- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017

- The cooling water data shall be specified in the project documentation.

The heat exchanger shall be provided with manually operated valves with position indicators to allow isolation and emptying the entire water cooling system while the motor continues in service without the heat exchanger.

The following list shows the instruments that shall be supplied with a water-air cooling system. The alarm contacts shall be normally closed.

- Water low flow switch and with switched alarm contacts.
- Local thermometers indicating the temperature of cooling water in and out and the air in the cooler.
- Water leak detector with alarm contact.

6. MOTORS TO BE INSTALLED IN HAZARDOUS AREAS

6.1. General

In addition to the requirements in this specification, the following paragraphs define the main standards that three-phase squirrel-cage induction motors shall comply with when installed in hazardous areas and specifically:

- IEC 60079-0 Electrical apparatus for explosive gas atmospheres,
- IEC 61241-14 Electrical apparatus for use in presence of combustible dust.

Motors and main accessories shall meet the requirements defined in project documentation and shall have an official certificate issued by the Official Certification Authority.

Motors with combined protection modes are accepted (pe, “d” y “eb”, “p” y “eb”, etc.)

When motors are required for installation in areas, with presence of electricity-conducting dust, the degree of protection required is IP 657. These motors will be marked as required in applicable legislation.

All the motors shall have as minimum, a maximum superficial temperature T3.

The certificate of the motor shall be for the motor, Terminal box and its accessories.

6.1.1. Starting conditions

In the defined starting conditions, the temperature of the motor surface temperature shall not be greater than the ignition temperature of gases present in the area.

6.2. Motors with protection mode “d”

The flameproof motors will be suitable for installation in explosive atmospheres with the sub grouping IIA, IIB, and IIC and for temperature class defined in the project documents.

In EU countries these motors will be category 2 marked, and shall have to fulfill the corresponding CENELEC standard.

6.2.1. Standards

The design, construction and tests of the motors shall be adapted to the applicable requirements of the IEC and CENELEC standards (latest edition) and specifically:

- IEC/EN 60079-1 “d” Protection

6.2.2. Degree of Protection

Motors and other accessories shall be totally enclosed, self-ventilating and with IP55 degree of protection.

© REPSOL S. A. Madrid, last update 2004-2017