

4. INSTALLATION AND OPERATION OF ELECTRICAL EQUIPMENT IN HAZARDOUS AREAS



Figure 7: Cooperation of the involved parties

4.1 OPERATOR, INSTALLER AND MANUFACTURER OBLIGATIONS

Safety in hazardous areas can only be ensured by a close and effective working relationship among all parties involved (Fig. 7). Besides operators, installers and manufacturers, this also includes inspection authorities, standardisation authorities and public authorities.

The operator is responsible for the safety of its equipment. It is their duty to judge where there is a risk of explosion and then classify zones accordingly. The operator must ensure that the system is installed correctly and tested before first-time commissioning. The system must be kept in proper working order by regular inspection and maintenance.

Table 18: Explosive atmosphere (gas and combustible dust)

	IEC	EN
Project engineering, selection and installation of electrical systems	IEC 60079-14	EN 60079-14
Inspection and maintenance of electrical systems	IEC 60079-17	EN 60079-17
Equipment repair, overhaul and recycling	IEC 60079-19	EN 60079-19
Classification of gas explosion hazardous areas	IEC 60079-10-1	EN 60079-10-1
Classification of dust explosion hazardous areas	IEC 60079-10-2	EN 60079-10-2

The requirements for system operation in hazardous areas are defined in the national regulations. In Europe minimum requirements are stipulated in EC Directive 1999/92/EC. National regulations supply the specific requirements in the respective countries.

Various standards have been issued at international and European level (Table 18).

The installer must observe the installation requirements and select and install the electrical equipment correctly according to its intended use.

Manufacturers of explosion-protected equipment must ensure special quality assurance measures during production and that every piece of manufactured equipment complies with the approved construction type.