



HAZARDOUS AREA CLASSIFICATION

Ensuring proper selection and installation of apparatus to prevent catastrophic incidents.

Areas with highly volatile atmospheres can cause catastrophic incidents and fatalities that can result in legal implications if the organisation does not take special precautions during construction and operation. Analysing and classifying the hazardous area location in the working environment can be a challenging endeavour without a knowledgeable team.

Hazardous area classification is a method of analysing and classifying the environment where explosive gas atmospheres may occur. The main purpose is to facilitate the proper selection and installation of apparatus to be used safely in that environment, taking into account the properties of the flammable materials that will be present.



Hazardous areas are classified into zones based on an assessment of the frequency of the occurrence and duration of an explosive substance:

- Explosive gas: Zone 0, 1 and 2; and
- Dust: Zone 20, 21 and 22.

Hazardous area classification concerns mines and surface industries as well as gas and dust explosive atmospheres. It defines the essential health and safety requirements applicable to products. It also concerns electrical and non-electrical products and deals with potentially flammable substances.

The hazardous area classification can deliver the following:

- Assistance with plant hazardous area classification and establishing classification documentation;
- Revision of the equipment list for technical and certification suitability;
- Assistance/consultation with the selection of "Ex" equipment;
- Audit and inspection of existing equipment in hazardous locations.

Key benefits

Proper hazardous area classification provides several benefits. Among others it:

- Ensures that critical controls on hazardous areas are in place to prevent catastrophic incidents;
- Prevents business losses due to the costs of legal penalties;
- Identifies hazardous areas that have the highest safety, environmental or financial impact when failing;
- Ensures legal compliance; and
- Verifies conformity of electrical and non-electrical products.

Related services

- Asset maintenance strategies and plans
- In-service inspections
- Machinery safety inspections