

GUIDELINES

- Hazardous atmosphere is the atmosphere where any flammable gas or vapor in a concentration capable of ignition occurs. Any area, where during normal operations a hazardous atmosphere is likely to occur in sufficient quantity to constitute a hazard had to be treated in a special manner from the point of the design of electrical installation.
- Many liquids, gases and vapors which in industry are generated, processed, handled and stored are combustible. When ignited these may burn readily and with considerable explosive force when mixed with air in the appropriate proportions. With regard to electrical installations, essential ignition sources include arcs, sparks or hot surfaces produced either in normal operation or under specified fault conditions.
- This Part of the Code is intended to provide guidelines for electrical installations and equipment in locations where a hazardous atmosphere is likely to be present with a view to maximizing electrical safety. The scope of this Part therefore includes installations in hazardous areas such as petroleum refineries and petrochemical and chemical industries. The requirements laid down herein are in addition to those-specified in part 4 of the Code. Some examples of industrial locations which require application of the guidelines in this Part are given on Page No.8.
- It is recognized that when electrical equipment is to be installed in or near a hazardous area, it is frequently possible, by taking care in the layout of the installation, to locate much of the equipment in less hazardous or non-hazardous areas and thus reduce the amount of special equipment required.
NOTE: - Hazardous areas can be limited in extent by construction measures, that is, walls or dams. Ventilation or application of protective gas will reduce the probability of the present of explosive gas atmosphere so that areas of greater hazard can be transformed to areas of lesser hazard or to non-hazardous areas.
- This Part includes generalized statements and recommendations on matters on which there are diverse opinions. It is, therefore, important that sound engineering judgement should be exercised while applying these guidelines.
- While preparing this Part, several standards for electrical equipment for explosive atmosphere have been referred to. These standards are listed in Appendix A. Some of these standards deal with particular construction techniques, others with aspects of standardization which are relevant to more than one technique.
- As distinct from the hazardous areas in buildings on the surface, environmental conditions in mines demand special consideration. This part of the Code does not include provisions for installations in underground mines.