

FLAMEPROOF

Kirloskar Electric AC Motors

For use in Explosive Atmospheres

The motors for special environments are classified, in general, into three main categories, namely -

1. Motors for hazardous areas : Flameproof Ex (d)
2. Increased Safety Motors : Ex (e)
3. Non-Sparking Motors : Ex (n)

INTRODUCTION :

Induction motors are used for a variety of applications to drive virtually all sorts of mechanical equipment. While their versatility is universally recognised, the design of induction motors for special environments in which they work, deserves special consideration with reference to the compliance with the various requirements mentioned in different standards.

Three phase AC Induction Flame Proof motors are specially designed for applications in Coal Mining, Refineries, Pharmaceutical, Chemical & Petroleum Industries, where risk of fire or explosion is present. These motors are designed to withstand the force of explosion, without any damage to the enclosure & without communicating the internal flame (or explosion) to the external flammable gas vapour.

CLASSIFICATION

Every Industrial Plant dealing with hazardous gases will not be equally liable to create explosive mixtures in practice. Therefore, to design and select motors for explosive atmospheres more economically, the 'degree' of protection needs to be matched with the requirements of the particular environment in which it is intended to work. To facilitate this, hazardous areas have been classified into different zones as follows, depending on the degree of hazard involved.

Zone 0 (or Division 0) is defined as an area in which an explosive gas-air mixture may be continuously present for long periods.

Zone1 (or Divison 1) is defined as an area in which an explosive gas-air mixture is likely to occur under normal operating conditions.

Zone2 (or Divison 2) is defined as an area in which an explosive gas-air mixture is not likely to occur in normal conditions and if it occurs, will exist for a short time during abnormal conditions.