

## GROUPING OF GASES

The gases present in various hazardous zones are also likewise classified into different groups.

Firstly the gases are grouped according to the dimensions of maximum experimental safe gaps which have been found to be capable of preventing transmission of a flame through the gaps in the enclosures.

Enclosures to be used in the hazardous areas where the flammable gases are present are classified as follows :

GROUP I

GROUP II

Group II is further sub-divided in IIA, IIB & IIC. These classifications are based on the maximum experimental safe gap required for each group.

Secondly, the gases are grouped according to the ignition temperature of the gas-air mixture. They are grouped into six temperature classes.

T1 = 450<sup>o</sup> C

T2 = 300<sup>o</sup> C

T3 = 200<sup>o</sup> C

T4 = 135<sup>o</sup> C

T5 = 100<sup>o</sup> C

T6 = 85<sup>o</sup> C

The surface temperature of the equipment is required to remain lower than the ignition temperature of the particular gas; under all conditions of its operation through out its service.

## TYPES OF ENCLOSURES OFFERED

Type of protection for a particular zone is determined basically by assessing the probabilities of an ignition spark, flame or hot surface coming in contact with a potentially explosive atmosphere.

Kirloskar Electric Offers following types of motors for use in explosive atmospheres. They are suitable for use in hazardous zones as indicated.

Type of Motor/Protection	Symbol	Zone
Flameproof Enclosure	Ex (d)	1
Increased Safety Enclosures	Ex (e)	2
Non-Sparking Enclosure	Ex ('n')	3