1 Scope

This ~~part of IEC 61241~~ standard is applicable to electrical apparatus protected by enclosures and surface temperature limitation for use in ~~areas where combustible dust may be present in quantities which could lead to a fire or explosion hazard~~ explosive dust atmospheres classified as zone 21 or zone 22 hazardous locations in accordance with Article 506 of the NEC®. It specifies requirements for design, construction and testing of electrical apparatus.

This standard supplements the general requirements in ~~IEC 61241-0~~ ANSI/ISA-61241-0.

~~NOTE IEC 61241-14 gives guidance on the selection and installation of the apparatus. Apparatus within the scope of this standard may also be subjected to additional requirements in other standards – for example, IEC 60079-0.~~

The ignition protection is based on the limitation of the maximum surface temperature of the enclosure and on other surfaces which could be in contact with dust and on the restriction of dust ingress into the enclosure ~~by the use of "dust-tight" or "dust-protected" enclosures~~.

The application of electrical apparatus in atmospheres which may contain explosive gas as well as combustible dust, whether simultaneously or separately, requires additional protective measures.

Where the apparatus has to meet other environmental conditions, for example, protection against ingress of water and resistance to corrosion, additional methods of protection may be necessary. The method used should not adversely affect the integrity of the enclosure.

This standard does not apply to dusts of explosives which do not require atmospheric oxygen for combustion, or to pyrophoric substances.

This standard is not applicable to electrical apparatus intended for use in underground parts of mines as well as those parts of surface installations of such mines endangered by firedamp and/or combustible dust.

This standard does not take account of any risk due to an emission of flammable or toxic gas from the dust.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60529:2001, *Degrees of protection provided by enclosures (IP Code)*

IEC 60034-5, *Rotating electrical machines – Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP code) – Classification*