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Explosion isolation flap valves

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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EN 16447

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EUROPÄISCHE NORM

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English Version

Explosion isolation flap valves

Vanne à clapet d'isolation d'explosion

Rückschlagklappen zur explosionstechnischen Entkopplung

This European Standard was approved by CEN on 28 May 2014.

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Foreword

This document (EN 16447:2014) has been prepared by Technical Committee CEN/TC 305 “Potentially explosive atmospheres - Explosion prevention and protection”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2015 and conflicting national standards shall be withdrawn at the latest by January 2015.

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For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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1 Scope

This European Standard describes the general requirements for flap valves used for dust explosion isolation. An explosion isolation flap valve is a protective system, which prevents a dust explosion from propagating via connecting pipes or ducts into other parts of apparatus or plant areas.

An explosion isolation flap valve can only stop the propagation of a dust explosion when it propagates against the direction of the normal process flow. It does not stop explosions running in the normal process flow direction. This European Standard specifies methods for evaluating the efficacy of explosion isolation flap valves.

This European Standard is applicable only to explosion isolation flap valves which are intended to avoid explosion propagation from a vessel, into other parts of the installation via connecting pipes or ducts. The standard covers isolation of such vessels that are protected by explosion venting (including flameless venting), explosion suppression or explosion resistant design.

NOTE 1 This standard is only applicable to cases where the explosion starts in a vessel and not in pipes or ducting.

Explosion isolation flap valves are not designed to prevent the transmission of fire or burning powder transported by the normal process flow.

NOTE 2 It is necessary to take this into account in risk assessments.

This European Standard is only applicable for dust explosions.

This European Standard is not applicable for explosions of materials listed below, or for mixtures containing some of those materials:

- a) gases, vapours and hybrid mixtures;
- b) chemically unstable substances;
- c) explosive substances;
- d) pyrotechnic substances.

2 Normative references

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

EN 13237, *Potentially explosive atmospheres - Terms and definitions for equipment and protective systems intended for use in potentially explosive atmospheres*

EN 14373, *Explosion suppression systems*

EN 14460, *Explosion resistant equipment*

EN 15089, *Explosion isolation systems*

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