Mitteelelektrilised seadmed plahvatusohtlike keskkondade jaoks. Osa 2: Kaitsmine juurdevoolu takistamise "fr" abil

Non-electrical equipment for use in potentially explosive atmospheres - Part 2: Protection by flow restricting enclosure 'fr'

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 13463-2:2005 sisaldab Euroopa standardi EN 13463-2:2004 ingliskeelset teksti. Käesolev dokument on jõustatud 25.01.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 13463-2:2005 consists of the English text of the European standard EN 13463-2:2004. This document is endorsed on 25.01.2005 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies the requirements for the construction and testing of flow restricting enclosures for non-electrical equipment intended for use in potentially explosive atmospheres if the atmosphere outside the enclosure becomes explosive rarely and for short durations only. This standard supplements the requirements in EN 13463-1 the contents of which apply in full to equipment constructed in accordance with this standard.	**Scope:** This European Standard specifies the requirements for the construction and testing of flow restricting enclosures for non-electrical equipment intended for use in potentially explosive atmospheres if the atmosphere outside the enclosure becomes explosive rarely and for short durations only. This standard supplements the requirements in EN 13463-1 the contents of which apply in full to equipment constructed in accordance with this standard.

ICS 13.230

Võtmesõnad:

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13463-2

November 2004

ICS 13.230

English version

Non-electrical equipment for use in potentially explosive atmospheres - Part 2: Protection by flow restricting enclosure 'fr'

Appareils non électriques destinés à être utilisés en atmosphères explosibles - Partie 2: Protection par enveloppe à circulation limitée 'fr'

Nicht-elektrische Geräte für den Einsatz in explosionsgefährdeten Bereichen - Teil 2: Schutz durch schwadenhemmende Kapselung 'fr'

This European Standard was approved by CEN on 14 October 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Ref. No. EN 13463-2:2004: E

Contents

Foreword

This document (EN 13463-2:2004) 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 May 2005, and conflicting national standards shall be withdrawn at the latest by May 2005.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 94/9/EC of 23 March 1994.

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

This European Standard consists of the following parts:

EN 13463-1, *Non-electrical equipment for potentially explosive atmospheres - Part 1: Basic method and requirements.*

EN 13463-2, *Non-electrical equipment for use in potentially explosive atmospheres - Part 2: Protection by flow restricting enclosure "fr".*

prEN 13463-3, *Non-electrical equipment for potentially explosive atmospheres - Part 3: Protection by flameproof enclosure 'd'.*

EN 13463-5, *Non-electrical equipment intended for use in potentially explosive atmospheres - Part 5: Protection by constructional safety "c".*

prEN 13463-6, *Non-electrical equipment for potentially explosive atmospheres - Part 6: Protection by control of ignition source 'b'.*

EN 13463-8, *Non-electrical equipment for potentially explosive atmospheres - Part 8: Protection by liquid immersion 'k'.*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

An explosive atmosphere surrounding an enclosure can penetrate it mainly due to the influence of three mechanisms:

— ventilation;

— equalisation of pressure differences between the inside and outside (breathing);

— diffusion.

If such an enclosure is effectively sealed, but not necessarily gas-tight, it can be assumed that ventilation and diffusion will not cause a significant short-time exchange of atmosphere. Under these conditions, an exchange of the external and internal atmospheres through the seals will only take place if there is a pressure difference across them. Such pressure differences may be caused by changes in temperature and will result in the enclosure "breathing" but will not cause a significant flow of explosive atmosphere into or through the enclosure.

Experience has shown that even simple enclosures can prevent a surrounding explosive atmosphere from reaching ignition sources inside them. Flow restricting enclosures are such simple enclosures, which will prevent, with adequate probability, the atmosphere inside the enclosures becoming explosive if the atmosphere outside the enclosure becomes explosive rarely and for short durations only. For this reason their use is restricted to the fulfilment of category 3 requirements.

This document is a type B standard as described in EN 1070.

1 Scope

This document specifies the requirements for the construction and testing of flow restricting enclosures for non-electrical equipment intended for use in potentially explosive atmospheres if the atmosphere outside the enclosure becomes explosive rarely and for short durations only.

This document supplements the requirements in EN 13463-1 the contents of which apply in full to equipment constructed in accordance with this document.

Equipment complying with this standard meets the requirements of Group II – Category 3 equipment. The type of ignition protection described in this standard is unsuitable for use in combination with another type of protection to produce equipment of any other category than category 3.

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.

EN 13463-1:2001, *Non-electrical equipment for potentially explosive atmospheres — Part 1: Basic method and requirements.*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13463-1:2001 and the following apply.

protection by flow restricting enclosure
type of ignition protection which, by means of an enclosure, reduces the probability of ingress of a surrounding explosive atmosphere into the enclosure to an acceptably low level so that the concentration inside the enclosure is below the lower explosive limit

4 General

4.1 General requirements

The requirements of this document apply in addition to the requirements of EN 13463-1.

Flow restricting enclosures used to protect Group II Category 3 equipment may contain ignition sources which occur during normal operation provided the enclosure itself is not an ignition source.

The type of protection shall not be used if the ignition source is an open flame.

4.2 Determination of suitability

The equipment manufacturers ignition hazard assessment required by EN 13463-1 shall have determined that protection by flow restricting enclosure is appropriate to achieve the level of protection required by Group II Category 3 equipment.

NOTE Equipment manufacturer means the manufacturer who applies flow restricting enclosures to protect the equipment that may contain ignitions sources under normal operation. It is not the manufacturer of the empty enclosure.