National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 15198:2007

ICS 13.230

METHODOLOGY FOR THE RISK ASSESSMENT OF NON-ELECTRICAL EQUIPMENT AND COMPONENTS FOR INTENDED USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES

National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland
Tel: +353 1 807 3800
Fax: +353 1 807 3838
http://www.nsai.ie

Sales
http://www.standards.ie

This Irish Standard was published under the authority of the National Standards Authority of Ireland and comes into effect on:
21 September 2007

Price Code G

Údarás um Chaighdeáin Náisiúnta na hÉireann

This page is intentionally left BLANK.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 15198

August 2007

ICS 13.230

English Version

Methodology for the risk assessment of non-electrical equipment and components for intended use in potentially explosive atmospheres

Méthodes pour l'évaluation du risque d'inflammation des appareils et des composants non électriques destinés à être utilisés en atmosphères explosibles

Methodik zur Risikobewertung für nicht-elektrische Geräte und Komponenten zur Verwendung in explosionsgefährdeten Bereichen

This European Standard was approved by CEN on 13 July 2007.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 15198:2007: E

Contents

Page

Foreword **3**

Introduction **4**

1 Scope **5**

2 Normative references **5**

3 Terms and definitions **6**

4 General requirements **6**

5 Ignition risk assessment Procedure **8**

6 Documentation **13**

Annex A (informative) Example of a reporting scheme for the ignition risk assessment **14**

Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 94/9/EC **16**

Bibliography **18**

Figures

Figure 1 — Ignition risk assessment for design of equipment or component 8

Figure 2 — Identification of ignition hazards 10

Tables

Table A.1 — Reporting scheme with cross references to the documentation requirements of Clause 6 15

Table ZA.1 — Correspondence between this European Standard and Directive 94/9/EC 16

Foreword

This document (EN 15198:2007) 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 February 2008, and conflicting national standards shall be withdrawn at the latest by February 2008.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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.

For relationship with EU Directive 94/9/EC, see informative Annex ZA, which is an integral part of this document.

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

Introduction

The function of this type A standard (description of general principles) as defined in CEN Guide 414 is to describe principles for a consistent systematic procedure for ignition risk assessment depending on Group II or Group I equipment.

Annex A is informative and contains examples for ignition risk assessment.

This European Standard does not provide means to prove the conformity of equipment categories. The procedure of ignition risk assessment for the design of equipment and components lead to a defined safety level which allows categorisation according to the appropriate criteria.

It is in both the manufacturer's and user's interest to establish a common methodology for achieving safety, reliability and efficacy in functioning and operating equipment and components with respect to the ignition hazards. Thus, ignition risk assessment is a tool which provides the essential link between manufacturers and users, but only aspects that directly address manufacturers are incorporated.

Integrated explosion safety is conceived to prevent the formation of explosive atmospheres as well as sources of ignition and, should an explosion nevertheless occur, to halt it immediately and / or to limit its effects. In this connection, the manufacturer must take measures with respect to the potential ignition sources. In addition, equipment and component must be designed and constructed after due analysis of possible operating faults in order as far as possible to preclude dangerous situations taking the misuse which can reasonably be anticipated into account. Therefore it is absolutely necessary to conduct an ignition risk assessment process.

For the equipment and components the identification of the potential ignition sources is the most relevant part of the ignition risk assessment.