PLAHVATUSE VÄLTIMINE JA KAITSE MAA-ALUSTES KAEVANDUSTES. KAITSESÜSTEEMID. OSA 4: AUTOMAATSED KUSTUTUSSÜSTEEMID TEEKÄIKUDELE

Explosion prevention and protection in underground mines - Protective systems - Part 4: Automatic extinguishing systems for road headers

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 14591-4:2007 sisaldab Euroopa standardi EN 14591-4:2007 ingliskeelset teksti.	This Estonian standard EVS-EN 14591-4:2007 consists of the English text of the European standard EN 14591-4:2007.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 04.07.2007.	Date of Availability of the European standard is 04.07.2007.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

Explosion prevention and protection in underground mines - Protective systems - Part 4: Automatic extinguishing systems for road headers

Protection contre l'explosion dans les mines souterraines - Systèmes de protection - Partie 4: Installation d'extinction automatique d'explosion pour machines à attaque ponctuelle

Explosionsschutz in untertägigen Bergwerken - Schutzsysteme - Teil 4: Automatische Explosionslöschanlagen für Teilschnittmaschinen

This European Standard was approved by CEN on 9 June 2007.

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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 CEN Management Centre has the same status as the official versions.

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Foreword

This document (EN 14591-4:2007) 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 January 2008, and conflicting national standards shall be withdrawn at the latest by January 2008.

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 Directives.

For relationship with EU Directives, see informative Annex ZA, which is an integral part of this document.

This European Standard consists of the following Parts:

EN 15491-1, *Explosion prevention and protection in underground mines — Protective systems — Part 1: 2-bar explosion proof ventilation structures*

EN 15491-2, *Explosion prevention and protection in underground mines — Protective systems — Part 2: Passive water trough barriers*

EN 14591-4, *Explosion prevention and protection in underground mines — Protective systems — Part 4: Automatic extinguishing systems for road headers*

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.

1 Scope

This document lays down requirements for automatic explosion extinguishing systems for roadheader machines (selective cut heading machines) in roadheader drivages where these systems automatically detect the initial phase of a firedamp explosion which has been initiated by the cutter head of a roadheader machine and extinguish it at the roadhead in such a way that the roadway drivage team is not put at risk.

This document does not lay down any requirements for the fighting of fires at the roadhead.

The automatic explosion extinguishing system for roadheaders is an autonomous protective system designed in accordance with Directive 94/9/EC.

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 1127-2:2002, *Explosive atmospheres — Explosion prevention and protection — Basic concepts and methodology for mining*

EN 10025 (all Parts), *Hot rolled products of structural steels*

EN 10204, *Metallic products — Types of inspection documents*

EN 13237:2003, *Potentially explosive atmospheres — Terms and definitions for equipment and protective systems intended for use in potentially explosive atmospheres*

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

EN 60068-2-6, *Environmental testing — Part 2: Tests — Tests Fc: Vibration (sinusoidal) (IEC 60068-2-6:1995 + Corrigendum 1995)*

EN 60079-0, *Electrical apparatus for explosive gas atmospheres — Part 0: General requirements (IEC 60079-0:2004, modified)*

EN 61000-6-2, *Electromagnetic compatibility (EMC) — Part 6-2 Generic standards — Emission standard for residential, commercial and light-industrial environments (IEC 61000-6-2:2005)*

EN 61000-6-4, *Electromagnetic compatibility (EMC) — Part 6-4: Generic standards — Emission standard for industrial environments (IEC 61000-6-4:1997, modified)*

EN 61508-1, *Functional safety of electrical/electronic/programmable electronic safety-related systems — Part 1: General requirements (IEC 61508-1:1998 + Corrigendum 1999)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1127-2:2002, EN 13237:2003 and the following apply.

3.1
automatic explosion extinguishing system
assembly of equipment for the automatic detection of the beginning of an explosion and initiation of the discharge of the extinguishing agent in order, in this way, to limit the destructive effects of the explosion