Irish Standard
I.S. EN 1889-1:2011

Machines for underground mines - Mobile machines working underground - Safety - Part 1: Rubber tyred vehicles

I.S. EN 1889-1:2011

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English Version

Machines for underground mines - Mobile machines working underground - Safety - Part 1: Rubber tyred vehicles

Machines pour l'exploitation de mines souterraines - Machines mobiles souterraines - Sécurité - Partie 1: Véhicules sur roues équipés de pneumatiques

Maschinen für den Bergbau unter Tage - Anforderungen an bewegliche Maschinen für die Verwendung unter Tage - Sicherheit - Teil 1: Gummibereifte Gleislosfahrzeuge für den Bergbau unter Tage

This European Standard was approved by CEN on 16 June 2011.

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Foreword

This document (EN 1889-1:2011) has been prepared by Technical Committee CEN/TC 196 “Machines for underground mines - Safety”, 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of an identical text or by endorsement, at the latest by January 2012, and conflicting national standards shall be withdrawn at the latest by January 2012.

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 supersedes EN 1889-1:2003.

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.

For relationship with EU Directive, 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, Croatia, 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

This European Standard is a type C standard as stated in EN ISO 12100:2010.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

The standard takes into account the current state of the art and technical facilities to use in order to exclude or prevent, as far as possible, hazards when rubber tyred vehicles are used underground.

After approval by CEN this document will be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by DAV + 6 months and conflicting national standards shall be withdrawn.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard

When compiling this standard it has been assumed that:

a) components are:

   1) designed in accordance with the good engineering practice and calculation codes, taking account of shocks and vibration, including all failure modes;

   2) made of materials with adequate strength and of suitable quality; and

   3) free of defects;

b) harmful materials, such as asbestos are not used;

c) components are kept in good repair and working order, so that the required dimensions remain fulfilled despite wear.

1 Scope

1.1 This European Standard specifies the safety requirements and tests for self-propelled rubber tyred vehicles as defined in 3.1 intended primarily for use in underground mining (i.e. as mine vehicles) and other underground workings (e.g. as tunnelling vehicles). The electrical supply voltage is limited to 1100 A.C. and 1500 D.C.

1.2 This European Standard deals with all significant hazards, hazardous situations and hazardous events, applying to self-propelled, rubber-tyred vehicles, subject to being used according to their intended purpose and prevailing manufacturer's conditions and within the scope of foreseeable misuse. This European Standard describes appropriate action to be taken to avoid or minimize the risk of significant hazards.

1.3 This European Standard does not include rubber tyred drilling rigs, which are covered by EN 791, or earth-moving machinery not intended primarily for use in underground mines, which are covered by EN 474 (all parts). This European Standard does not take account of specific hazards associated with special-purpose vehicles, e.g. tankers, explosives vehicles.

This standard does not cover the use and operation of rubber-tyred vehicles being remotely controlled or operation in potentially explosive atmospheres.

1.4 This European Standard applies to vehicles which are manufactured after the date of issue of this standard.

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 286-2, *Simple unfired pressure vessels designed to contain air or nitrogen — Part 2: Pressure vessels for air braking and auxiliary systems for motor vehicles and their trailers*

EN 349, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body*

EN 547-1, *Safety of machinery — Human body measurements — Part 1: Principles for determining the dimensions required for openings for whole body access into machinery*

EN 547-2, *Safety of machinery — Human body measurements — Part 2: Principles for determining the dimensions required for access openings*

EN 547-3, *Safety of machinery — Human body measurements — Part 3: Anthropometric data*

EN 894-2, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 2: Displays*

EN 953, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards*

EN ISO 4413, *Hydraulic fluid power - General rules and safety requirements for systems and their components (ISO 4413:2010)*

EN ISO 4414, *Pneumatic fluid power - General rules and safety requirements for systems and their components (ISO 4414:2010)*

EN 1679-1, *Reciprocating internal combustion engines — Safety — Part 1: Compression ignition engines*