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Standards

Irish Standard
I.S. EN 15746-2:2010+A1:2011

Railway applications - Track - Road-rail machines and associated equipment - Part 2: General safety requirements

I.S. EN 15746-2:2010+A1:2011

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

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Railway applications - Track - Road-rail machines and associated equipment - Part 2: General safety requirements

Applications ferroviaires - Voie - Machines rail route et éléments associés - Partie 2: Prescriptions générales de sécurité

Bahnanwendungen - Oberbau - Zwei-Wege Maschinen und zugehörige Ausstattung - Teil 2: Allgemeine Sicherheitsanforderungen

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Foreword

This document (EN 15746-2:2010+A1:2011) has been prepared by Technical Committee CEN/TC 256 "Railway applications", 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of an identical text or by endorsement, at the latest by April 2012, and conflicting national standards shall be withdrawn at the latest by April 2012.

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(s).

For relationship with EU Directive(s), see informative Annexes ZA, ZB and ZC, which are integral parts of this document.

This document includes Amendment 1, approved by CEN on 2011-09-13.

This document supersedes EN 15746-2:2010.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 and A1.

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.

EN 15746, *Railway applications — Track — Road-rail machines and their associated equipment*, consists of the following parts:

- *Part 1: Technical requirements for running and working*
- *Part 2: General safety requirements*

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 United Kingdom.

Introduction

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

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

When provisions of this type C standard are different from those which are stated in type 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.

1 Scope

This European Standard specifies the significant hazards, hazardous situations and events, common to self-propelled road-rail machines and attachments as defined in 3.5 and 3.6 of EN 15746-1:2010 and arising due to the adaptation for their use on rail intended for construction, maintenance inspection of the railway infrastructure, shunting and emergency rescue vehicles, when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer, see Clause 4.

This European Standard deals with the common hazards during running, assembly and installation, commissioning, travelling on and off track, use including setting, programming, and process changeover, operation, cleaning, fault finding, maintenance and de-commissioning of the machines.

NOTE 1 Specific measures for exceptional circumstances are not dealt with in this European Standard. They can be subject to negotiation between manufacturer and the machine operator.

The common hazards dealt with include the general hazards presented by the machines, and also the hazards presented by the following specific machine functions:

- a) excavation;
- b) ballast tamping, ballast cleaning, ballast regulating, ballast consolidating;
- c) track renewal;
- d) rail grinding;
- e) craning;
- f) catenary renewal / maintenance;
- g) maintenance of the components of the infrastructure;
- h) inspection and measurement of the components of the infrastructure;
- i) tunnel inspection / ventilation;
- j) shunting;
- k) emergency rescue and recovery

during commissioning, use, maintenance and servicing.

It is assumed that a finished standard automotive chassis used as a host for a road-rail machine will offer an acceptable safety level for its designed functions before conversion. Unless explicitly stated otherwise in a particular clause this specific aspect is not dealt with in this European Standard.

NOTE 2 A manufacturer should carry out an appropriate risk assessment for the complete machine. Irrespective of whether a harmonised standard exists for the machine in road configuration, this should identify any additional hazards arising from the particular application of the chassis and the protective measures required to adequately deal with them.

This European Standard does not deal with:

- l) requirements with regard to the quality of work and the performance of the machine;
- m) machines that utilise the catenary for traction purposes;
- n) specific requirements established by a railway infrastructure manager;

- o) negotiations between the manufacturer and the machine operator for additional or alternative requirements;
- p) requirements for use and travel of the machine on public highway;
- q) hazards due to air pressure caused by the passing of high-speed trains at more than 190 km/h;
- r) requirements which could be necessary in case of use in extreme conditions, such as:
 - 1) extreme ambient temperatures (tropical or polar);
 - 2) highly corrosive or contaminating environment, e.g. due to the presence of chemicals;
 - 3) potentially explosive atmospheres.

Other special vehicles used on railway tracks are dealt with in other European Standards, see Annex D.

This European Standard applies to all machines that are ordered one year after the publication date by CEN of this standard.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2, *Classification of fires*

EN 280, *Mobile elevating work platforms — Design calculations — Stability criteria — Construction — Safety — Examinations and tests*

EN 294, *Safety of machinery — Safety distance to prevent danger zones being reached by the upper limbs*

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

EN 474-1:2006, *Earth-moving machinery — Safety — Part 1: General requirements*

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 614-1, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles*

EN 614-2, *Safety of machinery — Ergonomic design principles — Part 2: Interactions between the design of machinery and work tasks*

EN 618, *Continuous handling equipment and systems — Safety and EMC requirements for equipment for mechanical handling of bulk materials except fixed belt conveyors*

EN 619, *Continuous handling equipment and systems — Safety and EMC requirements for equipment for mechanical handling of unit loads*

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