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Railway applications - Track - Road-rail machines and associated equipment - Part 1: Technical requirements for running and working

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15746-1:2010 sisaldab Euroopa standardi EN 15746-1:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.06.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 21.04.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 15746-1:2010 consists of the English text of the European standard EN 15746-1:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.06.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 21.04.2010.

The standard is available from Estonian standardisation organisation.

ICS 93.100

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English Version

**Railway applications - Track - Road-rail machines and
associated equipment - Part 1: Technical requirements for
running and working**

Applications ferroviaires - Voie - Machines rail-route et
équipements associés - Partie 1: Prescriptions techniques
pour la circulation et le travail

Bahnanwendungen - Oberbau - Zwei-Wege Maschinen und
zugehörige Ausstattung - Teil 1: Technische Anforderungen
an das Fahren und den Arbeitseinsatz

This European Standard was approved by CEN on 11 March 2010.

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Foreword

This document (EN 15746-1:2010) 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of an identical text or by endorsement, at the latest by October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

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(s).

For relationship with EU Directive(s), 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

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

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

This European Standard is a type C standard as stated in EN ISO 12100-1:2003 and EN ISO 12100-2:2003.

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

Road-rail machines as specified in 3.1 form the object of this European Standard.

This European Standard deals with railway specific risks of the road-rail machines, defined in Clause 4 when running and working on railway infrastructures.

The safety requirements in relation to the Machinery Directive are dealt with in EN 15746-2:2010 of this series of standards.

The risks which exist in all mechanical, electrical, hydraulic, pneumatic and other components of machines and which are dealt with in the relevant European Standards are not within the scope of this European Standard. If necessary, references are made to appropriate standards of this type.

1 Scope

1.1 General

This European Standard deals with the technical requirements to minimize the specific railway hazards of self propelled road-rail machines – henceforward referred to as machines – and associated equipment, which can arise during the commissioning, the operation and the maintenance of machines when carried out in accordance with the specification given by the manufacturer or his authorised representative.

Part 1 of EN 15746 defines requirements for approval of the machine by an authorised body; Part 2 defines requirements for the machine to be declared conformant by the manufacturer, except in the case of machines classified under Annex 4 of the Machinery Directive, which require a conformity check in conjunction with a notified body.

Additional requirements can apply for running on infrastructures with narrow gauge or broad gauge lines, lines of tramways, railways utilizing other than adhesion between the rail and rail wheels and underground infrastructures.

This European Standard is also applicable for machines and associated equipment that in working configuration are partly supported on the ballast or the formation.

This European Standard does not apply to the following:

- the requirements for quality of the work or performance of the machine;
- the specific requirements established by the machine operator for the use of machines, which will be the subject of negotiation between the manufacturer and the infrastructure manager;
- running and working whilst not on rails;
- separate machines temporarily mounted on machines and associated equipment;
- demountable machines as defined in 3.2;
- trailers as defined in 3.3, including road-rail trailers.

This European Standard does not establish the additional requirements for the following:

- operation subject to special rules, e.g. potentially explosive atmospheres;
- hazards due to natural causes, e.g. earthquake, lightning, flooding;
- working methods;
- operation in severe working conditions requiring special measures, e.g. work in tunnels or in cuttings, extreme environmental conditions such as: freezing temperatures, high temperatures, corrosive environments, tropical environments, contaminating environments, strong magnetic fields;
- hazards due to errors in software;
- hazards occurring when used to handle suspended loads which may swing freely.

Other track construction and maintenance machines used on railway tracks are dealt with in other European Standards, see Annex G.

1.2 Validity of this European Standard

This European Standard applies to all machines which are ordered one year after the publication date by CEN of this European 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 280, *Mobile elevating work platforms — Design calculations — Stability criteria — Construction — Safety — Examinations and tests*

EN 286-3, *Simple unfired pressure vessels designed to contain air or nitrogen — Part 3: Steel pressure vessels designed for air braking equipment and auxiliary pneumatic equipment for railway rolling stock*

EN 286-4, *Simple unfired pressure vessels designed to contain air or nitrogen — Part 4: Aluminium alloy pressure vessels designed for air braking equipment and auxiliary pneumatic equipment for railway rolling stock*

EN 791, *Drill rigs — Safety*

EN 12663:2000, *Railway applications — Structural requirements of railway vehicle bodies*

EN 13309, *Construction machinery — Electromagnetic compatibility of machines with internal electrical power supply*

EN 13715, *Railway applications — Wheelsets and bogies — Wheels — Wheels tread*

EN 14033-1:2008, *Railway applications — Track — Railbound construction and maintenance machines — Part 1: Technical requirements for running*

EN 14033-2:2008, *Railway applications — Track — Railbound construction and maintenance machines — Part 2: Technical requirements for working*

EN 14363:2005, *Railway applications — Testing for the acceptance of running characteristics of railway vehicles — Testing of running behaviour and stationary tests*

EN 14601, *Railway applications — Straight and angled end cocks for brake pipe and main reservoir pipe*

EN 15153-1, *Railway applications — External visible and audible warning devices for high speed trains — Part 1: Head, marker and tail lamps*

EN 15153-2, *Railway Applications — External visible and audible warning devices for high speed trains — Part 2: Warning horns*

EN 15273-2:2009, *Railway applications — Gauges — Part 2: Rolling stock gauge*

EN 15437 (all parts), *Railway applications — Axlebox condition monitoring — Interface and design requirements*

EN 15528, *Railway applications — Line categories for managing the interface between load limits of vehicles and infrastructure*

EN 15746-2:2010, *Railway applications — Track — Road-rail machines and associated equipment — Part 2: General safety requirements*

prEN 15954-1:2009, *Railway applications — Track — Trailers and associated equipment — Part 1: Technical requirements for running and working*

prEN 15954-2:2009, *Railway applications — Track — Trailers and associated equipment — Part 2: General safety requirements*

EN 50121-3-1:2006, *Railway applications — Electromagnetic compatibility — Part 3-1: Rolling stock — Train and complete vehicle*

EN 50121-3-2:2006, *Railway applications — Electromagnetic compatibility — Part 3-2: Rolling stock — Apparatus*

EN 50122-1, *Railway applications — Fixed installations — Part 1: Protective provisions relating to electrical safety and earthing*

EN 50238:2003, *Railway applications — Compatibility between rolling stock and train detection systems*

EN 60947 (all parts), *Low-voltage switchgear and controlgear*

EN ISO 7731, *Ergonomics — Danger signals for public and work areas — Auditory danger signals (ISO 7731:2003)*

EN ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

UIC 545, *Brakes — Inscriptions, marks and signs* ¹⁾

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100-1:2003 and the following apply.

3.1

road-rail machine

self propelled machine that can run on rails and ground

NOTE 1 It is normally a road vehicle adapted for running on rail also, but can be a specially designed rail vehicle for running on the ground also.

NOTE 2 It does not imply that the machine is suitable for use on the public road.

3.2

demountable machine

machine that can run and work on rail and which is not intended to operate track signalling and control systems

NOTE 1 Such a machine is designed to get on and off track by its own means or with other lifting equipment. In the case of demounting by its own means these are not intended for running on the ground.

NOTE 2 Such a machine is permitted to work on the railway only under special operating conditions granted by the infrastructure manager and run under special conditions granted by the authorised body and/or the infrastructure manager.

3.3

trailer

non-self propelled machine that can be hauled on rail wheels

1) May be purchased from: Railway Technical Publications (ETF), 16 Rue Jean Rey, F-75015 Paris.