Raudteealased rakendused. Rööbastee. Raudtee ehitus- ja hooldusmasinad. Osa 1: Tehnilised nõuded sõiduomadustele

Railway applications - Track - Railbound construction and maintenance machines - Part 1: Technical requirements for running

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 14033-1:2011 sisaldab Euroopa standardi EN 14033-1:2011 ingliskeelset teksti.	This Estonian standard EVS-EN 14033-1:2011 consists of the English text of the European standard EN 14033-1:2011.
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EUROPEAN STANDARD

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English Version

Railway applications - Track - Railbound construction and maintenance machines - Part 1: Technical requirements for running

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Bahnanwendungen - Oberbau - Schienengebundene Bau- und Instandhaltungsmaschinen - Teil 1: Technische Anforderungen an das Fahren

This European Standard was approved by CEN on 8 January 2011.

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Contents

Page

Foreword

This document (EN 14033-1:2011) 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of an identical text or by endorsement, at the latest by August 2011, and conflicting national standards shall be withdrawn at the latest by August 2011.

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 14033-1:2008.

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 Directive 2008/57/EC.

For relationship with EU Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document.

This series of standards EN 14033 "*Railway applications — Track — Railbound construction and maintenance machines*" consists of the following parts:

— *Part 1: Technical requirements for running*

— *Part 2: Technical requirements for working*

— *Part 3: 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 was prepared to meet the basic requirements of EU Directives to facilitate an open market for goods and services.

The railway specific particulars of the machines for construction and maintenance form the objective of this European Standard.

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. Where necessary, references are made to appropriate standards of this type and the interoperability of the rail system within the Community.

1 Scope

1.1 General

This European Standard defines the specific technical railway requirements for running of machines and other vehicles used for construction, maintenance and inspection of track, structures, track formation and fixed electric traction equipment.

This European Standard applies to all railbound machines and other vehicles – referred to as machines – running exclusively on the railway (utilising adhesion between the rail and wheels) and used for construction, maintenance and inspection of track, structures, infrastructure and fixed electric traction equipment. This European Standard applies to machines that are intended to operate signalling and control systems. Other machines are dealt with in other European Standards, see Annex K.

Special requirements can apply for running on infrastructures with narrow gauge or broad gauge lines, lines of tramways, railways utilising other than adhesion between the rail and wheels, road-rail machines and underground infrastructures.

This European Standard covers the requirements for safety and access of railway traffic, railway specific requirements for running on different infrastructures in relation to necessary movements of the machine as a train and movements to reach work sites.

1.2 Validity of the European Standard

This European Standard applies to new designs taking into consideration the recommendations given in Annex L on the application of the standard (migration rule).

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 286-3, *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 10220, *Seamless and welded steel tubes – Dimensions and masses per unit length*

EN 10305-4, *Steel tubes for precision applications – Technical delivery conditions – Part 4: Seamless cold drawn tubes for hydraulic and pneumatic power systems*

EN 10305-6, *Steel tubes for precision applications – Technical delivery conditions – Part 6: Welded cold drawn tubes for hydraulic and pneumatic power systems*

EN 12080, *Railway applications – Axleboxes – Rolling bearings*

EN 12663-1:2010, *Railway applications – Structural requirements of railway vehicle bodies – Part 1: Locomotives and passenger rolling stock (and alternative method for freight wagons)*

EN 12663-2:2010, *Railway applications – Structural requirements of railway vehicle bodies – Part 2: Freight wagons*

EN 13103, *Railway applications – Wheelsets and bogies – Non-powered axles – Design method*

EN 13104, *Railway applications – Wheelsets and bogies – Powered axles – Design method*

EN 13260, *Railway applications – Wheelsets and bogies – Wheelsets – Product requirements*

EN 13261, *Railway applications – Wheelsets and bogies – Axles – Product requirements*

EN 13262, *Railway applications – Wheelsets and bogies – Wheels – Product requirements*

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

EN 13979-1, *Railway applications – Wheelsets and bogies – Monobloc wheels – Technical approval procedure – Part 1: Forged and rolled wheels*

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

EN 14033-3:2009, *Railway applications – Track – Railbound construction and maintenance machines – Part 3: General safety requirements*

EN 14198:2004, *Railway applications – Braking – Requirements for the brake system of trains hauled by a locomotive*

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

EN 14531-6, *Railway applications – Methods for calculation of stopping and slowing distances and immobilisation braking – Part 6: Step by step calculations for train sets or single vehicles*

EN 14535-1, *Railway applications – Brake discs for railway rolling stock – Part 1: Brake discs pressed or shrunk onto the axle or drive shaft, dimensions and quality requirements*

prEN 14535-2:2007, *Railway applications – Brake discs for railway rolling stock – Part 2: Brake discs mounted onto the wheel –, Dimensions and quality requirements*

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

EN 15152, *Railway applications – Front windscreens for train cabs*

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 15179, *Railway applications – Braking – Requirements for the brake system of coaches*

EN 15220-1, *Railway applications – Brake indicators – Part 1: Pneumatically operated brake indicators*

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

EN 15355, *Railway applications – Braking – Distributor valves and distributor-isolating devices*

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

EN 15551, *Railway applications – Railway rolling stock – Buffers*

EN 15566, *Railway applications – Railway rolling stock – Draw gear and screw coupling*

EN 15611, *Railway applications – Braking – Relay valves*

EN 15624, *Railway applications – Braking – Empty-loaded changeover devices*

EN 15625, *Railway applications – Braking – Automatic variable load sensing devices*

prEN 15807:2008, *Railway applications – Pneumatic half couplings*

prEN 15839, *Railway applications – Testing for the acceptance of running characteristics of railway vehicles – Freight wagons – Testing of running safety under longitudinal compressive forces*

prEN 15877-1:2009, *Railway applications – Marking on railway vehicles – Part 1: Freight wagons*

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

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

EN 50153:2002, *Railway applications – Rolling stock – Protective provisions relating to electrical hazards*

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

ISO 8573-1, *Compressed air – Part 1: Contaminants and purity classes*

ISO 11112, *Earth-moving machinery – Operator's seat – Dimensions and requirements*

NF F11-100:2005, *Railway rolling stock – Quality of compressed air for pneumatic apparatuses and circuits use*

UIC 438-1:2004, *Identification marking for passenger rolling stock*[1)]

UIC 520:2003, *Wagons, coaches and vans – Draw gear – Standardisation*

UIC 527-1:2005, *Coaches, vans and wagons – Dimensions of buffer heads – Track layout on S-curves*

UIC 530-2:2008, *Wagons – Running safety*

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1) Railway Technical Publications (ETF), 16 rue Jean Rey, F-75015 Paris

UIC 535-2:2006, *Standardisation and positioning on wagons of steps, end platforms, gangways, handrails, tow hooks, automatic coupler (AC), automatic draw-on coupling and brake valve controls on the UIC member RUs and OSJD member Rus*

UIC 541-03:1984, *Brakes – Regulations concerning manufacture of the different brake parts – Driver's brake valve*

UIC 541-4:2007, *Brakes – Brakes with composition brake blocks – General conditions for certification of composite brake blocks*

UIC 543:2007, *Brakes – Regulations governing the equipment of trailing stock*

UIC 544-1:2004, *Brakes – Braking power*

UIC 545:2007, *Brakes – Inscriptions, marks and signs*

UIC 640:2003, *Motive power units – Inscriptions, marks and signs*

3 Terms and definitions

For the purposes of this document, the following terms and definitions and the terms listed in the relevant railway specific documents and in the UIC leaflets apply.

3.1
railbound machine (on-track machines, OTM)
vehicle specially designed for construction and maintenance of the track and infrastructure and used in different modes: working configuration, running configuration as a self-propelling vehicle, running configuration as a hauled vehicle, when:

— it is running on its own rail wheels,

— it is designed to have characteristics necessary for the operation of track based train detection systems

3.2
demountable machine
self propelled machine that can run and work on rail and which is not intended to operate 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

NOTE 1 Trailers are not designed and intended to operate signalling and control systems and are not designed to be transported between work areas on their rail wheels.

NOTE 2 This includes attachments with rail wheels.

3.4
railway infrastructure
all installations required for the running of railway vehicles

EXAMPLE Tracks, crossings, catenaries and signals.