Raudteealased rakendused. Rattapaarid ja pöördvankrid. Teljed. Tootenõuded

Railway applications - Wheelsets and bogies - Axles - Product requirements

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13261:2009 sisaldab Euroopa standardi EN 13261:2009 ingliskeelset teksti.	This Estonian standard EVS-EN 13261:2009 consists of the English text of the European standard EN 13261:2009.
Standard on kinnitatud Eesti Standardikeskuse 30.04.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 30.04.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 25.03.2009.	Date of Availability of the European standard text 25.03.2009.
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ICS 45.040

Võtmesõnad: acceptance testing, measurement, proper, quality assurance, quality control, railroad vehicles, railway applications, railway equipment, railway vehicles, railways, specifications, testing, tolerances, tolerances (measurement), wheels, wheelset shafts, wheelsets

EUROPEAN STANDARD

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English Version

Railway applications - Wheelsets and bogies - Axles - Product requirements

Applications ferroviaires - Essieux montés et bogies - Essieux-axes - Prescriptions pour le produit

Bahnanwendungen - Radsätze und Drehgestelle - Radsatzwellen - Produktanforderungen

This European Standard was approved by CEN on 29 November 2008.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 13261:2009) 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of an identical text or by endorsement, at the latest by September 2009, and conflicting national standards shall be withdrawn at the latest by September 2009.

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 13261:2003.

This document has been prepared under a mandate given to CEN/CENELEC/ETSI by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directives 96/48/EC and 2001/16/EC, amended by Directive 2004/50/EC.

For relationship with EU Directives 96/48/EC and 2001/16/EC, see informative Annex ZA and ZB, which are integral parts 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, 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

Normative documents which have been used until now in Europe for axle delivery (UIC leaflets, national standards) had, for the main purpose, a complete definition of delivery procedures and axle characteristics that were to be measured.

Product qualification was sometimes mentioned, but the procedures and the characteristics that had to be verified for the qualification were not given.

This standard addresses these issues by:

a) definition of all axle characteristics; these are verified either during qualification or delivery of the product (see clause 3);

b) definition of qualification procedures (see Annex I);

c) definition of delivery conditions (see Annex J); here, a choice is given to the supplier of either:

   1) a traditional delivery procedure with a control by batch sampling as in existing documents (see J.5), or;

   2) a delivery procedure using quality assurance concepts (see J.6).

1 Scope

This European Standard specifies the characteristics of axles for use on European networks.

It defines characteristics of forged or rolled solid and hollow axles, made from vacuum-degassed steel grade EA1N[1] that is the most commonly used grade on European networks. For hollow axles, this standard applies only to those that are manufactured by machining of a hole in a forged or rolled solid axle

In addition, the particular characteristics for axles in grade EA1T[1] and EA4T[1] are given in Annex A.

Two categories of axle are defined, category 1 and category 2. Generally, category 1 is chosen when the operational speed is higher than 200 km/h.

This standard is applicable to axles that are designed in accordance with the requirements of EN 13103 and EN 13104.

NOTE Different values for some characteristics may be agreed if a particular process of fabrication (e.g. cold rolling, shot peening) has an influence on them.

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 10002-1, *Metallic materials – Tensile testing – Part 1: Method of test at ambient temperature*

EN 10045-1, *Metallic materials – Charpy impact test – Part 1: Test method*

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 20898-2:1993, *Mechanical properties of fasteners – Part 2: Nuts with specified proof load values – Coarse thread (ISO 898-2:1992)*

EN 22768-1, *General tolerances – Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1:1989)*

EN 22768-2, *General tolerances – Part 2: Geometrical tolerances for features without individual tolerance indications (ISO 2768-2:1989)*

EN ISO 643:2003, *Steels – Micrographic determination of the apparent grain size (ISO 643:2003)*

EN ISO 2409:2007, *Paints and varnishes – Cross-cut test (ISO 2409:2007)*

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[1] N for a normalized metallurgical condition
T for a quenched and tempered metallurgical condition

EN ISO 2808:2007, *Paints and varnishes – Determination of film thickness (ISO 2808:2007)*

EN ISO 9227:2006, *Corrosion tests in artificial atmospheres – Salt spray tests (ISO 9227:2006)*

EN ISO 14284:2002, *Steel and iron – Sampling and preparation of samples for the determination of chemical composition (ISO 14284:1996)*

ISO 4967:1998, *Steel – Determination of content of non-metallic inclusions – Micrographic method using standard diagrams*

ISO 5948:1994, *Railway rolling stock material – Ultrasonic acceptance testing*

ISO 6933:1986, *Railway rolling stock material – Magnetic particle acceptance testing*

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ISO/TR 9769[2] *Steel and iron – Review of available methods of analysis*.
