

Raudteealased rakendused. Rattapaarid ja pöördvankrid. Monoplokk rattad. Tehnilise heakskiidu protseduur. Osa 1: Sepistatud ja valtsitud rattad KONSOLIDEERITUD TEKST

Railway applications - Wheelsets and bogies - Monobloc wheels - Technical approval procedure - Part 1: Forged and rolled wheels CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13979-1:2007+A1:2009 sisaldab Euroopa standardi EN 13979-1:2003+A1:2009 ingliskeelset teksti.

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English Version

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

Applications ferroviaires - Essieux montés et bogies -
Roues monobloc - Procédure d'homologation technique -
Partie 1: Roues forgées et laminées

Bahnanwendungen - Radsätze und Drehgestelle - Vollräder
- Technische Zulassungsverfahren - Teil 1: Geschmiedete
und gewalzte Räder

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Foreword

This document (EN 13979-1:2003+A1:2009) 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of an identical text or by endorsement, at the latest by October 2009, and conflicting national standards shall be withdrawn at the latest by October 2009.

This document includes Amendment 1, approved by CEN on 2009-02-24.

This document supersedes EN 13979-1:2003.

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

Annexes A and B are normative.

A1 Annexes C, D, E and F are informative. **A1**

This document contains a bibliography.

This European Standard is part of a series of two EN 13979 standards, Part 2 of which is:

A1 Part 2: Cast wheels. **A1**

A1 For relationship with EU Directives, see informative Annex ZA, which is an integral part of this document. **A1**

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 United Kingdom.

Introduction

To date, UIC regulations specified that for a wheel to be used in Europe:

- its design had to be standardized;
- it had to conform to the quality requirements of UIC leaflet 812-3.

In order to be able to adapt to new railway working conditions, on the one hand, and to facilitate the introduction of new technical solutions, on the other, it has been necessary to replace the concept of standardization with the definition of specifications that a wheel design shall meet to be accepted on a European network.

The standard covers these specifications and describes precisely how to assess the wheel design.

To be able to apply these specifications, it is essential to define the use of the wheel; this standard also states how to define this use.

At least four aspects are described with different purposes:

- a geometrical aspect: to allow interchangeability of different solutions for the same application;
- a thermomechanical aspect: to manage wheel deformations and to ensure that braking will not cause wheels to break;
- a mechanical aspect: to ensure that no fatigue cracks occur in the web;
- an acoustical aspect: to ensure that the solution chosen is as good as the reference wheel, for the use in question.

For each of these three latter aspects, the rules proposed tend to limit the procedure, the easier the objectives are to attain by the wheel under study.

This standard does not cover assessment of the hub nor of the static mechanical dimensioning of the wheel.

1 Scope

The aim of this European Standard is to define the requirements that a monobloc wheel of a freight or passenger railway vehicle non-powered axle shall meet in order to be able to be used on a European network.

For wheels of powered axles or wheels with noise dampers, the requirements may be amended or supplemented.

For light vehicles and tramways, other standards or documents accepted by the customer and supplier may be used.

This European Standard only applies to wheels of new design.

These requirements are intended to assess the validity of the design choice for the proposed use.

The assessment of these requirements is the technical approval procedure.

This European Standard is applicable to forged and rolled wheels for which the quality requirements are defined in ^{A1}EN 13262 ^{A1}.

2 Normative references

^{A1} 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. ^{A1}

EN 12668-3, *Non-destructive testing – Characterization and verification of ultrasonic examination equipment – Part 3: Combined equipment*

EN 13103, *Railway applications – Wheelsets and bogies – Non-powered axles – Design* ^{A1} guide ^{A1}

^{A1} EN 13262 ^{A1}, *Railway applications – Wheelsets and bogies – Wheels – Product requirements*