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

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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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

This European Standard was approved by CEN on 8 April 2019.

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COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 13979-1:2020) 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of an identical text or by endorsement, by January 2021 at the latest, and all conflicting national standards shall be withdrawn no later than January 2021.

Attention is drawn to the fact that some elements of this document may be the subject of patent rights or similar rights. CEN and/or CENELEC shall not be held responsible for identifying all or some of these patent rights.

This document replaces EN 13979-1:2003+A2:2011.

This document has been prepared in the context of a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2008/57/EC.

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

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are required to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, the Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, the Republic of Serbia, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 13979-1:2020 (E)**Introduction**

An assessment of the two following aspects is carried out before a wheel is commissioned:

- assessment of the design as described in this standard;
- assessment of the quality of the product (EN 13262).

1 Scope

The aim of this document is to define a design assessment procedure of a forged and rolled monobloc wheel (RST). This assessment is carried out before the wheel is commissioned. This document describes, in particular, the assessment to be performed in order to use wheels on a European network which, in addition, have quality requirements in conformity with those defined in EN 13262.

This assessment requires that the conditions of use for the wheel are defined and this standard provides a method for defining those conditions.

The assessment of the design covers four aspects:

- 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 fracture;
- a mechanical aspect: to ensure that no fatigue cracks occur in the wheel web and that no permanent deformation occurs under exceptional loading;
- an acoustic aspect: to ensure that the solution chosen is as good as the reference wheel.

This document does not cover assessment of the hub or of the rim.

This document has been drawn up for wheels of non-powered tread-braked wheelsets and applies in full to this type of wheel. For wheels on which disc brakes are mounted or toothed transmission wheels or even wheels with noise reduction devices, the requirements may be amended or supplemented.

For urban railway vehicles, other standards or documents may be used.

2 Normative references

The following documents referred to in the text constitute, for all or part of their content, requirements of this document. For dated references, only the cited edition applies. For undated references, the last edition of the reference document applies (including any amendments).

EN 13103-1, *Railway applications — Wheelsets and bogies — Part 1: Design method for axles with external journals*

EN 13262:2004+A2:2011, *Railway applications – Wheelsets and bogies – Wheels – Product requirements*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN