SLOVENSKI STANDARD
oSIST prEN 15313:2022

01-junij-2022

Železniške naprave - Zahteve za kolesne dvojice med vožnjo - Vzdrževanje kolesnih dvojic v vgrajenem in razstavljenem stanju

Railway applications - In-service wheelset operation requirements - In-service and off-vehicle wheelset maintenance

Bahnanwendungen - Radsätze und Drehgestelle - Radsatzinstandhaltung

Applications ferroviaires - Exploitation des essieux en service - Maintenance des essieux en exploitation ou déposés

Ta slovenski standard je istoveten z: **prEN 15313**

ICS:

45.040	Materiali in deli za železniško tehniko	Materials and components for railway engineering

oSIST prEN 15313:2022 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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prEN 15313

April 2022

ICS 45.040

Will supersede EN 15313:2016

English Version

Railway applications - In-service wheelset operation requirements - In-service and off-vehicle wheelset maintenance

Applications ferroviaires - Exploitation des essieux en service - Maintenance des essieux en exploitation ou déposés

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 256.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 15313:2022) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 15313:2016.

In comparison with the previous edition, the following technical modifications have been made:

— a clearer definition of the signs to identify thermal overload of wheels and associated pictures;

— the maintenance requirements to be followed when thermal overloading of a wheel is identified.

This document has been prepared under a standardization request given to CEN/CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of Directive (EU) 2016/797.

For the relationship with Directive (EU) 2016/797, see informative Annex ZA, which is an integral part of this document.

Introduction

The objectives of this amendment to EN 15313:2016 are to:

— incorporate the appropriate results of the ERA Joint Network Secretariat “broken wheels” and Joint Sector Group task force.

1 Scope

To ensure safety and interoperability, this document gives:

— the limits for in-service and off-vehicle wheelsets;

— the operations to be carried out for which the specific values (and/or criteria) remain to be defined in the maintenance plan.

This document applies to wheelsets and axle boxes complying with the following European standards:

— EN 13103-1:2017;

— EN 13260:2020, EN 13261:2020, EN 13262:2020;

— EN 13979-1:2020;

— EN 13715:2020;

— EN 13749:2021

that comprise:

— the axle fitted with wheels of diameters greater than or equal to 330 mm;

— axle boxes with bearings and grease.

This document is also applicable to wheelsets:

— fitted with brake discs, final drive, transmission or noise-damping systems, as appropriate;

— not complying with the above European standards, but complying with the international requirements in force, for example in UIC leaflets, before the approval of these standards;

— with tyred wheels;

— with resilient wheels.

For equipment not covered by Directive 2016/797/EC, this European Standard may be applied, noting that different values may be used.

All dimensions in this document are in millimetres (mm).

It is necessary to describe in a specific document the tasks to be performed in order to maintain wheelsets within the limits defined therein.

NOTE The specific values and criteria are defined in an appropriate maintenance plan.

2 Normative references

The following documents are referenced in the text in such a way that some parts of these or their entire contents constitute requirements of this document. With dated references, only the referenced issue is applicable. With undated references, the last issue of the referenced document is applicable (including all changes).

EN 13260:2020, *Railway applications — Wheelsets and bogies — Wheelsets — Product requirements*

EN 13261:2020, *Railway applications — Wheelsets and bogies — Axles — Product requirements*

EN 13262:2020, *Railway applications — Wheelsets and bogies — Wheels — Product requirements*

EN 13715:2020, *Railway applications — Wheelsets and bogies — Wheels — Tread profile*

EN 13979-1:2020, *Railway applications — Wheelsets and bogies — Monobloc wheels — Technical approval procedure — Part 1: Forged and rolled wheels*

EN 15085-2:2020, *Railway applications — Welding of railway vehicles and components — Part 2: Requirements for welding manufacturer*

EN ISO 9712:2012, *Non-destructive testing — Qualification and certification of NDT personnel (ISO 9712:2012)*

EN ISO 9934-1:2016, *Non-destructive testing — Magnetic particle testing — Part 1: General principles (ISO 9934-1:2016)*

EN ISO 9934-2:2015, *Non-destructive testing — Magnetic particle testing — Part 2: Detection media (ISO 9934-2:2015)*

EN ISO 9934-3:2015, *Non-destructive testing — Magnetic particle testing — Part 3: Equipment (ISO 9934-3:2015)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
operation
normal use of wheelsets in service on the track or during routine planned maintenance

Note 1 to entry: to entry: This term also includes any in-service problems and their treatment.

3.2
competent technical department
department having experience in the wheelset maintenance field having already written the rules

3.3
technical expert
technical expert competent in the maintenance of wheelsets

3.4
ECM
Entity in Charge of Maintenance

3.5
reprofiling only level
maintenance performed in-service or off-vehicle with reprofiling of the wheels only

3.6
maintenance plan
structured and documented set of tasks comprising the activities, instructions, resources and the length of time necessary in order to perform the maintenance (EN 13306:2017; Maintenance — Maintenance terminology)

3.7
medium wheelset maintenance
off-vehicle wheelset maintenance without change of wheels, combined with bearing overhaul

3.8
In service wheelset maintenance
maintenance of in-service wheelsets comprises all of the operations which are performed on wheelsets between medium and/or heavy maintenance levels

3.9
heavy wheelset maintenance
off-vehicle wheelset maintenance with change of wheels, combined with bearing overhaul

3.10
NDT
non-destructive testing

3.11
MT
magnetic particle testing

3.12
UT Testing
ultrasonic testing

3.13
VT
visual testing

3.14
resilient wheels
wheels that contain rubber elements between the tyre and the web

3.15
witness mark
area of unmachined material which can remain after reprofiling to demonstrate that the minimum of material has been removed

3.16
wagon overhaul
planned heavy maintenance operation on a wagon

4 Maintenance

4.1 General

Maintenance involves:

— maintenance of in-service wheelsets/axle boxes;

— maintenance of off-vehicle wheelsets/axle boxes;

— special maintenance attention after in-service incidents (e.g. overloads, hot axle box detection, wheelset bearings subject to water ingress, etc.).

An in-service wheelset shall be maintained by a maintenance undertaking qualified in this type of wheelset.

For maintenance of wheelsets, as a minimum, the following shall be utilized:

— a maintenance plan;

— service experience;

— an organization for component and production management;

— specific wheelset maintenance tools;

— qualified staff for non-destructive testing and welding.

4.2 Maintenance organization

4.2.1 Maintenance organization plan

The general maintenance of the wheelsets is organized as shown in Figure 1.

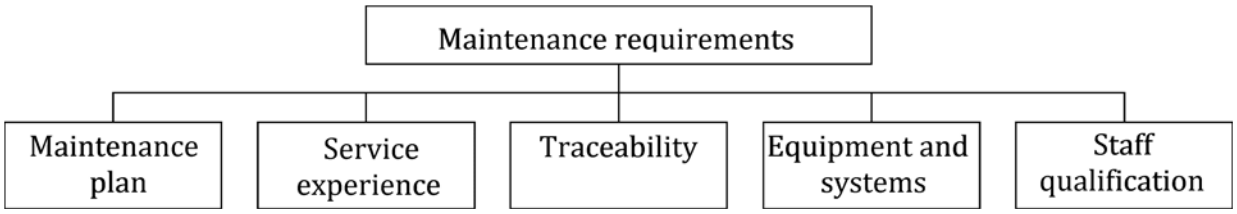

Figure 1 — General maintenance organization

4.2.2 Maintenance plan

For wheelset maintenance, it is necessary to have a maintenance plan for the wheelsets when in-service and off-vehicle.

The maintenance plan shall specify:

— the actions to be performed to meet the requirements and mandatory operations listed in this document;

— the maintenance intervals;

— any specific measures to be implemented.

The maintenance plan shall be written by a competent technical department in the railway field and approved by the technical expert for the owner undertaking.

4.2.3 Service experience

The maintenance plan shall be reviewed to include:

— the service experience based on the performance of parts in service;

— the corrective actions necessary for dealing with defects;

— remedial actions for criteria detected outside of the limits specified in the maintenance plan;

— corrective actions for limits based on data from in-line monitoring devices.

The principle for revising the maintenance plan based on service experience is presented in Figure 2.

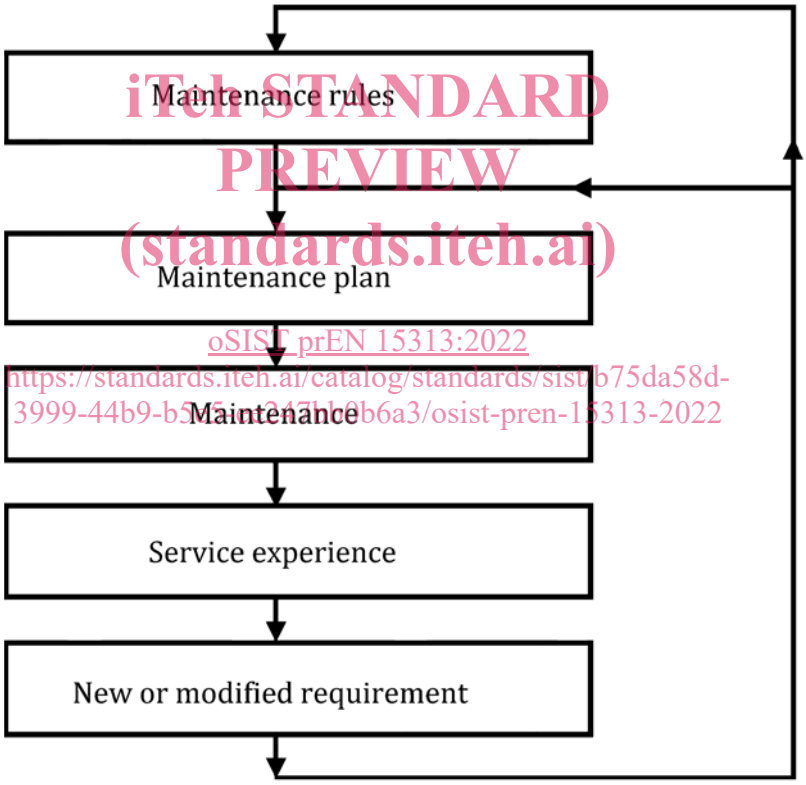

Figure 2 — Service experience

4.2.4 Traceability – storage – transportation

4.2.4.1 Wheelset identification

In order to ensure traceability, in-service wheelsets shall have marks complying with the requirements of EN 13260:2020, EN 13261:2020 and EN 13262:2020.