RAUDTEEALASED RAKENDUSED. RÖÖBASTEE. TÖÖDE VASTUVÕTMINE. OSA 1: TÖÖD BALLASTIGA PEALISEHITISEL. SIRGE RÖÖBASTEE, PÖÖRMED JA RISTMED

Railway applications - Track - Acceptance of works - Part 1: Works on ballasted track - Plain line, switches and crossings

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13231-1:2023 sisaldab Euroopa standardi EN 13231-1:2023 ingliskeelset teksti.	This Estonian standard EVS-EN 13231-1:2023 consists of the English text of the European standard EN 13231-1:2023.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 22.11.2023.	Date of Availability of the European standard is 22.11.2023.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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English Version

Railway applications - Infrastructure - Acceptance of works - Part 1: Works on ballasted track - Plain line, switches and crossings

Applications ferroviaires - Voie - Réception des travaux - Partie 1: Travaux de voie ballastée - Voie courante et appareils de voie

Bahnanwendungen - Oberbau - Abnahme von Arbeiten - Teil 1: Arbeiten im Schotteroberbau - Gleise, Weichen und Kreuzungen

This European Standard was approved by CEN on 8 October 2023.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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 13231-1:2023) 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 May 2024, and conflicting national standards shall be withdrawn at the latest by May 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13231-1:2013.

The main changes compared to the previous edition EN 13231-1:2013 are listed below:

— Enlargement of the scope by inclusion of:

  — requirements for substructure works as the quality of these works is substantial for the building of new tracks or the renewal of existing tracks;

  — conformity requirements of all track materials with the relevant acceptance criteria of the customer and the specifications provided by the supplier.

— New structure of this document in order to offer higher processability/workability and clearer responsibilities in the track works acceptance process as follows:

  — separate clause for acceptance process including acceptance procedure, responsibilities and warranty specifications;

  — separation of requirements for new tracks and renewal works from those for maintenance works; systematic treatment of requirements for working parameters and track components;

  — separate consideration of requirements for corresponding measuring systems and specific documentation of measurements in a normative Annex;

  — structured presentation of the requirements for positioning, functionality, safety dimension and quality checks for switches and crossings and rail expansion devices, and separate consideration of corresponding measuring devices in a normative Annex.

— Implementation of new available measurement technologies on tamping and stabilizing machines.

— Comprehensive clarification on tamping, ballast stabilizing and ballast cleaning processes and sustainable use of track ballast.

— Revision of the existing tolerances.

— Definition of new parameters and the respective tolerances.

— Improved coordination with EN 13848 series by systematic references.

This document is one of the EN 13231 series “*Railway applications — Track — Acceptance of works*” as listed below:

— *Part 1: Works on ballasted track — Plain line, switches and crossings* (the present document)

— *Part 2: Acceptance of reprofiling rails in plain line, switches, crossings and expansion devices*

— *Part 5: Procedures for rail reprofiling in plain line, switches, crossings and expansion devices*

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

The European rail network has a variety of different track construction types, track components, construction materials, working equipment and methods. These have evolved historically and are also a result from different geographical and climatic conditions.

Therefore, in some cases, this document provides only minimum requirements. Additionally, national regulations may apply for particular parameters.

1 Scope

This document specifies technical requirements and tolerances for the acceptance of works on ballasted track situated on:

— plain line;

— switches and crossings; and

— rail expansion devices as part of the track

for 1 435 mm and wider track gauge railways.

The works on ballasted track, hereafter referred to as track works, concern construction of new track, track renewal and track maintenance.

This document specifies the requirements for substructure works, track geometry, absolute track position, working parameters of on track machines, track components, ballast cross section, structure gauge, stressing works, specific measurements and quality checks for switches and crossings and rail expansion devices, and for the measuring systems used to perform measurements, verifications and checks for the scope of acceptance. Requirements for responsibilities and documentation necessary for the acceptance of track works are specified.

This document also requires compliance of all track materials with the customer's relevant acceptance criteria and specifications provided by the supplier.

This document does not cover works related to reprofiling the railhead or the associated measurements, except for some measurements related to safety, as these works are covered by other parts of EN 13231 series.

Platform reconstruction works and level crossing works are not covered by this document.

This document does not apply to urban rail systems or ballastless track.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 932-1, *Tests for general properties of aggregates — Part 1: Methods for sampling*

EN 13145, *Railway applications — Track — Wood sleepers and bearers*

EN 13230 (all parts), *Railway applications — Track — Concrete sleepers and bearers*

EN 13232 (all parts), *Railway applications — Track — Switches and crossings*

EN 13450, *Aggregates for railway ballast*

EN 13481 (all parts), *Railway applications — Track — Performance requirements for fastening systems*

EN 13803, *Railway applications — Track — Track alignment design parameters — Track gauges 1 435 mm and wider*

EN 13848 (all parts), *Railway applications — Track — Track geometry quality*

EN 14033-2:2017, *Railway applications — Track — Railbound construction and maintenance machines — Part 2: Technical requirements for travelling and working*

EN 15273-1, *Railway applications — Gauges — Part 1: General — Common rules for infrastructure and rolling stock*

EN 15273-3, *Railway applications — Gauges — Part 3: Structure gauges*

3 Terms and definitions

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

ISO and IEC maintain terminology 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
absolute track position
position of the track measured from surrounding geodetic reference points

3.2
acceptance
declaration of the customer to the contractor that the works have been achieved in accordance with the contract

3.2.1
acceptance process
set of interrelated or interacting activities in order to deliver the acceptance

3.2.2
acceptance procedure
specific way to carry out the acceptance process

3.3
Actuation Locking Detection System
ALDS
system that ensures the correct movement and locking, and enables the verification of correct positioning of the moveable parts of switches and crossings

3.4
anti-creep device
device to stop or limit relative longitudinal movement between switch and stock rails

3.5
ballast stabilization
dynamic conditioning of the ballast bed which provides compaction of the ballast bed and an increase of the lateral track resistance

3.5.1
natural stabilization
achieved by train passing in service or machine passing during construction