SLOVENSKI STANDARD
SIST EN 15273-3:2013+A1:2017

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Železniške naprave - Profili - 3. del: Svetli profili

Railway applications - Gauges - Part 3: Structure gauges

Bahnanwendungen - Begrenzungslinien - Teil 3: Lichtraumprofile

Applications ferroviaires - Gabarits - Partie 3: Gabarit des obstacles

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45.060.01	Železniška vozila na splošno	Railway rolling stock in general

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EUROPEAN STANDARD

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EN 15273-3:2013+A1

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English Version

Railway applications - Gauges - Part 3: Structure gauges

Applications ferroviaires - Gabarits - Partie 3: Gabarit des obstacles

Bahnanwendungen - Begrenzungslinien - Teil 3: Lichtraumprofile

This European Standard was approved by CEN on 15 December 2012 and includes Amendment 1 approved by CEN on 31 July 2016.

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

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European foreword

This document (EN 15273-3:2013+A1:2016) 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of an identical text or by endorsement, at the latest by May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

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 includes Amendment 1, which was approved by CEN on 31 July 2016.

This document replaces document EN 15273-3:2013.

The start and end of the text added or modified by the amendment is indicated in the text with [A1⟩ and ⟨A1] respectively.

[A1⟩ This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports the essential requirements of Directive 2008/57/EC. ⟨A1]

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

[A1⟩ *text deleted* ⟨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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document is the third of a series of three parts of the European Standard covering gauges:

— EN 15273-1 covers general principles, phenomena shared by the infrastructure and by the rolling stock, reference profiles and their associated rules;

— EN 15273-2 gives the rules for dimensioning the vehicles as a function of their specific characteristics for the relevant gauge and for the related calculation method;

— EN 15273-3 gives the rules for dimensioning the infrastructure in order to allow vehicles built according to the relevant gauge and taking account of the specific constraints to operate within it.

1 Scope

This standard:

— defines the various profiles needed to install, verify and maintain the various structures near the structure gauge;
— lists the various phenomena to be taken into account to determine the structure gauge;
— defines a methodology that may be used to calculate the various profiles from these phenomena;
— lists the rules to determine the distance between the track centres;
— lists the rules to be complied with when building the platforms;
— lists the rules to determine the pantograph gauge;
— lists the formulae needed to calculate the structure gauges in the catalogue.

The defined gauge includes the space to be gauged and maintained to allow the running of rolling stock, and the rules for calculation and verification intended for sizing the rolling stock to run on one or several infrastructures without interference risk.

This standard defines methodologies to demonstrate gauge compatibility between infrastructure and rolling stock.

This standard defines the responsibilities of the following parties:

a) for the infrastructure:

   1) gauge clearance;

   2) maintenance;

   3) infrastructure monitoring.

b) for the rolling stock:

   1) compliance of the operating rolling stock with the gauge concerned;

   2) maintenance of this compliance over time.

The gauges included in these standards have been developed as part of their application on European railways. Other networks such as regional, local, urban and suburban networks may apply the gauge regulations defined in this standard. They may be required to make use of specific methodologies, particularly where:

— specific rolling stock is used (for example: underground trains, trams, etc. operating on two rails);
— use occurs in other ranges of radii;
— others, etc.

The catalogue included in this standard only includes a selection of gauges and is not exhaustive. Each network is free to define the gauges in accordance with their own needs.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13232-1, *Railway applications — Track — Switches and crossings — Part 1: Definitions*

EN 13232-3, *Railway applications — Track — Switches and crossings — Part 3: Requirements for wheel/rail interaction*

EN 13232-9, *Railway applications — Track — Switches and crossings — Part 9: Layouts*

EN 13803-1 *Railway applications — Track — Track alignment design parameters — Track gauges 1435 mm and wider — Part 1: Plain line*

[A1] EN 15273-1:2013+A1:2016 [A1], *Railway applications — Gauges — Part 1: General — Common rules for infrastructure and rolling stock*

[A1] EN 15273-2: 2013+A1:2016 [A1], *Railway applications — Gauges — Part 2: Rolling stock gauge*

EN 50119, *Railway applications — Fixed installations — Electric traction overhead contact lines*

EN 50367, *Railway applications — Current collection systems — Technical criteria for the interaction between pantograph and overhead line (to achieve free access)*

3 Terms and definitions

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

3.1 structure gauge

defines the space, relative to the track used called the reference track, to be cleared of all objects or structures and relative to the traffic on adjacent tracks in order to permit safe operation on this reference track.

Note 1 to entry: The structure gauge is defined on the basis of the reference profile by applying the associated rules.

Three types of structure gauge are defined as follows:

3.1.1 structure verification limit gauge

space not to be encroached upon at any time which sets the limit for normal operation

Note 1 to entry: This is used to ensure that structures allow free passage. It is essential that no structure enters this at any time.

3.1.2 structure installation limit gauge

space not to be encroached upon taking into account a maintenance allowance

Note 1 to entry: This is used to define the structure installation limit. It is essential that no structure shall be installed if free passage is desired following normal maintenance operations.

3.1.3 structure installation nominal gauge

space to be cleared of any structure in order to enable train operations and track maintenance by incorporating allowances for safety, maintenance as well as reserve allowances defined by the person responsible for the infrastructure

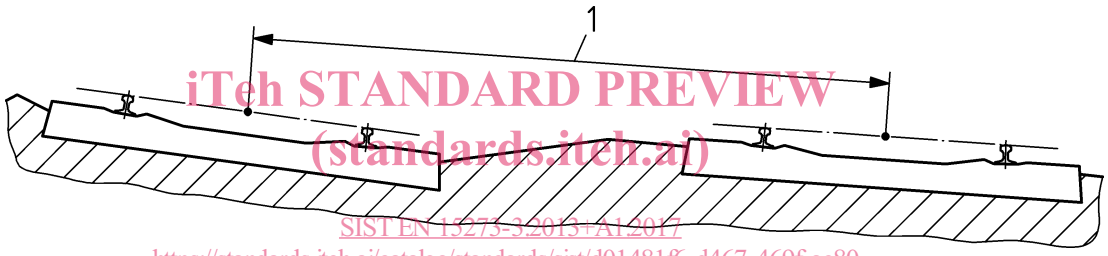
Note 1 to entry: This space for example takes into account exceptional dynamic movements, possible increases in speed, crosswinds, aerodynamic effects, etc.

3.2 distance between track centres

distance between the centres of the two adjacent tracks concerned, measured parallel to the running surface of the track with the least cant, called the reference track

Note 1 to entry: On the track, the distance between centres is often determined on the basis of the space between centres which is the distance between the two rails of the adjacent tracks. The exact measurement references (guideline, field face, rail centrelines) differ from one network to another.

Note 2 to entry: The definition of distance between centres adopted in this standard may differ from those used in other applications, such as installation for example. It is the responsibility of the infrastructure manager to determine the various conversion rules.



Key

1 distance between track centres

Figure 1 — Distance between track centres

3.2.1 verification limit distance between centres

minimum distance to be maintained at all times between adjacent tracks to ensure completely safe passage of traffic within the gauge used on the two tracks by avoiding any risk of interference between the vehicles

Note 1 to entry: This distance varies according to the local track parameters (e.g. cant, curve radius, etc.)

3.2.2 installation limit distance between centres

minimum distance between adjacent tracks to ensure completely safe passage of traffic within the gauge used on the two tracks by avoiding any risk of interference between the vehicles

Note 1 to entry: This distance varies according to the local track parameters (e.g. cant, curve radius, etc.). It takes into account maintenance allowances.