

SLOVENSKI STANDARD

oSIST prEN 13232-1:2014

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Železniške naprave - Zgornji ustroj - Kretnice in križišča - 1. del: Definicije

Railway applications - Track - Switches and crossings for Vignole rails - Part 1:
Definitions

Bahnanwendungen - Oberbau - Weichen und Kreuzungen für Vignolschienen - Teil 1:
Definitionen

Applications ferroviaires - Voie - Appareils de voie pour rails Vignole - Partie 1:
Définitions

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ICS:

01.040.45	Železniška tehnika (Slovarji)	Railway engineering (Vocabularies)
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 13232-1

October 2013

ICS 01.040.93; 93.100

Will supersede EN 13232-1:2003

English Version

Railway applications - Track - Switches and crossings for Vignole rails - Part 1: Definitions

Applications ferroviaires - Voie - Appareils de voie pour rails
Vignole - Partie 1: Définitions

Bahnanwendungen - Oberbau - Weichen und Kreuzungen
für Vignolschienen - Teil 1: Definitionen

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.

This draft European Standard was established by CEN 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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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: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (prEN 13232-1:2013) 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 13232-1:2003.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

This series of standards “*Railway applications – Track – Switches and crossings for Vignole rails*” covers the design and quality of switches and crossings in flat bottomed rail. The list of Parts is as follows:

- *Part 1: Definitions*
- *Part 2: Requirements for geometric design*
- *Part 3: Requirements for wheel/rail interaction*
- *Part 4: Actuation, locking and detection*
- *Part 5: Switches*
- *Part 6: Fixed common and obtuse crossings*
- *Part 7: Crossings with moveable parts*
- *Part 8: Expansion devices*
- *Part 9 : Layouts*

Part 1 contains terminology used throughout all parts of this series. Parts 2 to 4 contain basic design guides and are applicable to all switch and crossing assemblies. Parts 5 to 8 deal with particular types of equipment including their tolerances. These use Parts 1 to 4 as a basis. Part 9 defines the functional and geometric dimensions and tolerances for layout assembly.

The following terms are used within to define the parties involved in using the EN as the technical basis for a transaction:

- Customer the Operator or User of the equipment, or the Purchaser of the equipment on the User's behalf.
- Supplier the Body responsible for the use of the EN in response to the Customer's requirements.

1 Scope

This European Standard provides an accepted "terminology" for switch and crossing work. With the assistance of diagrams, the various components are given definitions, and these specific names are regarded as obligatory.

The definitions cover the constituent parts and design geometry of switch and crossing work, and include the movement of switches. Additional terminology of a more specific nature will be defined in the relevant part of the series.

The present definitions set out the terms most generally used for the geometrical form and the construction of switches and crossings, omitting those of too special a nature.

2 General definitions

2.1

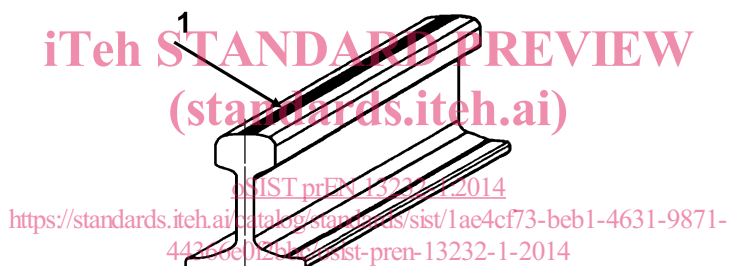
contact area

those parts of the rail ensuring the support and/or guidance, inside or outside, of a wheel. See Figure 5.

2.2

running table

upper surface of the head of a rail. See Figures 1 and 5.



Key

1 running table

Figure 1

2.3

running surface

curved surface defined by the longitudinal displacement of a straight line perpendicular to the centre-line of the track and tangential to both running tables. See Figure 2.

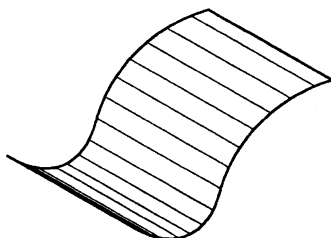
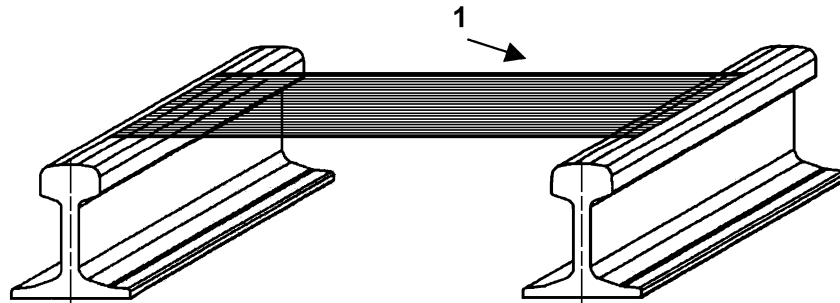


Figure 2

2.4**running plane**

flat plane tangential to the running surface at the considered point. See Figures 3 and 5.

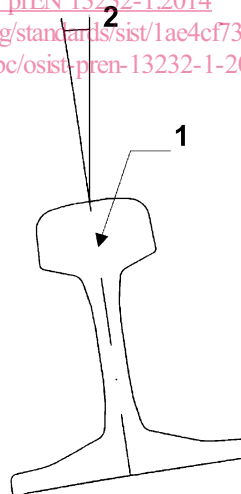
**Key**

1 running plane

Figure 3**2.5****rail inclination**

angle measured as a tangent (e.g. 1 in 20) between the normal to the running surface and the y-y axis of the rail. See Figures 4 and 5.

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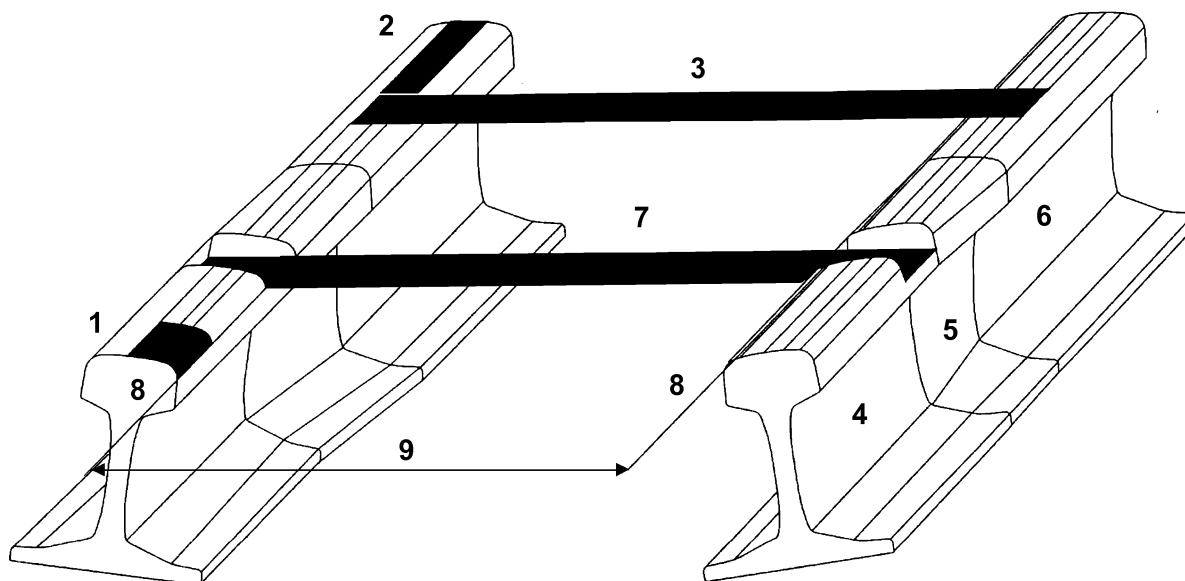
**Key**

1 y-y axis
2 rail inclination

Figure 4

2.6**inclined track**

where the axes of the two running rails are inclined inwards towards each other. See Figure 5.

**Key**

- 1 contact area
- 2 running table
- 3 running plane
- 4 inclined rail
- 5 rail twist

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Figure 5**2.7****vertical track**

where the axes of the two running rails are parallel, that is, have a rail inclination of zero. See Figure 5.

2.8**rail twist**

change in inclination of the rail (e.g. from 1 in 20 to vertical). See Figure 5.

2.9**gauge reference plane**

plane parallel to and below the running surface at a dimension "z". This dimension "z" is generally 14 mm. This plane is used for all design work, machining, and measurements. See Figures 5 and 6.



Figure 6

2.10**running edge**

intersection of the gauge reference plane with the inside of the rail head. See Figure 5.

2.11**track gauge**

distance between the corresponding running edges of the two rails. See Figure 5.

2.12**centre-line of track**

line midway between the running edges on straight track, and half normal gauge inside the running edge of the larger radius rail in curved track. See Figures 5 and 7.

2.13**high-side rail**

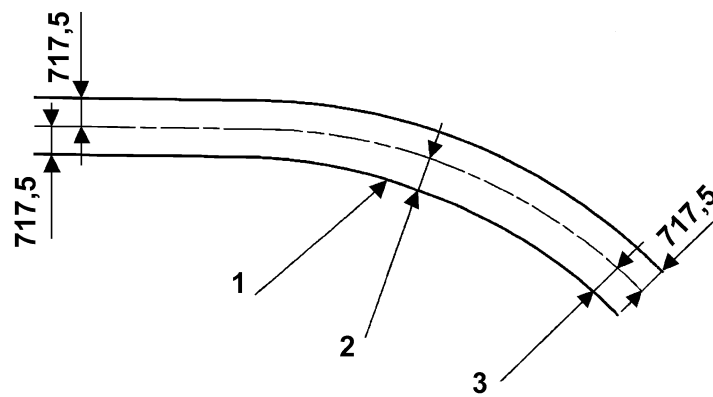
on curved track, the rail with the larger radius, i.e. centre-line radius plus half of track gauge

2.14**low-side rail**

on curved track, the rail with the smaller radius

2.15**gauge widening**

intended increase in track gauge. The radius of the low-side rail is decreased, and the distance between the centre-line of track and the low-side rail is increased, by the amount of gauge widening. See Figure 7.

**Key**

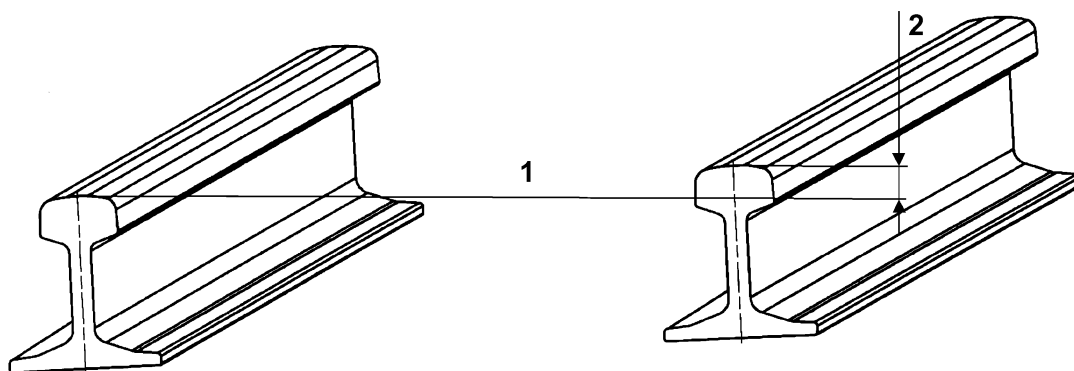
- 1 gauge widening on sharp curves
- 2 717,5 + gauge widening
- 3 717,5 + gauge widening
- G track gauge/2

Figure 7**2.16****sleeper or bearer spacing**

distance along the rails between the centre-lines of adjacent sleepers or bearers

2.17**cant (superelevation)**

difference in height, relative to the horizontal, of the two rails of one track at a particular location, measured at the centrelines of the heads of the rails. See Figure 8.

**Key**

- 1 horizontal
- 2 cant (superelevation)

Figure 8

2.18**equilibrium cant**

cant for which at a particular stated speed the resultant of the load of vehicle and the centrifugal force is perpendicular to the running plane

2.19**cant deficiency**

difference between the applied cant on the track and the equilibrium cant for the vehicle at the particular stated speed

3 Definitions of special trackwork**3.1****switch and crossing work**

trackwork ensuring the support and guidance of a vehicle along any given route among various diverging or intersecting tracks. The term (switch and crossing work) is amplified to include certain items having other functions (for example, expansion devices).

Note 1 to entry: Switches are in some circumstances described as points - either word is considered acceptable. (English version only)

All sketches represent the running edges. All turnouts are viewed from the switch toe (see 4.2.1).

3.2**turnout**

layout permitting the passage of rolling stock between two tracks and one common track. See Figure 9.

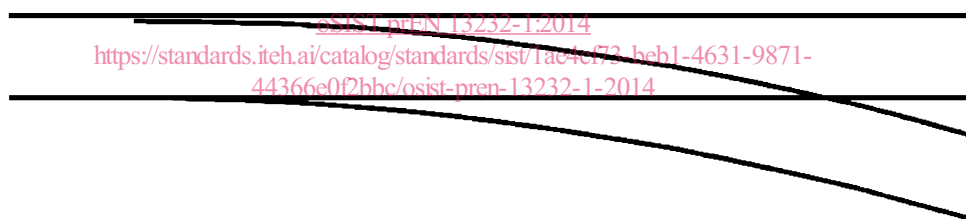


Figure 9

3.3**diamond crossing**

layout permitting the passage of rolling stock on intersecting tracks. See Figure 10.