



# SLOVENSKI STANDARD

## SIST EN 13230-5:2016

01-julij-2016

Nadomešča:  
SIST EN 13230-5:2009

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**Železniške naprave - Zgornji ustroj proge - Betonski pragi in kretniški betonski pragi - 5. del: Posebne oblike pragov**

Railway applications - Track - Concrete sleepers and bearers - Part 5: Special elements

Bahnanwendungen - Oberbau - Gleis- und Weichenschwellen aus Beton - Teil 5: Sonderformen

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Applications ferroviaires - Voie - Traverses et supports en béton - Partie 5 : Eléments spéciaux

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**Ta slovenski standard je istoveten z: EN 13230-5:2016**

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**ICS:**

45.080	Tračnice in železniški deli	Rails and railway components
91.100.30	Beton in betonski izdelki	Concrete and concrete products

**SIST EN 13230-5:2016**

**en**

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EUROPEAN STANDARD

EN 13230-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2016

ICS 91.100.30; 93.100

Supersedes EN 13230-5:2009

English Version

## Railway applications - Track - Concrete sleepers and bearers - Part 5: Special elements

Applications ferroviaires - Voie - Traverses et supports  
en béton - Partie 5 : Eléments spéciaux

Bahnanwendungen - Oberbau - Gleis- und  
Weichenschwellen aus Beton - Teil 5: Sonderformen

This European Standard was approved by CEN on 4 March 2016.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of 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 United Kingdom.

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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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## European foreword

This document (EN 13230-5:2016) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This document supersedes EN 13230-5:2009.

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 November 2016, and conflicting national standards shall be withdrawn at the latest by November 2016.

This European Standard is one of the EN 13230 (series) “*Railway applications – Track – Concrete sleepers and bearers*”, which consist of the following parts:

- Part 1: General requirements;
- Part 2: Prestressed monoblock sleepers;
- Part 3: Twin-block reinforced sleepers;
- Part 4: Prestressed bearers for switches and crossings;
- Part 5: Special elements;
- Part 6: Design.

There is a change in the wording of the documents of EN 13230 (series): “design bending moment” is replaced by “characteristic bending moment” and “test bending moment”.

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, 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.

**EN 13230-5:2016 (E)****Introduction**

This part of the EN 13230 series defines the specific requirements relating to special elements.

These are additional requirements to EN 13230-1:2016 that are necessary to have a complete standard dealing with special elements.

These special elements are prestressed concrete special elements as special sleepers or special bearers and reinforced concrete special elements. They are generally used within specific domains of the track for ballastless tracks, for bridges, or with check rails for instance.

This part of EN 13230 defines additional technical criteria and control procedures related to manufacturing and testing special elements. It completes the requirements of EN 13230-2:2016, EN 13230-3:2016 and EN 13230-4:2016.

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## 1 Scope

This part of the EN 13230 series defines additional technical criteria and control procedures for manufacturing and testing special elements.

## 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 13230-1:2016, *Railway applications – Track – Concrete sleepers and bearers – Part 1: General requirements*

EN 13230-2:2016, *Railway applications – Track – Concrete sleepers and bearers – Part 2: Prestressed monoblock sleepers*

EN 13230-3:2016, *Railway applications – Track – Concrete sleepers and bearers – Part 3: Twin-block reinforced sleepers*

EN 13230-4:2016, *Railway applications – Track – Concrete sleepers and bearers – Part 4: Prestressed bearers for switches and crossings*

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## 3 Terms and definitions (standards.iteh.ai)

For the purposes of this document, the terms and definitions given in EN 13230-1:2016 and the following apply. <https://standards.iteh.ai/catalog/standards/sist/c73ca198-816a-48ad-bc25-74b88d4e8104/sist-en-13230-5-2016>

### 3.1

#### special element

any individual concrete element supporting rails in the field of railway track construction, to which this standard is relevant, but which is not included in EN 13230-2:2016, EN 13230-3:2016 or EN 13230-4:2016 (slabs and longitudinal beams are excluded)

## 4 Requirements

A special element shall be defined by detailed drawings including tolerances.

All the tolerances specified in EN 13230-1:2016 which relate to the concrete elements, the rails, the fastening system and gauge shall be specified by the purchaser.

The purchaser shall specify the positive and negative characteristic bending moments to be applied:

- a) at the rail seat section;
- b) at the centre section or any relevant section.

**EN 13230-5:2016 (E)****5 Product testing**

EN 13230-1:2016, Clause 7, shall apply to any special element supporting rails for railway track applications.

Depending on the type of element and whether the concrete is prestressed or reinforced, the appropriate following clauses shall be for application:

- a) either EN 13230-2:2016, Clause 4;
- b) or EN 13230-3:2016, Clause 4;
- c) or EN 13230-4:2016, Clause 5.

If possible, the special parts of the element shall be checked according to the requirements of the purchaser and the quality plan of the manufacturing unit.

If not, the manufacturer shall have a special agreement with the purchaser in order to define the testing method.

**6 Manufacturing**

Depending on the type of element and whether the concrete is prestressed or reinforced, the appropriate following clauses shall be used:

- a) either EN 13230-2:2016, Clause 5; **(standards.iteh.ai)**
- b) or EN 13230-3:2016, Clause 7;
- c) or EN 13230-4:2016, Clause 6.

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Any special requirement to be incorporated during the manufacturing process shall be defined by the purchaser.

**7 Data to be supplied**

The purchaser shall supply all the data detailed in EN 13230-1:2016 and either EN 13230-2:2016, EN 13230-3:2016 or EN 13230-4:2016, in addition to any further special requirement.



## Annex A (informative)

### Definition of special elements – Basic examples

#### A.1 Prestressed concrete special elements

##### A.1.1 Special sleepers

See EN 13230-2:2016:

- a) with conductor rail;
- b) with check rail;
- c) for dual gauge;
- d) for level crossing;
- e) for expansion joints;
- f) for guard rail;
- g) for ballastless track;
- h) for accommodating cables.

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##### A.1.2 Special bearers

See EN 13230-4:2016:

- a) for dual gauge;
- b) for expansion joints;
- c) for ballastless track;
- d) for hot-box detectors;
- e) for bridges;
- f) bearers for switches and crossings more than 8,5 m long;
- g) for accommodating cables.