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BETONLIIPRID JA -PRUSSID. OSA 2: EELPINGESTATUD  
MONOLIITLIIPRID

Railway applications - Track - Concrete sleepers and  
bearers - Part 2: Prestressed monoblock sleepers

## EESTI STANDARDI EESSÕNA

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ICS 91.100.30, 93.100

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EUROPEAN STANDARD

EN 13230-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2016

ICS 91.100.30; 93.100

Supersedes EN 13230-2:2009

English Version

## Railway applications - Track - Concrete sleepers and bearers - Part 2: Prestressed monoblock sleepers

Applications ferroviaires - Voie - Traverses et supports en béton - Partie 2 : Traverses monoblocs précontraintes

Bahnanwendungen - Oberbau - Gleis- und Weichenschwellen aus Beton - Teil 2: Spannbeton-Monoblockschwellen

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

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## European foreword

This document (EN 13230-2:2016) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This document supersedes EN 13230-2:2009.

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of an identical text or by endorsement, at the latest by November 2016, and conflicting national standards shall be withdrawn at the latest by November 2016.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 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 2008/57/EC.

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

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.

## **Introduction**

This part of the EN 13230 series defines the specific requirements dedicated to prestressed monoblock sleepers.

These are additional requirements to EN 13230-1 that are necessary to have a complete standard dealing with prestressed monoblock sleepers.

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## 1 Scope

This part of the EN 13230 series defines additional technical criteria and control procedures related to the manufacturing and testing of prestressed monoblock sleepers.

## 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 206, *Concrete - Specification, performance, production and conformity*

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

prEN 13230-6:2015, *Railway applications – Track – Concrete sleepers and bearers – Part 6: Design*

FprEN 10138 (all parts), *Prestressing steels*

## 3 Terms, definitions and symbols

### 3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13230-1:2016 and the following apply.

#### 3.1.1

##### **Pre-tensioned monoblock sleeper**

sleeper manufactured using pre-tensioned tendons

#### 3.1.2

##### **post-tensioned monoblock sleeper**

sleeper manufactured using post-tensioned tendons