
**Railway applications — Concrete
sleepers and bearers for track —**

**Part 1:
General requirements**

*Applications ferroviaires — Traverses et supports en béton pour la
voie —*

Partie 1: Exigences générales



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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 269, *Railway applications*, Subcommittee SC 1, *Infrastructure*.

This document is used in conjunction with ISO 22480-2.

A list of all parts in the ISO 22480 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document covers the general requirements for concrete sleepers and bearers.

Concrete sleepers and bearers are safety critical components for railway applications. They are not covered by any other International Standards for structural concrete.

As safety critical components, an agreement is needed between the purchaser and the supplier to perform sleeper design and manufacture as well as to operate a factory quality system.

Railway applications — Concrete sleepers and bearers for track —

Part 1: General requirements

1 Scope

This document defines technical criteria and control procedures which need to be satisfied by the constituent materials and the finished concrete sleepers and bearers, i.e. precast concrete sleepers, twin-block reinforced sleepers, bearers for switches and crossings, and special elements for railway tracks.

This document defines mechanical tests which provide assurance of the capability of sleepers or bearers to resist repetitive loading and provide sufficient durability. In addition, it places controls on manufacturing processes and tests to ensure that the concrete will not suffer degradation in service through chemical reaction and frost damage.

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.

ISO 22480-2, *Railway applications — Concrete sleepers and bearers for track — Part 2: Prestressed monoblock sleepers*

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ISO 6506-1, *Metallic materials — Brinell hardness test — Part 1: Test method*

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:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

purchaser

body responsible for acquiring the product on the end user's behalf

3.2

supplier

body responsible for the use of this document in response to the *purchaser's* (3.1) requirement, and for requirements which apply to the *manufacturer* (3.3)