INTERNATIONAL STANDARD

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Second edition
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Timber structures — Bending applications of I-beams —

Part 2: Component performance and manufacturing requirements

Structures en bois — Résistance à la flexion des poutres en I —
Partie 2: Performances des composants et exigences de production

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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Contents

Page

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 165, *Timber structures*.

This second edition cancels and replaces the first edition (ISO 22389-2:2012), which has been technically revised. The main changes compared to the previous edition are as follows:

— The update of dimensional tolerances in 5.2.

A list of all parts in the ISO 22389 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

Prefabricated wood-based I-beams are being produced in many different countries under different national standards and these products are being exported from one country to another. While the national standards have many similarities there are also many areas of dissimilarity. Thus, there is a need for the development of an International Standard to establish consistency among these national standards to ensure the suitability of prefabricated wood-based I-beams for end use applications, regardless of the country of manufacture or of end use. This document will be of benefit to industry, consumers, governments and distributors.

Timber structures — Bending applications of I-beams —

Part 2:
Component performance and manufacturing requirements

1 Scope

This document specifies the component performance and manufacturing requirements for prefabricated wood-based I-beams used as structural members in bending applications. It does not cover fire performance, formaldehyde requirements and biological durability.

This document gives requirements for manufacturing, in-house quality assurance and periodic re-evaluation of prefabricated wood-based I-beams.

Wood-based I-beams tested according to this document are intended for use in covered conditions and utilizing components that are able to resist the effects of moisture on structural performance due to construction delays or other conditions of similar severity, but not permanently exposed to the weather.

NOTE The service conditions are similar to "Service class 2" as defined in ISO 20152-1.

Testing, evaluation and performance characterization requirements for prefabricated wood-based I-beams are covered in ISO 22389-1.

This document does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this document to establish appropriate health and safety practices and determine the applicability of regulatory limitations prior to use.

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 20152-1, *Timber structures — Bond performance of adhesives — Part 1: Basic requirements*

ISO 22389-1:2010, *Timber structures — Bending strength of I-beams — Part 1: Testing, evaluation and characterization*

ISO 22390, *Timber structures — Laminated veneer lumber — Structural properties*

EN 789, *Timber structures — Test methods — Determination of mechanical properties of wood based panels*

ASTM D5456, *Standard Specification for Evaluation of Structural Composite Lumber Products*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/