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Bambuskonstruktioner – Bestemmelse af fysiske og mekaniske egenskaber for bambusstængler – Prøvningsmetoder

Bamboo structures – Determination of physical and mechanical properties of bamboo culms – Test methods



DANSK STANDARD
Danish Standards Association

Göteborg Plads 1
DK-2150 Nordhavn
Tel: +45 39 96 61 01
Tel: +45 39 96 61 01
dansk.standard@ds.dk
www.ds.dk

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Bamboo structures — Determination of physical and mechanical properties of bamboo culms — Test methods

Structures en bambou — Détermination des propriétés physiques et mécaniques des tiges de bambou — Méthodes d'essais



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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@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).

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).

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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 165, *Timber structures*.

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.

This first edition cancels and replaces ISO 22157-1:2004.

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Bamboo structures — Determination of physical and mechanical properties of bamboo culms — Test methods

1 Scope

This document specifies test procedures for specimens obtained from round bamboo culms. The data obtained from the test methods can be used to establish characteristic physical or mechanical properties to be used in structural engineering design or for other scientific purposes. This document provides methods for evaluating the following physical and strength properties: moisture content, density, mass per unit length; strength properties parallel to the fibre direction, compression, tension and bending, and strength properties perpendicular to the fibre direction, tension and bending. It also provides methods to estimate moduli of elasticity in bending, compression and tension parallel to fibres, and bending perpendicular to fibres.

The test methods reported in this document are intended for commercial testing applications. The test methods reported in this document are intended for commercial testing applications and can also be adopted as benchmark methods for scientific research.

This document is organized to provide requirements for standard tests to be carried out to determine the material properties of full-culm bamboo as a structural material.

2 Normative references

There are no normative references in this document.