INTERNATIONAL STANDARD

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Timber structures — Solid timber finger-jointing — Production requirements

Structures en bois — Aboutages à entures multiples de bois massif — Exigences de fabrication

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Contents

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 10983 was prepared by Technical Committee ISO/TC 165, *Timber structures.*

Annexes A and B of this International Standard are for information only.

Introduction

This International Standard is based on European Standard EN 385:1995, *Finger-jointed structural timber — Performance requirements and minimum production requirements,* but has been modified for international use. In particular, the requirements for external control of production by an external independent organization have been omitted, as this is regarded as the responsibility of national regulatory bodies and not a matter for inclusion in an International Standard. However, TC 165 is not prepared to recommend the use of finger joints in structural timber components where the manufacturing process is not described by a works' quality manual for the following reasons.

a) Structural properties can only be assigned to a finger joint which is clearly defined. Such definition requires a clear statement, within the works' quality manual, which details the raw material inputs (wood and adhesive) and the manufacturing process.

b) Processes which are not written in a works' quality manual and promulgated to the personnel responsible for manufacturing the finger joint are unlikely, over lengthy periods of time, to be manufactured consistently.

Other principles built into the development of this International Standard are as follows.

— This International Standard applies only to the finger-joint production and makes reference only to the maintenance of finger-joint strength. Finger joints are found in both glulam laminations and finger joints and finger-jointed timber used directly for structural applications. No attempt is made in this International Standard to relate compliance testing to the properties of either glulam or finger-jointed timber.

— Type testing is undertaken to establish characteristic strengths and thence target strengths for compliance (daily quality control) testing. The precise test configurations are not specified in this International Standard, which permits the use of a wide variety test equipment. However, it is a requirement that the same equipment and configuration used for type testing also be used for compliance testing. Both bend and tension tests are provided for compliance testing.

Timber structures — Solid timber finger-jointing — Production requirements

1 Scope

This International Standard specifies requirements for bonded finger joints and minimum requirements for the manufacture of cut, interlocking, bonded finger joints in structural timber members.

Although most finger joints are produced in coniferous species, this International Standard also applies to broad-leaved species where information is available to enable them to be satisfactorily bonded.

It does not cover impressed (die-formed) joints. In the case of glued laminated timber it applies only to individual laminations. Large finger joints in glued laminated timber are not covered by this International Standard.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, this publication do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

EN 301, *Adhesives for load bearing timber structures — Phenolic and amino-plastic — Classification and performance requirements*.

3 Terms and definitions

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

3.1
finger joint
self-locating end joint formed by machining a number of similar, tapered, symmetrical fingers in the ends of timber members which are then bonded together

See Figure 1.

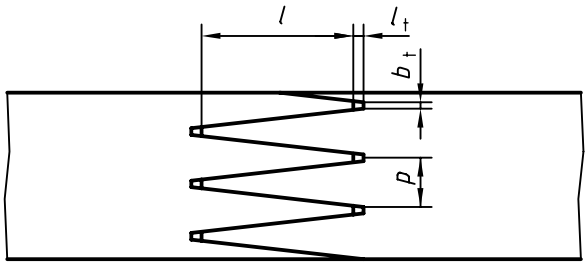

Figure 1 — Typical profile of finger joint showing finger length l, pitch p, tip width b_t, and tip gap l_t