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Standards

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I.S. EN 14081-1:2005+A1:2011

Timber structures - Strength graded structural timber with rectangular cross section - Part 1: General requirements

I.S. EN 14081-1:2005+A1:2011

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English Version

**Timber structures - Strength graded structural timber with
rectangular cross section - Part 1: General requirements**

Structures en bois - Bois de structure à section
rectangulaire classé pour sa résistance - Partie 1:
Exigences générales

Holzbauwerke - Nach Festigkeit sortiertes Bauholz für
tragende Zwecke mit rechteckigem Querschnitt - Teil 1:
Allgemeine Anforderungen

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Foreword

This document (EN 14081-1:2005+A1:2011) has been prepared by Technical Committee CEN/TC 124 “Timber structures”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by August 2011, and conflicting national standards shall be withdrawn at the latest by August 2011.

This document includes Amendment 1, approved by CEN on 2010-12-20.

This document supersedes A1 EN 14081-1:2005 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This European Standard 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(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this European Standard.

A1 *deleted text* A1

Other parts of this European Standard are:

EN 14081-2 Timber structures - Strength graded structural timber with rectangular cross section - Part 2: Machine grading; additional requirements for initial type testing,

EN 14081-3 Timber structures - Strength graded structural timber with rectangular cross section - Part 3: Machine grading; additional requirements for factory production control,

EN 14081-4 Timber structures - Strength graded structural timber with rectangular cross section - Part 4: Machine grading; grading machine settings for machine controlled systems.

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Introduction

There are basically two methods of strength grading: visual grading and machine grading.

Machine grading is in common use in a number of countries. The countries use two basic systems, referred to as 'output controlled' and 'machine controlled'. Both systems require a visual override inspection to cater for strength-reducing characteristics that are not automatically sensed by the machine.

The output-controlled system is suitable for use where the grading machines are situated in sawmills grading limited sizes, species and grades in repeated production runs of around one working shift or more. This enables the system to be controlled by testing timber specimens from the daily output. These tests together with statistical procedures are used to monitor and adjust the machine settings to maintain the required strength properties for each strength class. With this system it is permissible for machine approval requirements to be less demanding and for machines of the same type to have non-identical performance.

The machine controlled system was developed in Europe. Because of the large number of sizes, species and grades used it was not possible to carry out quality-control tests on timber specimens drawn from production. The system relies therefore, on the machines being strictly assessed and controlled, and on considerable research effort to derive the machines settings, which remain constant for all machines of the same type.

There are many different visual strength grading rules for timber in use in Europe. These have come into existence to allow for:

- different species or groups of species;
- geographic origin;
- different dimensional requirements;
- varying requirements for different uses;
- quality of material available;
- historic influences or traditions.

Because of the diversity of existing visual grading rules in use in different countries, it is currently impossible to lay down a single set of acceptable rules for all Member States.

The requirements given in this European Standard on visual strength grading rules therefore give basic principles, which should be followed when drawing up requirements for limits for some of the characteristics.

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