First edition
2010-04-01

Timber poles — Basic requirements and test methods

Poteaux en bois — Exigences de base et méthodes d'essai

Reference number
ISO 15206:2010(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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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 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 15206 was prepared by Technical Committee ISO/TC 165, *Timber structures*.

Introduction

This International Standard covers the requirements for grading and assignment of characteristic values that can be used for the design of timber poles used as cantilevers and/or in compression.

It is the responsibility of the supplier to always ensure that all products supplied are in conformity with the requirements of this International Standard and any other specification with which they are provided. This International Standard is intended for the initial determination of the characteristic values for a given population of poles and additional determination when there is a reason to suspect that the characteristics of a population have changed.

This International Standard recognizes that there are many different visual strength-grading rules for timber in use internationally. These have come into existence to allow for

— different species or groups of species,

— geographic origin,

— different dimensional requirements,

— varying requirements for different uses,

— the quality of material available, and

— historical influences or traditions.

Because of the diversity of existing standards for wood poles for overhead lines in use in different countries, it is impossible to lay down a single set of acceptable visual grading rules.

This International Standard therefore gives the basic principles to be followed when drawing up regional, national, local or buyer requirements for some characteristics and sets limits for others.

In laying down visual grading rules, two main factors are relevant:

— they shall clearly define and limit the strength-affecting characteristics in poles, such that there is very high confidence that poles supplied meet the required characteristic strength value;

— the rules and the text are such that they can be easily understood and be suitable for implementation by grading personnel.

This International Standard is also concerned with the durability characteristics of wood poles for overhead power and telecommunication lines. It assumes that all such poles are constructed from round timber in which the finished product comprises either a central core of heartwood surrounded by a zone of sapwood or the heartwood only. Such assumptions dictate that where sapwood is present, preservative treatment is normally required in order to provide the poles with sufficient enhanced durability, unless the amount of sapwood present is such that its loss would not compromise the integrity of the pole during its service life and the heartwood has sufficient natural durability as required by this International Standard.

Some timber species do not allow an easy differentiation between heartwood and sapwood. Various standards provide recommendations to address this problem; for example, EN 351-1 and AS 2209:1994 (Appendix D) specify the method of treatment of such timber when preservation is required.