Australian Standard™

Timber—Heavy structural products—Visually graded

Part 4: Cross-arms for overhead lines

This Australian Standard was prepared by Committee TM/3, Timber Grading. It was approved on behalf of the Council of Standards Australia on 19 November 1999 and published on 18 February 2000.

The following interests are represented on Committee TM/3:

Australian Timber Importers Federation

CSIRO—Building, Construction and Engineering

Curtin University of Technology

Forest and Forest Products Employment Skills

Housing Industry Association

Master Builders Australia

New Zealand Forest Research Institute

New Zealand Timber Industry Federation

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Timber—Heavy structural products—Visually graded

Part 4: Cross-arms for overhead lines

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM/3, Timber Grading, to supersede AS O61—1955, *Cross-arms from Eastern and South-eastern Australian hardwoods* and AS O20 — 1948, *Grading rules for cross-arms* (Jarrah and Karri).

The objective of this Standard is to provide producers and users of timber cross-arms with requirements for the visual grading and selection of species of such timbers intended for use in supporting overhead utility services.

The grades given in this Standard are based on those in AS O20 and AS O61 and on Structural Grades 1 and 2 of AS 2082 with particular regard to the requirements of cross-arms in use.

Appendices have been included to give —

(a) information required for purchasing orders;

(b) list of acceptable species and properties; and

(c) design properties.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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1 SCOPE

This Standard sets out the minimum requirements for visual grading of cross-arms intended for use in supporting overhead utility services.

NOTE: Purchasing guidelines are given in Appendix A.

2 APPLICATION

This Standard shall be used in conjunction with AS 3818.1 to specify timber cross-arms. Lists of appropriate species for cross-arms and stress grades applicable to strength groups are given in this Standard.

3 PURPOSE AND CONTEXT OF USE

3.1 Function

Cross-arms form the supporting crosspiece fixed to utility services poles from which overhead utility services are suspended.

3.2 Action

Cross-arms are subjected to—

(a) loads acting directly on the cross-arm;

(b) loads transmitted through bolts from the suspended cables including dead load, wind action and other loads;

NOTE: In some areas icing will also affect the loads carried by cross-arms.

(c) loads due to tension in the suspended cables especially at the end of cable runs;

(d) the effects of exposure such as ultraviolet radiation, temperature and moisture change; and

(e) deterioration of the timber due to insect and fungal attack.

4 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1148 Nomenclature of commercial timbers imported into Australia

1604 Timber—Preservative-treated—Sawn and round

1720 Timber structures

1720.1 Part 1: Design methods

1720.2 Part 2: Timber properties

2082 Timber—Hardwood—Visually stress-graded for structural purposes

2543 Nomenclature of Australian timbers

