

Australian Standard[®]

**Timber—Heavy structural products—
Visually graded**

Part 4: Cross-arms for overhead lines

STANDARDS
Australia



This Australian Standard® was prepared by Committee TM-003, Timber Grading. It was approved on behalf of the Council of Standards Australia on 27 October 2010. This Standard was published on 15 November 2010.

The following are represented on Committee TM-003:

- A3P
- Australian Timber Flooring Association
- BRANZ
- CSIRO Manufacturing, and Infrastructure Technology
- Forest and Wood Products Australia
- Forests New South Wales
- Frame and Truss Manufacturers Association Australia
- Master Builders Australia
- New Zealand Timber Industry Federation
- Tasmanian Timber Promotion Board
- Timber and Building Materials Association (NSW)
- Timber Queensland
- University of Technology, Sydney
- Wood Processors Association

Additional Interests:

- Dr Geoff Boughton
-

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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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-003, Timber Grading, to supersede AS 3818.4—2003.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

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 timbers intended for use in supporting overhead utility services.

The objectives of this revision are as follows:

- (a) To complete an overview of the AS 3818 series, with regard to consistency and alignment between all Parts.
- (b) To change the format of this Part of the Standard series from single section to multiple sections.

This Standard is Part 4 of the AS 3818 series, *Timber—Heavy structural products—Visually graded*, which is composed of the following parts:

AS

3818	Timber—Heavy structural products—Visually graded
3818.1	Part 1: General requirements
3818.2	Part 2: Railway track timbers
3818.3	Part 3: Piles
3818.4	Part 4: Cross-arms for overhead line (this Standard)
3818.5	Part 5: Mine lift guides
3818.6	Part 6: Decking for wharves and bridges
3818.7	Part 7: Large section sawn hardwood engineering timbers
3818.8	Part 8: Stumps and sole plates
3818.9	Part 9: Natural round tapered hardwood corbels, girders and stringers
3818.10	Part 10: Building poles
3818.11	Part 11: Utility poles

The grades given in this standard are based on those in previous Australian Standards for cross-arms and on Structural Grades 1 and 2 of AS 2082, *Timber—Hardwood—Visually stress-graded for structural purposes*, with particular regard to the requirements of cross-arms in use.

Appendices have been included to give advice on—

- (a) information required for purchasing orders; and
- (b) design properties.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard

Timber—Heavy structural products—Visually graded

Part 4: Cross-arms for overhead lines

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

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

NOTES:

- 1 Purchasing guidelines are given in Appendix A.
- 2 Stress grades applicable to strength groups are given in Appendix B.

1.2 APPLICATION

This Standard shall be used in conjunction with AS 3818.1 to specify timber cross-arms.

1.3 PURPOSE AND CONTEXT OF USE**1.3.1 Function**

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

1.3.2 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.

1.4 NORMATIVE REFERENCE

The following is the normative document referenced in this Standard:

NOTE: Documents referenced for informative purposes are listed in the Bibliography.

AS

3818 Timber—Heavy structural products—Visually graded

3818.1 Part 1: General requirements