

Australian Standard™

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

Part 4: Cross-arms for overhead lines

This Australian Standard was prepared by Committee TM-003, Timber Grading. It was approved on behalf of the Council of Standards Australia on 11 June 2003 and published on 11 September 2003.

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Australian Timber Importers Association
CSIRO, Manufacturing and Infrastructure Technology
Curtin University of Technology
Forest and Forest Products Employment Skills
Housing Industry Association
Master Builders Australia
Plantation Timber Association of Australia
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This Standard was issued in draft form for comment as DR 02351.

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

Part 4: Cross-arms for overhead lines

Originated as part of AS O7—1937 and AS O61—1955.
Previous edition AS 3818.4—2000.
Second edition 2003.

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Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 5397 3

PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee TM-003, Timber Grading, to supersede AS 3818.4—2000. 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 such timbers intended for use in supporting overhead utility services.

This Standard is intended to be used in conjunction with AS 3818.1. It is Part 4 of the AS 3818 series, *Timber—Heavy structural products—Visually graded*, which is composed of the following parts:

- Part 1: General requirements
- Part 2: Railway track timbers
- Part 3: Piles
- Part 4: Cross-arms for overhead lines
- Part 5: Mine lift guides
- Part 6: Decking for wharves and bridges

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—

- (a) advice on information required for purchasing orders; and
- (b) design properties applicable to particular stress grades and species.

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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STANDARDS AUSTRALIA

Australian Standard**Timber—Heavy structural products—Visually graded****Part 4: Cross-arms for overhead lines****1 SCOPE**

This Standard sets out 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. Species for cross-arms are listed in AS 3818.1. 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

1720 Timber structures

1720.1 Part 1: Design methods

3818 Timber—Heavy structural products—Visually graded

3818.1 Part 1: General requirements

5604 Timber—Natural durability ratings

5 DEFINITIONS

For the purpose of this Standard, the definitions given in AS 3818.1 apply.