

Australian Standard[®]

Wire-rope slings

Part 1: Product specification



This Australian Standard® was prepared by Committee ME-025, Lifting Tackle. It was approved on behalf of the Council of Standards Australia on 10 November 2008. This Standard was published on 2 April 2009.

The following are represented on Committee ME-025:

- Australian Business
 - Australian Chamber of Commerce and Industry
 - Australian Forging Group
 - Australian Industry Group
 - Australian Maritime Safety Authority
 - Crane Industry Council of Australia
 - Department of Defence (Australia)
 - Engineers Australia
 - Institute of Quarrying Australia
 - National Association of Testing Authorities Australia
 - Victorian WorkCover Authority
 - WorkCover New South Wales
-

This Standard was issued in draft form for comment as DR 08123.

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.

Keeping Standards up-to-date

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting www.standards.org.au

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

Australian Standard[®]

Wire-rope slings

Part 1: Product specification

Originally as part of AS B286—1970.
Revised and redesignated AS 1666—1976.
Revised and redesignated in part as AS 1666.1—1996.
Second edition 2009.

COPYRIGHT

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 9065 8

PREFACE

This Standard was prepared by the Standards Australia Committee ME-025 Lifting Tackle, to supersede AS 1666.1—1995.

The other Standard in this series covering wire-rope slings is AS 1666.2, *Wire-rope slings, Part 2: Care and use*.

The objective of this Standard is to provide a specification for wire rope slings that ensures safety and fitness for purpose. It is for reference by manufacturers, importers, users and regulators.

This edition takes cognizance of EN 13414-1:2003, *Steel wire rope slings—Safety, Part 1: Slings for general lifting service*, and includes the following changes:

- (a) Revision of definition of working load limit (WLL).
- (b) Deletion of safe working load (SWL) from any part of the Standard.

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.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.

CONTENTS

	<i>Page</i>
1 SCOPE.....	4
2 NORMATIVE REFERENCES	4
3 DEFINITIONS.....	5
4 MATERIALS.....	10
5 DESIGN AND MANUFACTURE.....	11
6 WORKING LOAD LIMIT (WLL).....	17
7 MECHANICAL PROPERTIES	15
8 MARKING	16
9 TYPE TESTING OF MECHANICAL PROPERTIES	17
10 PROOF TEST	17

APPENDICES

A INFORMATION THAT SHOULD BE SUPPLIED WITH ENQUIRIES AND ORDERS	19
B TYPES OF SLING	20
C CONDITIONS FOR APPLICATION OF TEST FORCES	27
D MEANS OF DEMONSTRATING COMPLIANCE WITH THIS STANDARD.....	28
E BIBLIOGRAPHY.....	31

STANDARDS AUSTRALIA

Australian Standard**Wire-rope slings****Part 1: Product specification****1 SCOPE**

This Standard specifies requirements for wire-rope slings, including grommets and wire-rope sling assemblies, for general conditions of use. Wire-rope slings consist of steel wire rope and often include terminations such as ferrule-secured eyes, hand-spliced eyes, poured sockets or swage fittings.

NOTES:

- 1 Ferrules are defined in Clause 3.10 and are subject to the requirements in Clauses 4.3.1 and 5.7.2.
- 2 Hand-spliced eyes are defined in Clause 3.14 and are subject to the requirements in Clause 5.7.4.
- 3 Poured sockets are defined in Clause 3.20 and are subject to the requirements in Clauses 4.3.2 and 5.7.5.
- 4 Swage fittings are defined in Clause 3.32 and are subject to the requirements in Clauses 4.3.3 and 5.7.6.
- 5 Guidance on information that should be supplied with enquiries and orders is given in Appendix A.

2 NORMATIVE REFERENCES

The following documents are indispensable to the application of this Standard:

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

AS

1138	Thimbles for wire rope
1171	Methods for magnetic particle testing of ferromagnetic products and components
1666	Wire-rope slings
1666.2	Part 2: Care and use
2074	Steel castings
2193	Calibration and classification of force-measuring systems
2574	Non-destructive testing—Ultrasonic testing of steel castings and classification of quality
2759	Steel wire rope—Use, operation and maintenance
3507	Non-destructive testing
3507.1	Part 1: Guide to radiography for ferrous castings
3569	Steel wire ropes
3679	Structural steel
3679.1	Part 1: Hot-rolled bars and sections
3776	Lifting components for Grade T chain slings