AS 1418.1—1994

Australian Standard®

Cranes (including hoists and winches)

Part 1: General requirements

This Australian Standard was prepared by Committee ME/5, Cranes. It was approved on behalf of the Council of Standards Australia on 7 March 1994 and published on 20 June 1994.

The following interests are represented on Committee ME/5:

A.C.T. Occupational Health and Safety Office

Association of Consulting Engineers, Australia

Australian Chamber of Manufactures

Australian Institute of Building

Bureau of Steel Manufacturers of Australia

Construction and Mining Equipment Association of Australia

Crane Industry Council of Australia

Department of Defence (Commonwealth)

Department of Employment, Vocational Education, Training and Industrial Relations, Qld.

Department of Labour, S.A.

Department of Occupational Health, Safety and Welfare, W.A.

Electricity Supply Association of Australia

Institution of Engineers, Australia

Lifts Manufacturers Association of Australia

Maritime Services Board of New South Wales

Metal Trades Industry Association of Australia

Occupational Health and Safety Authority, Vic.

Port of Melbourne Authority

Public Works Department, N.S.W.

Railways of Australia Committee

Tasmania — Development and Resources

Telecom Australia

University of New South Wales

Water Board, Sydney— Illawarra—Blue Mountains

WorkCover Authority, N.S.W.

Work Health Authority, N.T.

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

AS 1418.1—1994

Australian Standard®

Cranes (including hoists and winches)

Part 1: General requirements

As 1418.1 first published as part of AS CB2—1938. Second edition 1960. Revised and redesignated in part as AS 1418.1—1977.

Revised and redesignated in part as AS 1418.1—1977. Second edition 1986.

Third edition 1994.

Incorporating: Amdt 1—1997 AS 1418.1 — 1994

2

PREFACE

This edition of this Standard was prepared by the Standards Australia Committee on Cranes to supersede AS 1418.1—1986, SAA Crane Code, Part 1: General requirements.

This Standard incorporates significant changes to AS 1418.1. Major technical changes include the following:

- (a) All references to glass fibre reinforced plastics material have been deleted.
- (b) The following Sections have been substantially revised to reflect the current movement towards harmonization with ISO Standards, and towards the limit states design approach for steel structures:
 - (i) Section 4—Crane loads.
 - (ii) Section 5—Design of crane structures.
 - (iii) Section 6—Stability.
- (c) Requirements for monorail beams have been incorporated into Section 5.
- (d) The following Sections were revised and updated as deemed necessary at this stage:
 - (i) Section 7—Crane mechanisms.
 - (ii) Section 8—Electrical equipment and controls.

As a result of the above changes, a number of Appendices have been deleted, but a new Appendix has been added, giving some information on the structure of the Crane Standards.

Other adjustments that have been made include the updating of referenced Standards, and editorial changes to align with current Standards Australia policy.

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

© Copyright - STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

AS 1418.1—1994

CONTENTS

3

	Po	age
FOREW	ORD	7
SECTIO	ON 1 SCOPE AND GENERAL	
1.1	SCOPE	8
1.2	NEW DESIGNS AND INNOVATIONS	8
1.3	INTERPRETATIONS	8
1.4	REFERENCED DOCUMENTS	8
1.5	DEFINITIONS	8
1.6	NOTATION	
SECTIO	ON 2 CLASSIFICATION OF CRANES	
2.1	SCOPE OF SECTION	. 9
2.2	GENERAL	. 9
2.3	GROUP CLASSIFICATION	. 9
SECTIO	ON 3 MATERIALS FOR CRANES	
3.1	SCOPE OF SECTION	
3.2	MATERIAL SPECIFICATIONS	12
3.3	MATERIAL PROPERTIES	12
SECTIO	ON 4 CRANE LOADS	
4.1	SCOPE OF SECTION	
4.2	REFERENCE TO OTHER PARTS OF THIS STANDARD	
4.3	DETERMINATION OF CRANE LOADS	
4.4	CATEGORIZATION OF CRANE LOADS	
4.5	PRINCIPAL LOADS	14
4.6	ADDITIONAL LOADS	21
4.7	SPECIAL LOADS	24
4.8	CATEGORIZATION OF FREQUENCY OF CRANE LOAD	
	COMBINATIONS	27
4.9	PRINCIPLES FOR DETERMINATION OF CRANE LOAD	
	COMBINATIONS	27
SECTIO	ON 5 DESIGN OF CRANE STRUCTURE	
5.1	SCOPE OF SECTION	30
5.2	BASIS OF DESIGN	30
5.3	DESIGN OBJECTIVE	30
5.4	METHOD OF DESIGN	30
5.5	FATIGUE STRENGTH	32
5.6	DESIGN FOR SERVICEABILITY DEFLECTION AND VIBRATION	32
5.7	DESIGN OF MONORAIL BEAMS	33
SECTIO	ON 6 STABILITY	
6.1	SCOPE OF SECTION	36
6.2	OVERTURNING	
6.3	STABILITY DURING ERECTION, MAINTENANCE AND WEIGHING	36
6.4	SAFETY AGAINST DRIFTING	36



The is a new provider i arenade and chare publication at the limit below	This is a free preview.	Purchase the	entire publication	at the link below:
--	-------------------------	--------------	--------------------	--------------------

Product Page

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation