

Australian Standard™

Cranes, hoists and winches—Safe use

Part 20: Self-erecting tower cranes

This Australian Standard was prepared by Committee ME-005, Cranes. It was approved on behalf of the Council of Standards Australia on 26 April 2005. This Standard was published on 1 July 2005.

The following are represented on Committee ME-005:

Association of Consulting Engineers Australia
Australian Elevator Association
Australian Industry Group
Australian Institute for Non-destructive Testing
Bureau of Steel Manufacturers of Australia
Construction and Mining Equipment Association of Australia
Crane Industry Council of Australia
Department for Administrative and Information Services (S.A.)
Department of Infrastructure, Energy and Resources (Tasmania)
Institution of Engineers Australia
State Chamber of Commerce
Victorian WorkCover Authority
WorkCover New South Wales
WorkSafe Western Australia

Keeping Standards up-to-date

Standards are living documents which 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 Standards may also be withdrawn.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 which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia, GPO Box 5420, Sydney, NSW 2001.

Australian Standard™

Cranes, hoists and winches—Safe use

Part 20: Self-erecting tower cranes

First published as AS 2550.20—2005.

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 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 6779 6

PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee ME-005. 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 the AS 2550 series of Standards is to provide uniform requirements and guidance for the safe use of cranes, hoists and winches.

It should be noted that Standards Australia uses the term ‘shall’ to indicate those requirements that have to be met if one wants to be in compliance with the objectives and intent of the Standard in question. However, nothing in this Australian Standard is required by law in any Australian jurisdiction, unless the Australian Standard has been specifically incorporated by an Act of regulation in the jurisdiction.

The Commonwealth, State and Territory governments may choose to incorporate this Australian Standard into their occupational health and safety law. The exact manner of incorporation will determine whether the whole document is incorporated or whether specific sections or provisions of the Australian Standard are incorporated. The manner of incorporation will determine which of the Standard’s requirements (‘shall’ statements) have been made a legal requirement in a jurisdiction. As a general principle, where an Australian Standard is incorporated by a regulation, the legal status of the Standard’s requirements and recommendations is made clear by the incorporation provisions of the regulation.

Thus, the requirements (‘shall’ statements) in an Australian Standard are not mandatory for legal purposes unless incorporated specifically by an Act or regulation. Readers will need to refer to their jurisdiction’s law to determine which parts of the Australian Standard (if any) have been incorporated and the manner of incorporation.

Jurisdictions may also choose to incorporate this Australian Standard (either in whole or in part) in an Approved Code of Practice made under OH&S law. The purpose of the Approved Codes of Practice is to provide practical guidance to persons on how to comply with their obligations under the enabling OH&S Act or regulations made under the Act. Incorporation of this Standard in an Approved Code of Practice has the effect of making the Standard form part of the Code; that is, part of the guidance on how to comply with the provisions of the Act or regulation to which the Code is giving practical guidance. The provisions in a Code, however, are not mandatory. That is, a person may choose to comply with the relevant provisions of the Act or regulation in some other way, provided that the alternative method used also fulfils the requirements of the Act or regulations.

Readers will need to refer to their jurisdiction’s Approved Codes of Practice to determine which parts of this Australian Standard (if any) have been incorporated into Codes of Practice and the manner of incorporation.

Published Standards in the series are:

AS

2550	Cranes, hoists and winches—Safe use
2550.1	Part 1: General requirements
2550.3	Part 3: Bridge, gantry, portal (including container cranes), jib and monorail cranes
2550.4	Part 4: Tower cranes
2550.5	Part 5: Mobile cranes
2550.6	Part 6: Guided storing and retrieving appliances
2550.7	Part 7: Builders’ hoists and associated equipment

AS

- 2550.10 Part 10: Elevating work platforms
- 2550.11 Part 11: Vehicle-loading cranes
- 2550.13 Part 13: Building maintenance units
- 2550.15 Part 15: Concrete placing equipment
- 2550.16 Part 16: Mast climbing work platforms

AS/NZS

- 2550.9 Part 9: Vehicle hoists

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.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND APPLICATION	
1.1 SCOPE	5
1.2 APPLICATION	5
1.3 REFERENCED DOCUMENTS	5
1.4 DEFINITIONS	5
1.5 INSTRUCTIONS	6
SECTION 2 PLANNING	
2.1 GENERAL	7
2.2 MATTERS TO BE CONSIDERED	7
SECTION 3 SELECTION.....	9
SECTION 4 SITING	
4.1 GENERAL	10
4.2 CRANE STANDING.....	10
4.3 PROXIMITY HAZARDS AND VISIBILITY	11
4.4 CLEARANCES	11
4.5 ANEMOMETER	11
SECTION 5 INSTALLATION	
5.1 GENERAL	12
5.2 PERSONNEL	12
5.3 ERECTION, FOLDING AND DISMANTLING	12
SECTION 6 MAINTENANCE, INSPECTION, REPAIR AND RECORDS	
6.1 GENERAL	13
6.2 MAINTENANCE	13
6.3 INSPECTION AND TESTING	13
6.4 REPAIRS.....	18
6.5 RECORDS.....	18
SECTION 7 OPERATION	
7.1 GENERAL	19
7.2 OPERATION NEAR AERIAL CONDUCTORS.....	19
7.3 MULTIPLE LIFTING	19
7.4 LIFTING PERSONNEL	19
7.5 OUT-OF-SERVICE.....	19
7.6 WIND EFFECTS.....	19
7.7 FIRE EXTINGUISHER.....	19
7.8 REMOTELY OPERATED CRANES	20
7.9 ACCESS TO CABIN-CONTROLLED CRANES	20
7.10 SUPERVISION OF RAIL-MOUNTED, SELF-ERECTING TOWER CRANES	20
7.11 PERSONNEL SAFETY	20
7.12 MOBILE PHONES.....	21
APPENDIX A EXAMPLES OF SELF-ERECTING TOWER CRANES	22

STANDARDS AUSTRALIA

Australian Standard
Cranes, hoists and winches—Safe use

Part 20: Self-erecting tower cranes

SECTION 1 SCOPE AND APPLICATION

1.1 SCOPE

This Standard specifies the requirements for the safe use of self-erecting tower cranes.

1.2 APPLICATION

This Standard shall be applied for the safe use of self-erecting tower cranes as defined in Clause 1.4.2.

This Standard is complementary to AS 2550.1, but the requirements given herein shall take precedence over the corresponding requirements given in that document.

NOTE: Examples of self-erecting tower cranes are given in Appendix A.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 1318 Use of colours for the marking of physical hazards and the identification of certain equipment in industry
- 1418 Cranes, hoists and winches
 - 1418.1 Part 1: General requirements
 - 1418.4 Part 4: Tower cranes
- 2549 Cranes (including hoists and winches)—Glossary of terms
- 2550 Cranes, hoists and winches—Safe use
 - 2550.1 Part 1: General requirements

AS/NZS

- 1891 Industrial fall-arrest systems and devices
 - 1891.1 Part 1: Safety belts and harnesses
 - 1891.2 Part 2: Horizontal lifeline and rail systems
 - 1891.3 Part 3: Fall-arrest devices
 - 1891.4 Part 4: Selection, use and maintenance
- 3000 Electrical installations (known as the Australian/New Zealand Wiring Rules)

ISO

- 12482 Cranes—Condition monitoring
 - 12482-1 Part 1: General

1.4 DEFINITIONS

For the purpose of this Standard, the definitions given in AS 1418.4, AS 2549, AS 2550.1 and those below apply.