

Australian Standard[®]

**Cranes (including hoists and
winches)**

**Part 14: Requirements for cranes
subject to arduous working
conditions**

This Australian Standard was prepared by Committee ME/5, Cranes. It was approved on behalf of the Council of Standards Australia on 5 February 1996 and published on 5 July 1996.

The following interests are represented on Committee ME/5:

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 Labour, S.A.
Department of Training and Industrial Relations, Qld
Health and Safety Organisation, Vic.
Institution of Engineers, Australia
Lift Manufacturers Association of Australia
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME/5 on Cranes as an aid to the specification for cranes subjected to arduous working conditions. The requirements it specifies are additional to the other parts of AS 1418 and should be applied to cranes which are subject to those conditions.

The Standard is a result of a consensus among representatives of the Joint Committee to produce it as an Australian Standard.

This Standard may be specified in its entirety where the entire crane is subjected to arduous working conditions or it may be specified in part where only a limited part or parts of a crane are subjected to arduous working conditions.

As an example of the need to specify this Standard in part only, consider a crane that is subjected to a normal level of duty, except for a very high frequency of lifting. In such a case, it would be proper to specify the crane Standard normally applicable to the crane (for example AS 1418.3) and to specify this Standard only for the crane mechanisms contained in Section 4. Further, it may not be necessary to specify Section 4 in its entirety. For example, if the crane is for indoor use, weather protection may be omitted.

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.

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STANDARDS AUSTRALIA

Australian Standard

Cranes (including hoists and winches)

Part 14: Requirements for cranes subject to arduous working conditions

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies the additional requirements to AS 1418.1 for cranes subject to arduous working conditions.

1.2 APPLICATION Where assessed as necessary, the crane purchaser shall specify the complete crane or only those components of the crane (e.g. long travel, cross travel, crab) that will be subjected to arduous working conditions and which shall conform to the entire, or specific sections of this, Standard.

1.3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

- | | |
|---------|---|
| B66 | Worm gearing (inch series) |
| 1403 | Design of rotating steel shafts |
| 1418 | Cranes (including hoists and winches) |
| 1418.1 | Part 1: General requirements |
| 1418.3 | Part 3: Bridge and gantry cranes (including container cranes) |
| 1418.12 | Part 12: Crane collector systems |
| 1657 | Fixed platforms, walkways, stairways and ladders—Design, construction and inspection |
| 1939 | Degrees of protection provided by enclosures for electrical equipment (IP Code) |
| 2005 | Low-voltage fuses—Fuses with enclosed fuse-links |
| 2005.1 | Part 1: General requirements |
| 2005.10 | Part 10: General requirements |
| 2074 | Steel castings |
| 2184 | Low-voltage switchgear and controlgear—Moulded-case circuit-breakers for rated voltages up to and including 600 V a.c. and 250 V d.c. |
| 2549 | Cranes—Glossary of terms |
| 2938 | Gears—Spur and helical—Guide to specification and rating |
| 3000 | Electrical installations—Buildings, structures and premises (known as the SAA Wiring Rules) |
| 3008 | Electrical installations—Selection of cables |
| 3008.1 | Part 1: Cables for alternating voltages up to and including 0.6/1 kV |
| 3190 | Approval and test specification—Residual current devices (current-operated earth-leakage devices) |