

Australian Standard™

**Cast steels**

This Australian Standard was prepared by Committee MT-001, Iron and Steel. It was approved on behalf of the Council of Standards Australia on 9 May 2003 and published on 19 June 2003.

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The following are represented on Committee MT-001:

- Australasian Railway Association
- Australian Building Codes Board
- Australian Foundry Institute
- Australian Industry Group
- Australian Institute of Steel Construction
- Bureau of Steel Manufacturers of Australia
- Institute of Materials Engineering Australasia

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# Australian Standard™

## Cast steels

Originated as AS B27—1931 and AS E7—1938.  
Previous edition AS 2074—1982.  
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## PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee MT-001, Iron and Steel, to supersede AS 2074—1982.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian, rather than an Australian/New Zealand Standard.

The objective of this Standard is to specify the steel specifications, heat treatment and test requirements for cast steels.

AS 2074—1982 specified additional requirements, including fettling and dressing, freedom from defects, rectification of defects and certification. These additional requirements are now specified in AS 4738. This edition of the Standard is a material's standard.

Cognizance was taken of the following International (ISO) Standards available on the subject:

### ISO

- |            |  |
|------------|--|
| 4990:1986  | Steel castings—General technical delivery requirements             |
| 4991:1994  | Steel castings for pressure purposes                               |
| 8062:1994  | Castings—System of dimensional tolerances and machining allowances |
| 11972:1998 | Corrosion-resistant cast steels for general applications           |
| 11973:1999 | Heat-resistant cast steels and alloys for general applications     |
| 13521:1999 | Austenitic manganese steel castings                                |

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.

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# STANDARDS AUSTRALIA

## Australian Standard Cast steels

### SECTION 1 SCOPE AND GENERAL

#### 1.1 SCOPE AND APPLICATION

##### 1.1.1 Scope

This Standard specifies requirements for carbon, low alloy and high alloy cast steels.

##### NOTES:

- 1 Advice and recommendations on information for optional test requirements to be supplied by the purchaser at the time of enquiry or order are contained in Appendix A.
- 2 A summary of chemical composition and tensile properties of steels included in this Standard is given in Appendix B, which also provides guidance on the selection of grades for specific applications.
- 3 AS 2074 only specifies materials. AS 4738 specifies the other additional requirements of the casting (See Preface).

##### 1.1.2 Application

Castings shall comply with the general requirements of Section 1 and with the specific requirements of Sections 2, 3 and 4, as follows:

- (a) Carbon steel.....Section 2.
- (b) Low alloy steel .....Section 3.
- (c) High alloy steel.....Section 4.

##### 1.1.3 Other requirements

The castings shall comply with AS 4738.

NOTE: The purchaser should specify AS 2074 and AS 4738 on the purchase order.

#### 1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

##### AS

1391	Methods for tensile testing of metals
1544	Methods for impact tests on metals
1544.2	Part 2: Charpy V-notch
1816	Metallic materials — Brinell hardness test
1816.1	Part 1: Test method (ISO 6506-1:1999, MOD)
1988	Welding of steel castings
2038	Methods for detecting the susceptibility of austenitic stainless steels to intergranular corrosion
2291	Methods for tensile testing of metals at elevated temperatures
2706	Numerical values — Rounding and interpretation of limiting values