

Australian Standard™

Metal castings

Part 1: Ferrous sand moulded

This Australian Standard was prepared by Committee MT-001, Iron and Steel. It was approved on behalf of the Council of Standards Australia on 3 December 2003. This Standard was published on 24 February 2004.

The following are represented on Committee MT-001:

Australian Institute of Steel Construction
Australian Chamber of Commerce and Industry
Australian Industry Group
Australasian Railway Association
Australian Building Codes Board
Australian Foundry Institute
Bureau of Steel Manufacturers of Australia
Institute of Materials Engineering Australia

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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. 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.

This Standard incorporates Amendment No. 1 (April 2005). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of the Standard is to specify the general technical delivery requirements for iron and steel castings, including the requirements for the preparation of samples and test pieces.

When material or product Standards differ from this general delivery specification, the materials or product Standards apply. In special cases, variations from these conditions may be agreed upon at the time of order.

This Standard also specifies a group of supplementary requirements which may be applied to iron and steel castings. These requirements are provided for use when additional testing of inspection is desired, and are applied only when individually specified by the purchaser.

During the preparation of this Standard, cognizance was taken of the following International Standards:

ISO	
1302	Geometrical Product Specification (GPS)—Indication of surface texture in technical product documentation
4990	Steel castings—General technical delivery requirements
8062	Castings—Systems of dimensional tolerances and machining allowances
10135	Technical drawings—Simplified representation of moulded, cast and forged parts
11971	Visual examination of surface quality of steel castings

This Standard is one of a series of Standards covering the range of cast irons and steels. The series comprises the following:

AS	
1830	Grey cast iron
1831	Ductile cast iron
1832	Malleable cast iron
85	Austenitic cast iron
202	Wear-resistant white cast iron
2074	Cast steels
4314	Metal castings—Patterns, pattern equipment and coreboxes for the production of sand moulds and sand cores
4738	Metal castings—Ferrous sand moulded (this Standard)
5049	Cast iron—Designation of microstructure of graphite

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, where an ‘informative’ appendix is only information and guidance.

Statements expressed in mandatory terms in footnotes to tables are deemed to be requirements of this Standard.

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STANDARDS AUSTRALIA

Australian Standard
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1 SCOPE

This Standard specifies the general technical delivery requirements for iron and steel castings, including the requirements for the preparation of samples and test pieces.

When material or product Standards differ from this general delivery specification, the material or product Standard applies. In special cases, variations from these conditions may be agreed upon at the time of order.

NOTES:

- 1 Appendix A lists the supplementary requirements that may be applied to ferrous castings.
- 2 Appendix E lists the application for iron and steel castings.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard

AS

1100	Technical drawing
1100.201	Mechanical engineering drawing
1171	Non-destructive testing—Magnetic particle testing of ferro-magnetic products, components and structures
1199	Sampling procedures for inspection by attributes
1190.0	Part 0: Introduction to the ISO 289 attribute sampling system
1199.1	Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection.
1210	Pressure vessels
1654	ISO system of limits and fits
1830	Grey cast iron
1831	Ductile cast iron
1832	Malleable cast iron
1833	Austenitic cast iron
1903	Welding of steel castings
2027	Wear-resistant white cast iron
2062	Non-destructive testing—Penetrant testing of products and components
2074	Cast steel
3507	Non-destructive testing
3507.1	Part 1: Guide for radiography for ferrous castings
3507.2	Part 2: Radiographic determination of quality of ferrous castings