

Australian Standard™

**Founding—Patterns, pattern equipment  
and coreboxes for the production of  
sand moulds and sand cores**

This Australian Standard was prepared by Committee MT-001, Iron and Steel. It was approved on behalf of the Council of Standards Australia on 30 May 2005. This Standard was published on 15 June 2005.

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The following are represented on Committee MT-001:

- Australian Railway Associations
- Australian Building Codes Board
- Australian Foundry Institute
- Australian Industry Group
- Australian Steel Institute
- Bureau of Steel Manufacturers of Australia
- Institute of Material 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.

The objective of this Standard is to specify the general technical delivery requirements for patterns to be used for iron, steel and non-ferrous castings.

This Standard is intended for purchasers, manufacturers (patternmakers) and founders. It is also intended to ensure the correct interpretation of casting and tooling drawings/numerical data and to ensure that pattern equipment will produce sand moulds and/or sand cores, suitable for use, and to assist in determining the usually undefined limits of good workmanship. This Standard stresses the need for consultation between the purchaser, manufacturer (patternmaker) and founder before work commences.

This Standard not only specifies the usual features of design, construction, materials, tolerances, contractions and required machining allowances but also specifies other features such as usage, classification, quality control, marking, packaging and storage.

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

EN  
12890 Founding—Patterns, pattern equipment and coreboxes for the production of sand moulds and sand cores

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  
1833 Austenitic cast iron  
2027 Wear-resistant white cast iron  
2074 Cast steels  
4314 Founding—Patterns, pattern equipment and coreboxes for the production of sand moulds and sand cores (this Standard)  
4738 Metal castings  
4738.1 Part 1: Ferrous sand moulded  
5009 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

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## STANDARDS AUSTRALIA

## Australian Standard

**Founding—Patterns, pattern equipment and coreboxes for the production of sand moulds and sand cores****1 SCOPE**

This Standard specifies the requirements for patterns, pattern equipment and coreboxes for the production of sand moulds and/or sand cores.

This Standard does not specify equipment for the production of lost wax patterns, permanent moulds and die casting dies or ancillary items used in the manufacture of pattern equipment (such as screws and dowels).

**2 REFERENCE DOCUMENTS**

The following documents are referred to in this Standard:

## AS

- |          |                                                                                              |
|----------|----------------------------------------------------------------------------------------------|
| 1100     | Technical drawing                                                                            |
| 1100.201 | Part 201: Mechanical engineering drawing                                                     |
| 1199     | Sampling procedures for inspection by attributes                                             |
| 1199.0   | Part 0: Introduction to the ISO 2859 attribute sampling system                               |
| 1199.1   | Part 1: Sampling schemes indexed by acceptable quality limit (AQL) for lot-by-lot inspection |

- |        |                                                |
|--------|------------------------------------------------|
| 1654   | ISO system of limits and fits                  |
| 1654.1 | Part 1: Bases of tolerance deviations and fits |
| 4738   | Metal castings                                 |
| 4738.1 | Part 1: Ferrous sand moulded                   |

## AS/NZS

- |          |                                                                                  |
|----------|----------------------------------------------------------------------------------|
| 1604     | Specifications for preservative treatment                                        |
| 1604.3   | Part 3: Plywood                                                                  |
| ISO 9001 | Quality management systems—Requirements                                          |
| ISO 9004 | Quality management systems—Guidelines for performance improvements               |
| HB 18    | Guideline for third-party certification and accreditation                        |
| HB 18.23 | Guide 28 General rules for a model third-party certification scheme for products |

**3 DEFINITIONS**

For the purposes of this Standard, the definitions below apply:

**3.1 Purchaser**

Person or body responsible for the ordering of the patterns, pattern equipment and coreboxes.

**3.2 Manufacturer (patternmaker)**

Person or body responsible for the production of the patterns, pattern equipment and coreboxes.