AS 1444—2007
(Incorporating Amendment No. 1)
Reconfirmed 2017

Australian Standard®

Wrought alloy steels—Standard, hardenability (H) series and hardened and tempered to designated mechanical properties

This Australian Standard® was prepared by Committee MT-001, Iron and Steel. It was approved on behalf of the Council of Standards Australia on 23 August 2007.
This Standard was published on 26 October 2007.

The following are represented on Committee MT-001:

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

This Standard was issued in draft form for comment as DR 06642.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 1444—2007

Wrought alloy steels—Standard, hardenability (H) series and hardened and tempered to designated mechanical properties

RECONFIRMATION NOTICE

Technical Committee MT-001 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 04 June 2017.

The following are represented on Technical Committee MT-001:

Australian Building Codes Board
Australian Steel Association
Australian Steel Institute
Bureau of Steel Manufacturers of Australia
Employers and Manufacturers Association
Materials Australia
New Zealand Heavy Engineering Research Association
Society of Automotive Engineers- Australasia

NOTES

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Wrought alloy steels—Standard, hardenability (H) series and hardened and tempered to designated mechanical properties

Originated as part of AS G18—1996, AS G19—1966 and AS G20—1966.
Previous edition AS 1444—1996.
Fifth edition 2007.
Reissued incorporating Amendment No. 1 (February 2008).

Published by Standards Australia, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 8406 2

PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand MT-001, Iron and Steel, to supersede AS 1444—1996, *Wrought alloy steels—Standard, hardenability (H) series and hardened and tempered to designated mechanical properties.* After consulting 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 (February 2008). 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 this Standard is to specify requirements for wrought alloy steels for general engineering purposes supplied in the form of hot-rolled or cold-finished bars for machining, forgings, and bars, blooms, billets and slabs for forgings. Steels may be supplied to chemical composition only (standard series), to chemical composition and subject to end-quench hardenability requirements (H series), to chemical composition and mechanical properties.

The objective of this revision is to update the reference documents and to apply current style.

The alloy designations used in this Standard align with those used in American specifications which have found worldwide acceptance for many years. The alloy designations included in ISO 683-1, *Heat-treatable steels, alloys steels and free-cutting steels,* Part 1: *Direct-hardening unalloyed and low alloyed wrought steel in form of different black products* and BS 970-3, *Specification for wrought steels for mechanical and allied engineering purposes,* Part 3: *Bright bars for engineering purposes,* are rarely used in Australia and consequently were not acceptable to Committee MT-001 which favours the universally known four-digit system.

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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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for wrought alloy steels intended for general engineering purposes and is applicable to hot-rolled or cold-finished bars for machining, blooms, billets and slabs for forgings, and forgings, as follows:

(a) To specified chemical composition only (standard steel series).

(b) To specified chemical composition and end-quench hardenability requirements (H series).

(c) To specified chemical composition and mechanical properties achieved by hardening and tempering.

This Standard does not apply to stainless steels.

NOTES:

1 Advice and recommendations on information to be supplied by the purchaser at the time of enquiry or order are contained in Appendix A.

2 Alternative means for determining compliance with this Standard are given in Appendix B.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
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 acceptance quality limit (AQL) for lot-by-lot inspection.
1391	Metallic materials—Tensile testing at ambient temperature
1443	Carbon steels and carbon-manganese steel—Cold-finished bars
1544	Methods for impact tests on metals
1544.1	Part 1: Izod
1544.2	Part 2: Charpy V-notch
1654	ISO system of limits and fits
1654.2	Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts
1733	Methods for the determination of grain size in metals
1770	Steel—Hardenability test by end quench (Jominy test)
1815	Metallic materials—Rockwell hardness test
1815.1	Method 1: Test method (scales A, B, C, D, E, F, G, H, K, N, T)