

AS 1444—1996

Australian Standard<sup>®</sup>

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

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This Australian Standard was prepared by Committee MT/1, Iron and Steel. It was approved on behalf of the Council of Standards Australia on 11 June 1996 and published on 5 September 1996.

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The following interests are represented on Committee MT/1:

Australian Chamber of Commerce and Industry  
Australian Chamber of Manufactures  
Australian Foundry Institute  
Australian Institute of Steel Construction  
Bureau of Steel Manufacturers of Australia  
Institute of Metals and Materials Australasia  
Metal Trades Industry Association of Australia  
Railways of Australia  
Society of Automotive Engineers, Australasia

Additional interests participating in preparation of Standard:

Rod and bar manufacturers

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*This Standard was issued in draft form for comment as DR 95247.*

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| <p>Originated as part of AS G18—1966, AS G19—1966 and AS G20—1966.<br/>Previous editions AS 1444—1986 and AS 2506—1990.<br/>AS 1444—1986 and AS 2506—1990 revised, amalgamated and designated AS 1444—1996.</p> |
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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee MT/1, Iron and Steel to supersede AS 1444—1986, *Wrought alloy steels—Standard and hardenability (H) series* and AS 2506—1990, *Wrought alloy steels—Hardened and tempered to designated mechanical properties*.

The two Standards have been combined because of the similarity of technical content, a need to rationalize the standardization of alloy steels and a need for uniformity of dimensional tolerances of heat-treatable steels.

This Standard is the result of a consensus among Australian and New Zealand representatives on the Joint Committee to produce it as an Australian Standard.

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) or, to chemical composition and mechanical properties.

In this revision a number of grades of both the standard steel types and the 'H' types specified in the 1986 edition of AS 1444 have been deleted and new grades have been added. The dimensional tolerances and the requirements for surface condition for hot-rolled bars align with those in AS 1442, *Carbon steels and carbon-manganese steels—Hot-rolled bars and semifinished products*, and AS 1443, *Carbon steels and carbon-manganese steels—Cold-finished bars*.

A table has been added to cover the mechanical properties of cold-finished bars that have been cold drawn or cold rolled after heat treatment.

During the preparation of this Standard, cognizance was taken of the international Standard ISO 683-1, *Heat-treatable steels, alloy steels and free-cutting steels, Part 1: Direct-hardening unalloyed and low-alloyed wrought steel in form of different black products*.

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 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/1 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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