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Australian Standard 1449–1978

STAINLESS AND HEAT-RESISTING STEEL PLATE, SHEET AND STRIP (COILS AND CUT LENGTHS)

[Title allocated by Defence Cataloguing Authority: METAL PLATE, SHEET, STRIP (Stainless and Heat Resisting Steel in Coils and Cut Lengths)]

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Associated Chambers of Manufactures of Australia

Bureau of Steel Manufacturers of Australia

Department of Defence

Department of Productivity

Institute of Steel Service Centres of Australia

Metal Trades Industry Association of Australia

Petroleum Marketing Engineers Advisory Committee

Railways of Australia Committee

Society of Automotive Engineers—Australasia

This standard, prepared by Committee MT/1, Iron and Steel, was approved on behalf of the Council of the Standards Association of Australia on 9 December 1977, and was published on 1 July 1978.

The specification is intended to include the technical provisions necessary for the supply of materials referred to herein but does not purport to comprise all the necessary provisions of a contract.

To keep abreast of progress in industry, Australian standards are subject to regular review. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

This standard was issued in draft form for public review as DR 76118.

AUSTRALIAN STANDARD SPECIFICATION

STAINLESS AND HEAT-RESISTING STEEL PLATE, SHEET AND STRIP

(COILS AND CUT LENGTHS)

AS 1449 — 1978

First published (as AS G31) 1971
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PREFACE

This standard was prepared under the direction of the Association's Committee on Iron and Steel, by its subcommittee on stainless and heat-resisting steel plate, sheet and strip, as a revision of AS G31—1971, Stainless and Heat-resisting Steel Plate, Sheet and Strip of the AISI-SAE Standard Steels Type (Coils and Cut Lengths), which it accordingly supersedes.

The standard applies to stainless and heat-resisting steels for general engineering purposes, supplied in the form of hot-rolled plates or as cold-rolled sheet and strip in coils or cut lengths. In the revision of the standard, cognizance was taken of ASTM A240, Heat-resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Fusion-welded Unfired Pressure Vessels, but provision has been made for steels other than the AISI-SAE types, and for this reason the title and scope have been amended. The various grades are still identified basically in the manner used by the American Iron and Steel Institute and the Society of Automotive Engineers.

In this revision, the yield value has been specified as 'yield strength' to bring the standard into line with the term adopted internationally.

Appendix A sets out purchasing guidelines, including contractual requirements previously included in the body of the standard, and directs attention to matters requiring consideration at the time of enquiry and/or order. The intention is to prevent misinterpretation and to ensure a clear understanding of product requirements by both purchaser and supplier.

This standard may require reference to the following Australian and British standards:

AS 1391	Methods for Tensile Testing of Metals
AS 1815	Method for Rockwell Hardness Test Part 1—Testing of Metals
AS 1816	Method for Brinell Hardness Test Part 1—Testing of Metals
AS 1817	Method for Vickers Hardness Test Part 1—Testing of Metals
AS 2038	Methods for Detecting the Susceptibility of Austenitic Stainless Steel to Intergranular Corrosion
BS 1639	Method for Bend Testing of Metals.

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1 SCOPE. This specification sets out requirements for stainless and heat-resisting steels for general engineering purposes, supplied as hot-rolled plates or as cold-rolled sheet and strip in coils or cut lengths.

NOTE: Guidelines to purchasers on requirements that must be specified by the purchaser and those that must or may be agreed at the time of enquiry and/or order are given in Appendix A.

2 DESIGNATION.

2.1 General. The steel designation as given in Tables 1, 2 and 3, shall comprise the following:

(a) The number of this Australian Standard, i.e. AS 1449.

(b) A three-digit number to indicate the grade, in accordance with Clause 2.2.

(c) Where necessary, a suffix letter or symbol to signify modifications to grades as given in Clause 2.3.

2.2 Series Designation. The following series designations shall be used to identify each group:

2XX—Chromium-nickel-manganese steels
NOTE: Non-hardenable, austenitic and non-magnetic.

3XX—Chromium-nickel steels
NOTE: Non-hardenable, austenitic and non-magnetic.

4XX—Chromium steels
NOTE: Hardenable, martensitic and magnetic.

4XX—Chromium steels
NOTE: Non-hardenable, ferritic and magnetic.

2.3 Modification Symbols. Modification to grades shall be indicated by a suffix letter, or letters, as follows:

L — denotes special low carbon content

S — denotes a lower specified maximum carbon

Ti — denotes material stabilized with titanium.

Example of designation. AS 1449/316 Ti denotes a chromium-nickel austenitic stainless steel, not hardenable by heat-treatment and stabilized with titanium.