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AS/NZS 2717.1:1996

Australian/New Zealand Standard®

Welding—Electrodes—Gas metal arc

Part 1: Ferritic steel electrodes

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Australasian Railway Association
Australian Chamber of Commerce and Industry
Australian Institute of Steel Construction
Bureau of Steel Manufacturers of Australia
Division of Manufacturing and Technology, CSIRO
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New Zealand Manufacturers Federation
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WD/2 on Welding Consumables, to supersede AS 2717.1—1984.

The objective of this Standard is to specify requirements for carbon steel electrodes and low or intermediate alloy ferritic steel electrodes for gas metal arc welding.

The classification and designation system adopted is compatible with Australian Standards for cored electrodes and submerged-arc welding electrodes, and similarly, has mechanical requirements complying with the ship classification societies' unified rules.

To assist designers and for ease of selection, the weld metal is classified according to its tensile strength and is divided into grades related to its Charpy V-notch impact energy value. The intent here is that the designer needs only to specify on the drawing the weld metal classification which will thereby nominate the mechanical properties required for the satisfactory functioning of the welded joint. The fabricator, taking into account recommendations by the manufacturer of the consumables, can select the electrode or electrode/gas combination appropriate to the materials of construction and the conditions prevailing at the time.

This edition takes cognizance of the 1993 edition of ANSI/AWS A5.18, *Specification for carbon steel electrodes and rods for gas shielded arc welding*, and incorporates the following significant technical changes:

(a) The heat treatment condition has been added to the weld metal classification and the thermal treatment requirements have been reviewed.

(b) Conformance tests have been made non-mandatory.

(c) The impact test grades and requirements have been revised.

(d) The marking and storage requirements have been reviewed.

In addition, editorial changes and adjustments have been made, including the following:

(i) Updating of reference Standards.

(ii) Alignment with current Standards Australia and Standards New Zealand policies.

Statements expressed in mandatory forms in notes to tables and figures are deemed to be requirements of this Standard.

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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