

Australian/New Zealand Standard™

**Welding consumables—Tubular cored
electrodes and rods for gas shielded
and non-gas shielded metal arc welding
of stainless and heat-resisting steels—
Classification (ISO 17633:2004, MOD)**



AS/NZS ISO 17633:2006

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The following are represented on Committee WD-002:

Australian Chamber of Commerce and Industry
Bureau of Steel Manufacturers of Australia
Business New Zealand
CSIRO Manufacturing and Infrastructure Technology
Welding Technology Institute of Australia

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF

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NOTES

Australian/New Zealand Standard™

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WD-002, Welding Consumables.

The objective of this Standard is to specify requirements for classification of tubular flux and metal cored electrodes and rods, based on the all-weld metal chemical composition, the type of electrode core, shielding gas, welding position and the all-weld metal mechanical properties, in the as welded or heat treated conditions, for gas shielded and non-gas shielded metal arc welding of stainless and heat-resisting steels.

This Standard is an adoption with national modifications, to take account of Australian/New Zealand conditions, and has been reproduced from ISO 17633:2004 *Welding consumables — Tubular cored electrodes and rods for gas shielded and non-gas shielded metal arc welding of stainless and heat-resisting steels — Classification*.

Variations to ISO 17633:2004 are indicated at the appropriate places throughout this standard. Strikethrough (~~example~~) identifies ISO text, tables and figures which, for the purposes of this Australian/New Zealand Standard, are deleted. Where text, tables or figures are added, each is set in its proper place and identified by shading (**example**). Added figures are not themselves shaded, but are identified by a shaded border.

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The term 'informative' is used in this Standard to define the application of the annex to which it applies. An informative annex is for information and guidance.

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INTRODUCTION

This International Standard provides a classification system for tubular cored electrodes and rods for welding stainless steels. It recognizes that there are two somewhat different approaches in the global market, to classifying a given tubular stainless steel welding consumable, and allows for either or both to be used, to suit a particular market need. Application of either type of classification designation (or of both where suitable) identifies a product as classified according to this International Standard.

The classification according to system A is mainly based on EN 12073:1999, Welding consumables — Tubular cored electrodes for metal arc welding with or without a gas shield of stainless and heat-resisting steels — Classification. The classification according to system B is mainly based upon standards used around the Pacific Rim.

Requests for official interpretations of any aspect of this International Standard should be directed to the Secretariat of ISO/TC 44/SC 3, via your national standards body, a complete listing of which can be found at www.iso.org.

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Any table, figure or text of the international standard that is struck through is not part of this standard. Any Australian/New Zealand table, figure or text that is added is part of this standard and is identified by shading.

1 Scope

This International Standard specifies requirements for classification of tubular flux and metal cored electrodes and rods, based on the all-weld metal chemical composition, the type of electrode core, shielding gas, welding position and the all-weld metal mechanical properties, in the as welded or heat treated conditions, for gas shielded and non-gas shielded metal arc welding of stainless and heat-resisting steels.

This International Standard is a combined standard providing for classification utilizing a system based upon classification according to nominal composition, or utilizing a system based upon classification according to alloy type.

- 1) Paragraphs and tables which carry the label “classification according to nominal composition” are applicable only to products classified to that system.
- 2) Paragraphs and tables which carry the label “classification according to alloy type” are applicable only to products classified to that system.
- 3) Paragraphs and tables which carry neither label are applicable to products classified according to either or both systems.

It is recognized that the operating characteristics of tubular cored electrodes can be modified by the use of pulsed current, but for the purposes of this International Standard, pulsed current is not permitted for determining the electrode classification.

NOTE – General information on health and safety in welding is given in Annex ZA.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

References to international standards that are struck through in this clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is identified as such.

ISO 31-0:1992, *Quantities and units — Part 0: General principles*

~~ISO 544, *Welding consumables — Technical delivery conditions for welding filler materials — Type of product, dimensions, tolerances and marking*~~

AS/NZS ISO 544, *Welding consumables—Technical delivery conditions for welding filler materials—Type of product, dimensions, tolerances and marking.*