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Welding consumables — Covered electrodes for manual metal arc welding of stainless and heat-resisting steels — Classification

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Foreword

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This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 3, *Welding consumables,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 3581:2016), which has been technically revised.

The main changes are as follows:

— the document has been updated in accordance with the drafting guidelines laid out in the ISO House Style;

— the dates of normative references have been updated to show their latest editions;

— a new Clause 3 (Terms and definitions) has been added in accordance with the standard structure of ISO documents;

— “weld metal recovery” now reads “nominal electrode efficiency” throughout, in accordance with ISO 2401;

— a new Table 2 has been added listing classification systems;

— new alloys have been added to Table 3 (formerly Table 2) and associated clauses of the document;

— the chemical compositions of several alloys have been updated in Table 3 (formerly Table 2);

— certain alloys have been reclassified in Table 3 (formerly Table 2);

— a new footnote was added to Table 3 (formerly Table 2) regarding Co content;

— the wording of Clause 9 (formerly Clause 8) has been updated.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html. Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: https://committee.iso.org/sites/tc44/home/interpretation.html.

Introduction

This document provides a classification system for covered electrodes for manual metal arc welding of stainless and heat-resisting steels in terms of chemical composition of deposited weld metal and type of electrode covering. Other properties of the electrodes are specified by reference to tables.

This document recognizes that there are two somewhat different approaches in the global market for classifying a given covered electrode for arc welding of stainless steel. It allows for either or both to be used to suit a particular need. Application of either (or both) type(s) of classification designation identifies a product as classified according to this document. It is important to note that the two systems are not exactly equivalent; therefore, each system is to be used independently of the other, without combining designators in any way.

The classification according to nominal composition (system A) is mainly based on EN 1600. The classification according to alloy type (system B) is mainly based on standards used around the Pacific Rim.