SLOVENSKI STANDARD
SIST EN ISO 2560:2020

01-november-2020

Nadomešča:
SIST EN ISO 2560:2010

Dodajni in pomožni materiali za varjenje - Oplaščene elektrode za ročno obločno varjenje nelegiranih in drobnozrnatih jekel - Razvrstitev (ISO 2560:2020)

Welding consumables - Covered electrodes for manual metal arc welding of non-alloy and fine grain steels - Classification (ISO 2560:2020)

Schweißzusätze - Umhüllte Stabelektroden zum Lichtbogenhandschweißen von unlegierten Stählen und Feinkornstählen - Einteilung (ISO 2560:2020)

Produits consommables pour le soudage - Électrodes enrobées pour le soudage manuel à l'arc des aciers non alliés et des aciers à grains fins - Classification (ISO 2560:2020)

Ta slovenski standard je istoveten z: EN ISO 2560:2020

ICS:

25.160.20	Potrošni material pri varjenju	Welding consumables

SIST EN ISO 2560:2020 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 2560

September 2020

ICS 25.160.20

Supersedes EN ISO 2560:2009

English Version

Welding consumables - Covered electrodes for manual metal arc welding of non-alloy and fine grain steels - Classification (ISO 2560:2020)

Produits consommables pour le soudage - Électrodes enrobées pour le soudage manuel à l'arc des aciers non alliés et des aciers à grains fins - Classification (ISO 2560:2020)

Schweißzusätze - Umhüllte Stabelektroden zum Lichtbogenhandschweißen von unlegierten Stählen und Feinkornstählen - Einteilung (ISO 2560:2020)

This European Standard was approved by CEN on 16 July 2020.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN ISO 2560:2020 E

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European foreword

This document (EN ISO 2560:2020) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 “Welding and allied processes” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 2560:2009.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 2560:2020 has been approved by CEN as EN ISO 2560:2020 without any modification.

INTERNATIONAL STANDARD

ISO 2560

Fourth edition
2020-08

Welding consumables — Covered electrodes for manual metal arc welding of non-alloy and fine grain steels — Classification

Produits consommables pour le soudage — Électrodes enrobées pour le soudage manuel à l'arc des aciers non alliés et des aciers à grains fins — Classification

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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).

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.

This fourth edition cancels and replaces the third edition (ISO 2560:2009), which has been technically revised.

The main changes compared to the previous edition are as follows:

— all the references have been updated;

— throughout the document, "nominal electrode efficiency" now reads "electrode efficiency";

— in 4B, "strength" has been clarified by changing to "tensile strength;

— in Table 3B, the "Nominal level" for Mn shown in the 1st row of the table for "No symbol, -1, -P1, or –P2" was changed to 1,3;

— in Table 3B, a new footnote has been added regarding G classifications (similar to Table 3A);

— in Table 4B, a new footnote d to symbol "45" was added "Not including PF (vertical up)";

— in Table 8B, the heading of the last column has been revised to read " Impact test temperature";

— in Table 8B, NS (not specified) has been changed to NR (not required) and a new footnote c regarding testing at lower temperatures has been added;

— in Table 10B, E4918, E4918-1, E5516-3M3, E5516-N3 and E5516-N7 have been updated to match values in AWS standards;

— in Clause 8, *b* has been changed to *w* for width in accordance with ISO 15792-1;

— in Clause 9, Rounding procedure has been updated to match current agreed wording;

— in Clause 12B, Example 1B, the %Mn was changed to 0,90 to better match the designation given in the example;

Introduction

This document recognizes that there are two somewhat different approaches in the global market to classifying a given electrode, 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 in accordance with this document. The classification in accordance with system A is mainly based on EN 499:1994. The classification in accordance with system B is mainly based on standards used around the Pacific Rim.

This document provides a classification in order to designate covered electrodes in terms of the yield strength, tensile strength and elongation of the all-weld metal. The ratio of yield strength to tensile strength of weld metal is generally higher than that of parent metal. Users should note that matching weld metal yield strength to parent metal yield strength does not necessarily ensure that the weld metal tensile strength matches that of the parent metal. Therefore, where the application requires matching tensile strength, selection of the consumable should be made by reference to column 3 of Table 1A or to Table 1B and Table 8B.

It should be noted that the mechanical properties of all-weld metal test specimens used to classify the electrodes vary from those obtained in production joints because of differences in welding procedure such as electrode size, width of weave, welding position, welding current, interpass temperature and parent metal composition.

