



# SLOVENSKI STANDARD SIST EN ISO 18276:2017

01-maj-2017

Nadomešča:  
SIST EN ISO 18276:2006

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**Dodajni materiali za varjenje - Strženske žice iz cevi za obločno varjenje nerjavnih in ognjeodpornih jekel v zaščitnem plinu in brez zaščite - Razvrščanje (ISO 18276:2017)**

Welding consumables - Tubular cored electrodes for gas-shielded and non-gas-shielded metal arc welding of high strength steels - Classification (ISO 18276:2017)

**iTeh STANDARD PREVIEW**

Schweißzusätze - Fülldrahtelektroden zum Metall-Lichtbogenschweißen mit und ohne Schutzgas von hochfesten Stählen - Einteilung (ISO 18276:2017)

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Produits consommables pour le soudage - Fils-électrodes fourrés pour le soudage à l'arc avec ou sans gaz de protection des aciers à haute résistance - Classification (ISO 18276:2017)

**Ta slovenski standard je istoveten z: EN ISO 18276:2017**

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**ICS:**

25.160.20      Potrošni material pri varjenju      Welding consumables

**SIST EN ISO 18276:2017**

**en,fr,de**

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EUROPEAN STANDARD

EN ISO 18276

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN ISO 18276:2006

English Version

## Welding consumables - Tubular cored electrodes for gas-shielded and non-gas-shielded metal arc welding of high strength steels - Classification (ISO 18276:2017)

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

<b>Contents</b>	<b>Page</b>
<b>European foreword.....</b>	<b>3</b>

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[SIST EN ISO 18276:2017](https://standards.iteh.ai/catalog/standards/sist/578a61bf-adb3-4041-afb5-b7d9fdb96cfl/sist-en-iso-18276-2017)  
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## European foreword

This document (EN ISO 18276:2017) 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 October 2017, and conflicting national standards shall be withdrawn at the latest by October 2017.

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

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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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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**Welding consumables — Tubular  
cored electrodes for gas-shielded and  
non-gas-shielded metal arc welding of  
high strength steels — Classification**

*Produits consommables pour le soudage — Fils-électrodes fourrés  
pour le soudage à l'arc avec ou sans gaz de protection des aciers à  
haute résistance — Classification*

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Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
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# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Classification</b> .....	<b>2</b>
<b>5 Symbols and requirements</b> .....	<b>3</b>
5.1 Symbol for the product/process.....	3
5.2 Symbol for tensile properties of all-weld metal.....	4
5.3 Symbol for impact properties of all-weld metal.....	4
5.4 Symbol for chemical composition of all-weld metal.....	5
5.5 Symbol for type of electrode core or the usability characteristics of the electrodes.....	8
5.6 Symbol for shielding gas.....	9
5.7 Symbol for welding position.....	9
5.8 Symbol for hydrogen content of deposited metal.....	9
5.9 Symbol for conditions of post-weld heat treatment.....	10
<b>6 Rounding procedure</b> .....	<b>10</b>
<b>7 Mechanical tests</b> .....	<b>10</b>
7.1 Preheating and interpass temperatures.....	10
7.2 Pass sequence.....	11
7.3 Post-weld heat treatment (PWHT) condition.....	12
<b>8 Chemical analysis</b> .....	<b>12</b>
<b>9 Retesting</b> .....	<b>12</b>
<b>10 Technical delivery conditions</b> .....	<b>12</b>
<b>11 Examples of designations</b> .....	<b>12</b>
<b>Annex A (informative) Classification systems</b> .....	<b>15</b>
<b>Annex B (informative) Description of composition designations for electrodes in the classification system based upon tensile strength and average impact energy of 27 J</b> .....	<b>18</b>
<b>Annex C (informative) Description of types of electrode core in the classification system based upon yield strength and average impact energy of 47 J</b> .....	<b>19</b>
<b>Annex D (informative) Descriptions of types of usability characteristics in the classification system based upon tensile strength and average impact energy of 27 J</b> .....	<b>20</b>
<b>Annex E (informative) Notes on hydrogen content</b> .....	<b>22</b>
<b>Bibliography</b> .....	<b>23</b>

## ISO 18276:2017(E)

## 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](http://www.iso.org/directives)).

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For an explanation on 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 the following URL: [www.iso.org/iso/foreword.html](http://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*.

This second edition cancels and replaces the first edition (ISO 18276:2005), which has been technically revised with the following changes:

- content has been aligned with ISO 17632:2015 and ISO 17634:2015;
- shielding gas designations have been updated;
- [Table 3B](#) has been extensively revised to align with existing Pacific Rim designations;
- new designations have been added to [Table 3B](#);
- the T4 designator has been deleted from [Table 4B](#);
- heat input ranges given in [Table 8B](#) have been modified to match current Pacific Rim values;
- fillet weld tests have been removed;
- an example using the Z designation has been added to [Clause 11A](#).

Requests for official interpretations of any aspect of this document should be directed to the Secretariat of ISO/TC 44/SC 3 via your national standards body. A complete listing of these bodies can be found at [www.iso.org](http://www.iso.org).

## Introduction

This document proposes a classification system for tubular cored electrodes in terms of the tensile properties, impact properties, chemical composition of the all-weld metal, type of electrode core, shielding gas and welding position. The ratio of yield strength to tensile strength of the weld metal is generally higher than that of the parent metal. Note that matching weld metal yield strength to parent metal yield strength will not necessarily ensure that the weld metal tensile strength matches that of the parent metal. Where the application requires matching tensile strength, therefore, selection of the consumable should be made by reference to column 3 of [Table 1A](#) or [Table 1B](#).

Note that the mechanical properties of all-weld metal test specimens used to classify tubular cored electrodes will differ from those obtained with production joints because of differences in welding procedure such as electrode size, width of weave, welding position and parent metal composition.

The classification in accordance with system A is mainly based on EN 12535<sup>[1]</sup>. The classification in accordance with system B is mainly based upon standards used around the Pacific Rim.

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