

STN	Zváracie materiály. Tyčinky, drôty a zvarový kov na zváranie nelegovaných a jemnozrnných ocelí volfrámovou elektródou v inertnom plyne. Klasifikácia (ISO 636: 2015).	STN EN ISO 636
		05 5309

Welding consumables - Rods, wires and deposits for tungsten inert gas welding of non-alloy and fine-grain steels - Classification (ISO 636:2015)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/16

Obsahuje: EN ISO 636:2015, ISO 636:2015

Oznámením tejto normy sa ruší
STN EN ISO 636 (05 5309) z novembra 2008

122610

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2016
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD

EN ISO 636

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2015

ICS 25.160.20

Supersedes EN ISO 636:2008

English Version

Welding consumables - Rods, wires and deposits for tungsten inert gas welding of non-alloy and fine-grain steels - Classification (ISO 636:2015)

Produits consommables pour le soudage - Baguettes et fils pour dépôts par soudage TIG des aciers non alliés et des aciers à grains fins - Classification (ISO 636:2015)

Schweißzusätze - Stäbe, Drähte und Schweißgut zum Wolfram-Inertgasschweißen von unlegierten Stählen und Feinkornstählen - Einteilung (ISO 636:2015)

This European Standard was approved by CEN on 15 August 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

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

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 636:2015) 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 June 2016, and conflicting national standards shall be withdrawn at the latest by June 2016.

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.

This document supersedes EN ISO 636:2008.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 636:2015 has been approved by CEN as EN ISO 636:2015 without any modification.

**Welding consumables — Rods, wires
and deposits for tungsten inert gas
welding of non-alloy and fine-grain
steels — Classification**

*Produits consommables pour le soudage — Baguettes et fils pour
dépôts par soudage TIG des aciers non alliés et des aciers à grains fins
— Classification*





COPYRIGHT PROTECTED DOCUMENT

© ISO 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Classification	1
4 Symbols and requirements	2
4.1 Symbol for the product/process.....	2
4.2 Symbol for strength and elongation of all-weld metal.....	3
4.3 Symbol for impact properties of all-weld metal.....	4
4.4 Symbol for the chemical composition of rods or wires.....	4
5 Mechanical tests	9
5.1 Preheating and interpass temperatures.....	9
5.2 Welding conditions and pass sequence.....	10
5.3 PWHT condition.....	10
6 Chemical analysis	10
7 Rounding procedure	11
8 Retests	11
9 Technical delivery conditions	11
10 Designation	11

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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

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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 44, *Welding and allied processes*, Subcommittee SC 3, *Welding consumables*.

This fourth edition cancels and replaces the third edition (ISO 636:2004), which has been technically revised.

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

Introduction

This International Standard provides a classification for the designation of rods and wires in terms of their chemical composition and, where required, in terms of the yield strength, tensile strength, and elongation of the all-weld metal. The ratio of yield to tensile strength of weld metal is generally higher than that of parent metal. 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 material. Where the application requires matching tensile strengths, selection of consumables is made by reference to column 3 of [Table 1A](#) or [Table 1B](#).

Of note is that the mechanical properties of all-weld metal test specimens used to classify the rods and wires vary from those obtained in production joints because of differences in welding procedure such as diameter, width of weave, welding position, and material composition.

The classification according to system A is mainly based on EN 1668:1997. The classification according to system B is mainly based upon standards used around the Pacific Rim.

Welding consumables — Rods, wires and deposits for tungsten inert gas welding of non-alloy and fine-grain steels — Classification

1 Scope

This International Standard specifies requirements for classification of rods and wires in the as-welded condition and in the post-weld heat-treated condition for tungsten inert gas welding of non-alloy and fine-grain steels with a minimum yield strength of up to 500 MPa or a minimum tensile strength of up to 570 MPa.

This International Standard is a combined specification providing classification utilizing a system based upon the yield strength and the average impact energy of 47 J of all-weld metal or utilizing a system based upon the tensile strength and the average impact energy of 27 J of all-weld metal.

- a) Paragraphs and tables which carry the suffix letter “A” are applicable only to rods and wires classified to the system based upon the yield strength and the average impact energy of 47 J of all-weld metal in accordance with this International Standard.
- b) Paragraphs and tables which carry the suffix letter “B” are applicable only to rods and wires classified to the system based upon the tensile strength and the average impact energy of 27 J of all-weld metal in accordance with this International Standard.
- c) Paragraphs and tables which have neither the suffix letter “A” nor the suffix letter “B” are applicable to all rods and wires classified in accordance with this International Standard.

2 Normative references

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

ISO 544, *Welding consumables — Technical delivery conditions for filler materials and fluxes — Type of product, dimensions, tolerances and markings*

ISO 13916, *Welding — Guidance on the measurement of preheating temperature, interpass temperature and preheat maintenance temperature*

ISO 14175, *Welding consumables — Gases and gas mixtures for fusion welding and allied processes*

ISO 14344, *Welding consumables — Procurement of filler materials and fluxes*

ISO 15792-1:2000, *Welding consumables — Test methods — Part 1: Test methods for all-weld metal test specimens in steel, nickel and nickel alloys*. Amended by ISO 15792-1:2000/Amd 1:2011

ISO 80000-1:2009, *Quantities and units — Part 1: General*. Corrected by ISO 80000-1:2009/Cor 1:2011

koniec náhľadu – text ďalej pokračuje v platenej verzii STN