

**Keevitustarvikud. Elektrodtraadid, traadid, vardad ja rübustid kõrgtugeva terase kaitsegaaskeevituseks sulavelektroodiga. Klassifikatsioon (ISO 16834:2012)**

**Welding consumables - Wire electrodes, wires, rods and deposits for gas shielded arc welding of high strength steels - Classification (ISO 16834:2012)**

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN ISO 16834:2012 sisaldab Euroopa standardi EN ISO 16834:2012 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 16834:2012 consists of the English text of the European standard EN ISO 16834:2012.
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English Version

**Welding consumables - Wire electrodes, wires, rods and  
deposits for gas shielded arc welding of high strength steels -  
Classification (ISO 16834:2012)**

Produits consommables pour le soudage - Fils-électrodes,  
fils, baguettes et dépôts pour le soudage à l'arc sous flux  
gazeux des aciers à haute résistance - Classification (ISO  
16834:2012)

Schweißzusätze - Drahtelektroden, Drähte, Stäbe und  
Schweißgut zum Schutzgasschweißen von hochfesten  
Stählen - Einteilung (ISO 16834:2012)

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

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## Foreword

This document (EN ISO 16834:2012) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 "Welding" 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of an identical text or by endorsement, at the latest by November 2012, and conflicting national standards shall be withdrawn at the latest by November 2012.

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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### Endorsement notice

The text of ISO 16834:2012 has been approved by CEN as a EN ISO 16834:2012 without any modification.

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## Introduction

This International Standard recognizes that there are two somewhat different approaches in the global market to classifying a given wire electrode, wire, rod or deposit, 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 International Standard. The classification in accordance with system A is mainly based on EN 12534:1999<sup>[1]</sup>. The classification in accordance with system B is mainly based upon standards used around the Pacific Rim. Future revisions will aim to merge the two systems into a single classification system.

This International Standard provides a classification for the designation of wire electrodes, wires, rods and deposits 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 the 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 material. Thus, where the application requires matching tensile strength, selection of the consumable should be made by reference to column 3 of Table 1A or 1B, as appropriate.

# Welding consumables — Wire electrodes, wires, rods and deposits for gas shielded arc welding of high strength steels — Classification

## 1 Scope

This International Standard specifies requirements for classification of wire electrodes, wires, rods and all-weld metal deposits in the as-welded condition and in the post-weld heat-treated (PWHT) condition for gas shielded metal arc welding and tungsten inert-gas welding of high-strength steels with a minimum yield strength greater than 500 MPa, or a minimum tensile strength greater than 570 MPa. One wire electrode can be tested and classified with different shielding gases.

This International Standard is a combined specification providing for 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.

- e) Clauses, subclauses and tables which carry the suffix letter “A” are applicable only to wire electrodes, wires, rods and deposits classified according to the system based upon the yield strength and the average impact energy of 47 J of all-weld metal under this International Standard.
- f) Clauses, subclauses and tables which carry the suffix letter “B” are applicable only to wire electrodes, wires, rods and deposits classified according to the system based upon the tensile strength and the average impact energy of 27 J of all-weld metal under this International Standard.
- g) Clauses, subclauses and tables which do not have either the suffix letter “A” or the suffix letter “B” are applicable to all wire electrodes, wires, rods and deposits classified under this International Standard.

## 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.

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 14175:2008, *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*

ISO 80000-1:2009, *Quantities and units — Part 1: General*