

Welding consumables - Covered electrodes, wires, rods and tubular cored electrodes for fusion welding of cast iron - Classification

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 1071:2003 sisaldab Euroopa standardi EN ISO 1071:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 17.09.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 1071:2003 consists of the English text of the European standard EN ISO 1071:2003.</p> <p>This document is endorsed on 17.09.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This European Standard specifies requirements for classification of covered electrodes for manual metal arc welding, wire electrodes for metal arc welding, tubular cored electrodes for metal arc welding with and without a gas shield, rods for TIG-welding and rods for oxyfuel gas welding of unalloyed cast irons. Classification is based on the chemical composition of wires and rods and on the all-weld metal deposit for tubular cored and covered electrodes</p>	<p>Scope:</p> <p>This European Standard specifies requirements for classification of covered electrodes for manual metal arc welding, wire electrodes for metal arc welding, tubular cored electrodes for metal arc welding with and without a gas shield, rods for TIG-welding and rods for oxyfuel gas welding of unalloyed cast irons. Classification is based on the chemical composition of wires and rods and on the all-weld metal deposit for tubular cored and covered electrodes</p>
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Võtmesõnad: cast iron, classi, classifications, cored wire electrode, electrodes, fusion welding, gas metal-arc welding, gas- shielded welding, gas welding, marks, rod electrodes, symbols, welding, welding electrodes, welding engineering, welding filler metals, wire electrodes

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English version

Welding consumables - Covered electrodes, wires, rods and
tubular cored electrodes for fusion welding of cast iron -
Classification (ISO 1071:2003)

Produits consommables pour le soudage - Electrodes
enrobées, fils d'apport, baguettes et fils fourrés pour le
soudage par fusion de la fonte - Classification (ISO
1071:2003)

Schweißzusätze - Umhüllte Stabelektroden, Drähte, Stäbe
und Fülldrahtelektroden zum Schmelzschiessen von
Gusseisen - Einteilung (ISO 1071:2003)

This European Standard was approved by CEN on 20 February 2003.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN ISO 1071:2003) has been prepared by Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DS in collaboration with Technical Committee ISO/TC 44 "Welding and allied processes".

Annexes A, B and ZA are informative.

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 January 2004, and conflicting national standards shall be withdrawn at the latest by January 2004.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

This European Standard classifies welding consumables for fusion welding of various types of unalloyed cast irons, e.g.:

- grey cast irons with lamellar graphite according to EN 1561;
- malleable cast irons according to EN 1562;
- spheroidal graphite cast irons according to EN 1563;
- ductile iron pipes, fittings, accessories and their joints for water pipelines – Requirements and test methods according to EN 545;
- ductile iron pipes, fittings, accessories and their joints for gas pipelines – Requirements and test methods according to EN 969.

Applications for welding consumables classified to this standard:

- production welding, that means welding of cast materials during the process of production. In that way the quality of the casting shall be ensured according to the guaranteed properties and to the requirements of the application;
- repair welding of castings which are damaged during service;
- welding for construction purposes, where cast irons are joined to themselves or to other ferrous or non-ferrous metals.

Two different methods are used for the welding of cast irons:

- using a welding consumable which produces a weld metal similar to the parent metal. High preheating is required (typical temperature range 550 °C to 650 °C);
- using a welding consumable which produces a weld metal dissimilar to the parent metal. No or only low preheating is required.

This standard contains the different types of welding consumables because the chemical composition of welding rods and wire electrodes as well as the all-weld metal of the corresponding covered electrodes and tubular cored electrodes is similar.

Additionally to the welding consumables specified in this standard, consumables classified to other standards can be used (see annex A).

1 Scope

This European Standard specifies requirements for classification of covered electrodes for manual metal arc welding, wire electrodes for metal arc welding, tubular cored electrodes for metal arc welding with and without a gas shield, rods for TIG-welding and rods for oxyfuel gas welding of unalloyed cast irons. Classification is based on the chemical composition of wires and rods and on the all-weld metal deposit for tubular cored and covered electrodes.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 439, *Welding consumables - Shielding gases for arc welding and cutting.*

EN 545, *Ductile iron pipes, fittings, accessories and their joints for water pipelines - Requirements and test methods.*

EN 969, *Ductile iron pipes, fittings accessories and their joints for gas pipelines - Requirements and test methods.*

EN 1561, *Founding - Grey cast irons.*

EN 1562, *Founding — Malleable cast irons.*

EN 1563, *Founding — Spheroidal graphite cast irons.*

EN 1564, *Founding — Austempered ductile cast irons.*

EN 22401, *Covered electrodes - Determination of the efficiency, metal recovery and deposition coefficient (ISO 2401:1972).*

EN ISO 6847, *Welding consumables - Deposition of a weld metal pad for chemical analysis (ISO 6847:2000).*

prEN ISO 544, *Welding consumables - Technical delivery conditions for welding filler metals - Type of product, dimensions, tolerances and markings (ISO/FDIS 544:2000).*

ISO 31-0:1992, *Quantities and units - Part 0: General principles.*