Welding consumables - Wire electrodes, strip electrodes, wires and rods for arc welding of stainless and heat resisting steels - Classification

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 14343:2010 sisaldab Euroopa standardi EN ISO 14343:2009 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 14343:2010 consists of the English text of the European standard EN ISO 14343:2009.
Standard on kinnitatud Eesti Standardikeskuse 28.02.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 28.02.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.11.2009.	Date of Availability of the European standard text 15.11.2009.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 25.160.20

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 14343

November 2009

ICS 25.160.20

Supersedes EN ISO 14343:2007

English Version

Welding consumables - Wire electrodes, strip electrodes, wires and rods for arc welding of stainless and heat resisting steels - Classification (ISO 14343:2009)

Produits consommables pour le soudage - Fils-électrodes, électrodes en feuillard, fils d'apport et baguettes de soudage, pour le soudage à l'arc des aciers inoxydables et des aciers résistant aux températures élevées - Classification (ISO 14343:2009)

Schweißzusätze - Drahtelektroden, Bandelektroden, Drähte und Stäbe zum Schmelzschweißen von korrosionsbeständigen und hitzebeständigen Stählen - Einteilung (ISO 14343:2009)

This European Standard was approved by CEN on 24 October 2009.

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 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 Management Centre has the same status as the official versions.

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

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 14343:2009) 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 May 2010, and conflicting national standards shall be withdrawn at the latest by May 2010.

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 14343:2007.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 14343:2009 has been approved by CEN as a EN ISO 14343:2009 without any modification.

Contents

Page

Introduction

It is recognized that there are two somewhat different approaches in the global market to classifying a given stainless steel welding consumable, and that either or both can be used to suit a particular market need. One is the *nominal composition* approach, which uses designators to indicate the principal alloying elements at their nominal levels, in a particular sequence, and which is sometimes followed by chemical element symbols to indicate compositional modifications to the original grade. The other is the *alloy type* approach, which uses tradition-based three- or four-digit designations for certain original grades, sometimes followed by one or more chemical element symbols indicating compositional modifications of the original. In both approaches, classification is based upon the chemical composition of the product. In many cases, a given product can be classified using both approaches, because the composition ranges, although slightly different, overlap to a considerable extent between the two.

Designation by either type of classification, or both where suitable, identifies a product as being classified according to this International Standard. Many, but not all, commercial products addressed by this International Standard can be classified using both approaches, and suitable products can be so marked. Classification according to system A, by nominal composition, is based mainly on EN 12072[1][1)], while that of system B, by alloy type, is mainly based upon standards used around the Pacific Rim.

For stainless steel welding consumables, there is no unique relationship between the product form (wire electrode, strip electrode, wire or rod) and the welding process used (gas-shielded metal arc welding, gas tungsten arc welding, plasma arc welding, submerged arc welding, electroslag welding and laser beam welding). For this reason, the wire electrodes, strip electrodes, wires or rods can be classified on the basis of any of the above product forms and can be used, as appropriate, for more than one of the above processes.

1) This was replaced by “EN ISO 14343:2007” when CEN adopted the previous edition of this International Standard.

Welding consumables — Wire electrodes, strip electrodes, wires and rods for arc welding of stainless and heat resisting steels — Classification

1 Scope

This International Standard specifies requirements for classification of wire electrodes, strip electrodes, wires and rods for gas-shielded metal arc welding, gas tungsten arc welding, plasma arc welding, submerged arc welding, electroslag welding and laser beam welding of stainless and heat-resisting steels. The classification of the wire electrodes, strip electrodes, wires and rods is based upon their chemical composition.

This International Standard is a combined specification providing for classification utilizing a system based upon nominal composition (system A), or utilizing a system based upon alloy type (system B).

a) Paragraphs which carry the label “classification according to nominal composition” and the suffix letter “A”, or “ISO 14343-A”, are applicable only to products classified according to system A;

b) Paragraphs which carry the label “classification according to alloy type” and the suffix letter “B”, or “ISO 14343-B”, are applicable only to products classified according to system B.

c) Paragraphs which carry neither label nor suffix letter are applicable to products that can be classified according to either system A or B or both.

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

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

ISO 14344, *Welding and allied processes — Flux and gas shielded electrical welding processes — Procurement guidelines for consumables*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
rod
form of welding filler metal, normally packaged in straight lengths, that does not conduct the welding current, used in gas tungsten arc and plasma arc welding