Welding consumables - Fluxes for submerged arc welding and electroslag welding - Classification (ISO 14174:2012)

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NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 14174:2012 sisaldab Euroopa standardi EN ISO 14174:2012 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 14174:2012 consists of the English text of the European standard EN ISO 14174:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.02.2012.	Date of Availability of the European standard is 01.02.2012.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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Võtmesõnad: arc welding, classifications, filler wire, high alloy steels, low alloy steels, marking, submerge arc welding, symbols, unalloyed steels, welding fluxes,

EUROPEAN STANDARD

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English Version

Welding consumables - Fluxes for submerged arc welding and electroslag welding - Classification (ISO 14174:2012)

Produits consommables pour le soudage - Flux pour le soudage à l'arc sous flux et le soudage sous laitier - Classification (ISO 14174:2012)

Schweißzusätze - Pulver zum Unterpulverschweißen und Elektroschlackeschweißen - Einteilung (ISO 14174:2012)

This European Standard was approved by CEN on 28 January 2012.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 14174:2012) 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of an identical text or by endorsement, at the latest by August 2012, and conflicting national standards shall be withdrawn at the latest by August 2012.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.

This document supersedes EN 760:1996.

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Endorsement notice

The text of ISO 14174:2012 has been approved by CEN as a EN ISO 14174:2012 without any modification.

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Introduction

This International Standard is based on EN 760:1996[1].

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1 Scope

This International Standard specifies requirements for classification of fluxes for submerged arc welding and electroslag welding for joining and overlay welding using wire electrodes, tubular cored electrodes, and strip electrodes.

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 3690, *Welding and allied processes — Determination of hydrogen content in arc weld metal*

ISO 14171, *Welding consumables — Solid wire electrodes, tubular cored electrodes and electrode/flux combinations for submerged arc welding of non alloy and fine grain steels — Classification*

ISO 14343, *Welding consumables — Wire electrodes, strip electrodes, wires and rods for arc welding of stainless and heat resisting steels — Classification*

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

3 Classification

Fluxes for submerged arc welding and electroslag welding for joining and overlay welding are granular, fusible products of mainly mineral origin, which are manufactured by various methods. Fluxes influence the chemical composition and the mechanical properties of the weld metal.

The classification of the fluxes is divided into seven parts:

1) the first part gives a symbol indicating the product/process (see 4.1);
2) the second part gives a symbol indicating the method of manufacture (see 4.2);
3) the third part gives a symbol indicating the type of flux, characteristic chemical constituents (see Table 1);
4) the fourth part gives a symbol indicating the applications, flux class (see 4.4);
5) the fifth part gives a symbol indicating the metallurgical behaviour (see 4.5);
6) the sixth part gives a symbol indicating the type of current (see 4.6);
7) the seventh part gives a symbol indicating the diffusible hydrogen content of deposited weld metal (see Table 6) — only applicable for class 1 fluxes.

In order to promote the use of this International Standard, the classification is divided into two sections.

a) Compulsory section.

This section includes the symbols for process, method of manufacture, characteristic chemical constituents, and applications, i.e. the symbols defined in 4.1, 4.2, 4.3, and 4.4.

b) Optional section.