INTERNATIONAL STANDARD

ISO 14343

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AMENDMENT 1
2006-03-15

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

AMENDMENT 1: Addition of strip electrodes for submerged arc welding and electroslag welding

Produits consommables pour le soudage — Fils-électrodes, fils d'apport et baguettes d'apport pour le soudage à l'arc des aciers inoxydables et des aciers résistant aux températures élevées — Classification

AMENDEMENT 1: Ajout des soudages à l'arc sous flux et sous laitier électroconducteurs

Reference number
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

Amendment 1 to ISO 14343:2002 was prepared by the International Institute of Welding, recognized as an international standardizing body in the field of welding by the ISO Council.

Introduction

The use of strip electrodes for the deposition of stainless steel overlays, using either submerged arc welding or electroslag welding, is widespread. Compositions of the strips used in these processes are generally similar to the compositions of solid wire electrodes, wires and rods. Accordingly, Amendment 1 to ISO 14343:2002 adds the classification of strip electrodes into ISO 14343:2002.

Requests for official interpretations of provisions in this standard should be made in writing and sent to the ISO Central Secretariat who will forward them to the IIW Secretariat for an official response.

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

AMENDMENT 1: Addition of strip electrodes for submerged arc welding and electroslag welding

Cover page and Page 1

Replace the original document title, “Welding consumables — Wire electrodes, wires and rods for arc welding of stainless and heat resisting steels — Classification,” with the following:

> “Welding consumables — Wire electrodes, strip electrodes, wires and rods for fusion welding of stainless and heat resisting steels — Classification”

Page iv, Introduction

Replace the third paragraph with the following:

> “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, laser welding, submerged arc welding or electroslag welding). For this reason, the wire electrodes, strip electrodes, wires or rods may 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.”

Page 1, Clause 1

Replace the first paragraph with the following:

> “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.”

Page 2, Clause 3

Add a new Subclause 3.2, as indicated below, and renumber old Subclauses 3.2 and 3.3 as 3.3 and 3.4, respectively.

> **"3.2**
> **strip electrode**
> form of welding filler metal, normally packaged as coils, having a rectangular cross-section of width much greater than thickness, that becomes part of the welding circuit through which current is conducted, and that terminates at the arc for submerged arc welding, or at the slag bath for electroslag welding"

Page 2, Subclause 4.1

Replace the text relating to "ISO 14343-A" with the following:

> "The symbol for the wire electrode, strip electrode, wire or rod used in the fusion welding process is the letter G (gas metal arc welding), W (gas tungsten arc welding), P (plasma arc welding), S (submerged arc welding), B (submerged arc welding or electroslag welding with strip electrode) or L (laser beam welding), placed at the beginning of the designation."

Replace the text relating to "ISO 14343-B" with the following:

> "No symbol is used to indicate the welding process. The symbol for solid stainless and heat resisting steel wire electrodes, wires and rods for use in all welding processes shall be the letters "SS". The initial "S" indicates solid wire as distinguished from covered electrodes or from tubular cored wires or tubular cored rods. The symbol for strip electrodes for use in submerged arc welding or electroslag welding shall be the letters "BS". The "B" indicates a strip electrode. The second "S" in "SS" and the "S" in "BS" indicates that the alloy system is stainless or heat resisting steel."

Page 2, Subclause 4.2

Replace the text of the subclause with the following:

> "The symbol in Table 1 indicates the chemical composition of the wire electrode, strip electrode, wire or rod determined under conditions given in Clause 6."

Page 3, Clause 8

After Example c), immediately before the words, "Where, in all three examples," insert the following:

> "d) A strip electrode for submerged arc welding or electroslag welding has a chemical composition within the limits for the alloy symbol 23 12 2 L and within the limits for the alloy symbol 309LMo of Table 1.
>
> The designation will be:

Classification according to nominal composition	**Classification according to alloy type**
ISO 14343-A — B 23 12 2 L	ISO 14343-B — BS309LMo"

Then replace the words, “Where in all three examples,” and the remainder of Clause 8, with the following:

“Where, in all four examples,

Classification according to nominal composition

ISO 14343-A = International Standard number, with classification according to the system A
G or S or W or B = product/process symbol (see 4.1)
20 10 3 or 19 12 3 L or 23 12 2 L = chemical composition of the product (see Table 1).

Classification according to alloy type

ISO 14343-B = International Standard number, with classification according to the system B
SS or BS = product/process symbol (see 4.1)
308Mo or 316LSi or 309LMo = chemical composition of the product (see Table 1).”

Page 6, Table 1, section entitiled “Special types – Often used for dissimilar metal joining”

Following the table row beginning in the first column with “(23 12 L Si)”, insert the following new row:

22 11 L [g]	309LD [g]	0,03	0,65	1,0 to 2,5	0,03	0,03	21,0 to 24,0	10,0 to 12,0	0,75	—	0,75	—	—

Following the table row beginning in the second column with “309LNb”, insert the following new row:

22 12 L Nb [g]	309LNbD [g]	0,03	0,65	1,0 to 2,5	0,03	0,03	20,0 to 23,0	11,0 to 13,0	0,75	—	0,75	10 x C to 1,2	—

Page 7, Table 1, table footnotes

At the foot of the table, add the following new table footnote:

[g]	These compositions are mainly used in low dilution overlay welding such as electroslag strip cladding.

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Price based on 3 pages