

This is a preview of "ISO 3581:2003". [Click here to purchase the full version from the ANSI store.](#)

Second edition
2003-02-01

Welding consumables — Covered electrodes for manual metal arc welding of stainless and heat-resisting steels — Classification

*Produits consommables pour le soudage — Électrodes enrobées pour
le soudage manuel à l'arc des aciers inoxydables et résistant aux
températures élevées — Classification*



Reference number
ISO 3581:2003(E)

© ISO 2003

This is a preview of "ISO 3581:2003". [Click here to purchase the full version from the ANSI store.](#)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2003

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 3581:2003". [Click here to purchase the full version from the ANSI store.](#)

Contents

Page

Foreword.....	iv
Introduction	v
1 Scope.....	1
2 Normative references	1
3 Classification.....	2
4 Symbols and requirements	5
4.1 Symbol for the product/process.....	5
4.2 Symbol for the chemical composition of all-weld metal.....	5
4.3 Symbol for type of electrode covering	5
4.4 Symbol for effective electrode efficiency and type of current	13
4.5 Symbol for welding position.....	13
5 Chemical analysis	14
6 Mechanical property tests.....	14
6.1 General	14
6.2 Preheat and interpass temperatures.....	14
6.3 Pass sequence	15
7 Fillet weld test	15
8 Retests	16
9 Technical delivery conditions.....	17
10 Examples of designation.....	17
Annex A (informative) Types of covering.....	18
Annex B (informative) Considerations on weld metal ferrite contents	19
Bibliography	22

This is a preview of "ISO 3581:2003". [Click here to purchase the full version from the ANSI store.](#)

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.

ISO 3581 was prepared in collaboration with the International Institute of Welding which has been approved by the ISO Council as an international standardizing body in the field of welding.

This second edition cancels and replaces the first edition (ISO 3581:1976), which has been technically revised.

This is a preview of "ISO 3581:2003". [Click here to purchase the full version from the ANSI store.](#)

Introduction

This International Standard provides a classification system for stainless steel, covered welding electrodes in terms of chemical composition of deposited weld metal and type of electrode covering. Other properties of the electrodes are specified by reference to tables.

This International Standard has been prepared by the International Institute of Welding, Commission II "Arc Welding", Subcommittee II-E. It recognizes that there are two somewhat different approaches in the global market, for classifying a given stainless steel, covered electrode, and allows for either or both to be used to suit a particular need. Application of either (or both) type(s) of classification designation identifies a product as classified according to this International Standard. It should be noted that the two systems are not exactly equivalent, therefore each system must be used independent of the other, without combining designators in any way.

The classification according to ISO 3581, system A, is mainly based upon EN 1600; the classification according to ISO 3581, system B, is mainly based upon standards used around the Pacific Rim.