SLOVENSKI STANDARD
SIST EN ISO 15011-3:2010

01-april-2010

Nadomešča:
SIST EN ISO 15011-3:2003

Zdravje in varnost pri varjenju in sorodnih postopkih - Laboratorijska metoda za vzorčenje dima in plinov - 3. del: Določevanje emisije ozona pri obločnem varjenju (ISO 15011-3:2009)

Health and safety in welding and allied processes - Laboratory method for sampling fume and gases - Part 3: Determination of ozone emission rate during arc welding (ISO 15011-3:2009)

Arbeits- und Gesundheitsschutz beim Schweißen und bei verwandten Verfahren - Laborverfahren zum Sammeln von Rauch und Gasen - Teil 3: Bestimmung der Emissionsrate von Ozon (ISO 15011-3:2009)

Hygiène et sécurité en soudage et techniques connexes - Méthode de laboratoire d'échantillonnage des fumées et des gaz - Partie 3: Détermination du débit d'émission d'ozone lors du soudage à l'arc (ISO 15011-3:2009)

Ta slovenski standard je istoveten z: **EN ISO 15011-3:2009**

ICS:

13.100	Varnost pri delu. Industrijska higiena	Occupational safety. Industrial hygiene
25.160.10	Varilni postopki in varjenje	Welding processes

SIST EN ISO 15011-3:2010 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 15011-3

October 2009

ICS 25.160.10; 13.100

Supersedes EN ISO 15011-3:2002

English Version

Health and safety in welding and allied processes - Laboratory method for sampling fume and gases - Part 3: Determination of ozone emission rate during arc welding (ISO 15011-3:2009)

Hygiène et sécurité en soudage et techniques connexes - Méthode de laboratoire d'échantillonnage des fumées et des gaz - Partie 3: Détermination du débit d'émission d'ozone lors du soudage à l'arc (ISO 15011-3:2009)

Arbeits- und Gesundheitsschutz beim Schweißen und bei verwandten Verfahren - Laborverfahren zum Sammeln von Rauch und Gasen - Teil 3: Bestimmung der Emissionsrate von Ozon beim Lichtbogenschweißen (ISO 15011-3:2009)

This European Standard was approved by CEN on 29 September 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

Contents

Page

Foreword

This document (EN ISO 15011-3:2009) 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 April 2010, and conflicting national standards shall be withdrawn at the latest by April 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 15011-3:2002.

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 15011-3:2009 has been approved by CEN as a EN ISO 15011-3:2009 without any modification.

INTERNATIONAL STANDARD

ISO 15011-3

Second edition
2009-10-15

Health and safety in welding and allied processes — Laboratory method for sampling fume and gases —

Part 3: Determination of ozone emission rate during arc welding

Hygiène et sécurité en soudage et techniques connexes — Méthode de laboratoire d'échantillonnage des fumées et des gaz —

Partie 3: Détermination du débit d'émission d'ozone lors du soudage à l'arc

Reference number
ISO 15011-3:2009(E)

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.

COPYRIGHT PROTECTED DOCUMENT

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

Contents

Page

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 15011-3 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 9, *Health and safety*.

This second edition cancels and replaces the first edition (15011-3:2002), which has been technically revised.

ISO 15011 consists of the following parts, under the general title *Health and safety in welding and allied processes — Laboratory method for sampling fume and gases*:

— *Part 1: Determination of fume emission rate during arc welding and collection of fume for analysis*

— *Part 2: Determination of the emission rates of carbon monoxide (CO), carbon dioxide (CO_2), nitrogen monoxide (NO) and nitrogen dioxide (NO_2) during arc welding, cutting and gouging*

— *Part 3: Determination of ozone emission rate during arc welding*

— *Part 4: Fume data sheets*

— *Part 5: Identification of thermal-degradation products generated when welding or cutting through products composed wholly or partly of organic materials*

The following part is under preparation:

— *Part 6: Procedure for quantitative determination of fume and gases from resistance spot welding* [Technical Specification]

Request for an official interpretation of technical aspects of this part of ISO 15011 should be directed to the secretariat of ISO/TC 44/SC 9 via the user's national standardization body; a listing of these bodies can be found at www.iso.org.

Introduction

Welding and allied processes generate fume and gases, which, if inhaled, can be harmful to human health. Knowledge of the composition and the emission rates of the fume and gases can be useful to occupational health professionals in assessing worker exposure and in determining appropriate control measures.

Absolute exposure is dependent upon factors such as welder position with respect to the plume and draughts and cannot be predicted from emission rate data. However, in the same work situation, a higher emission rate is expected to correlate with a higher exposure and a lower emission rate with a lower exposure. Hence, emission rate data can be used to predict relative changes in exposure that might occur in the workplace under different welding conditions and to identify measures for reducing such exposure, but they cannot be used to calculate ventilation requirements.

This part of ISO 15011 defines a method for measuring the emission rate of ozone during arc welding using a hood technique. The procedure simply prescribes a methodology, leaving selection of the test parameters to the user, so that the effects of different variables can be evaluated. Research [2] has shown that differences in ozone emission rate measured using this technique correlate well with changes in exposure in the workplace.

It is assumed that the executions of the provisions and the interpretation of the results obtained in this part of ISO 15011 are entrusted to appropriately qualified and experienced people.