SLOVENSKI STANDARD
SIST EN ISO 15614-13:2005

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Popis in kvalifikacija varilnih postopkov za kovinske materiale - Preskus varilnega postopka - 13. del: Uporovno soļ elno in obģigalno varjenje (ISO 15614-13:2005)

Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 13: Resistance butt and flash welding (ISO 15614-13:2005)

Anforderung und Qualifizierung von Schweißverfahren für metallische Werkstoffe - Schweißverfahrensprüfung - Teil 13: Pressstumpf- und Abbrennstumpfschweißen (ISO 15614-13:2005)

Descriptif et qualification d'un mode opératoire de soudage pour les matériaux métalliques - Epreuve de qualification d'un mode opératoire de soudage - Partie 13: Soudage en bout par résistance pure et soudage par étincelage (ISO 15614-13:2005)

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Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 13: Resistance butt and flash welding (ISO 15614-13:2005)

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This European Standard was approved by CEN on 3 February 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

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Foreword

This document (EN ISO 15614-13:2005) has been prepared by Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 44 "Welding and allied processes".

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 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

INTERNATIONAL STANDARD

ISO 15614-13

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Specification and qualification of welding procedures for metallic materials — Welding procedure test —

Part 13: Resistance butt and flash welding

Descriptif et qualification d'un mode opératoire de soudage pour les matériaux métalliques — Épreuve de qualification d'un mode opératoire de soudage —

Partie 13: Soudage en bout par résistance pure et soudage par étincelage

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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 15614-13 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding*, in collaboration with Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 10, *Unification of requirements in the field of metal welding*, in accordance with the Agreement on Technical cooperation between ISO and CEN (Vienna Agreement).

ISO 15614 consists of the following parts, under the general title *Specification and qualification of welding procedures for metallic materials — Welding procedure test*:

— *Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys*

— *Part 2: Arc welding of aluminium and its alloys*

— *Part 3: Arc welding of cast iron*

— *Part 4: Finishing welding of aluminium castings*

— *Part 5: Arc welding of titanium, zirconium and their alloys*

— *Part 6: Arc welding of copper and its alloys*

— *Part 7: Overlay welding*

— *Part 8: Welding of tubes to tube-plate joints*

— *Part 9: Arc underwater hyperbaric wet welding*

— *Part 10: Hyperbaric dry welding:*

— *Part 11: Electron and laser beam welding*

— *Part 12: Spot, seam and projection welding*

— *Part 13: Resistance butt and flash welding*

For the purposes of this part of ISO 15614, the CEN annex regarding fulfilment of European Council Directives has been removed.

Introduction

All new welding procedure qualifications are to be carried out in accordance with this part of ISO 15614 from the date of its issue.

However, this part of ISO 15614 does not invalidate previous welding procedure qualifications made to standards or specifications, provided the intent of the technical requirements is satisfied and the previous welding procedure qualifications are relevant to the application and production work on which they are to be employed.

Also, where additional tests have to be carried out to make the qualification technically equivalent, it is only necessary to do the additional tests on a test piece which should be made in accordance with this part of ISO 15614.

Requests for official interpretations of any aspect of this part of ISO 15614 should be directed to the Secretariat of ISO/TC 44/SC 10 via the national standards body, a complete listing of which can be found at www.iso.org.

Specification and qualification of welding procedures for metallic materials — Welding procedure test —

Part 13: Resistance butt and flash welding

1 Scope

This part of ISO 15614 specifies the tests which should be used for qualification of welding procedure specifications.

It applies to resistance butt welding and flash welding of metallic materials, e.g. with solid, tubular, flat or circular cross-section. The basic principles of this part of ISO 15614 may be applied to other resistance welding processes when this is specified in the specification.

NOTE This part of ISO 15614 is a part of a series of standards. Details of this series are given in ISO 15607:2003, Annex A.

This part of ISO 15614 defines the conditions for carrying out tests and the limits of validity of a qualified welding procedure for all practical welding operations covered by this part of ISO 15614.

The tests required to qualify the procedure for a particular component/assembly depend on the performance and quality requirements of the component/assembly and should be defined in the design specification.

The tests should be carried out in accordance with this part of ISO 15614, unless more severe tests are specified by the relevant application standard or specification, when these apply.

NOTE Specific service, material, or manufacturing conditions may require more comprehensive testing than is specified by this part of ISO 15614.

Such tests may include:

— microsections;

— fatigue or endurance tests;

— impact test;

— radiographic test;

— ultrasonic test;

— corrosion test;

— tests of components or complete welded assemblies.

This part of ISO 15614 covers the following resistance welding processes as defined in ISO 4063:

— 24 flash welding, using direct current or alternating current with various movement sequences, constant flashing and pulsed flashing;

— 25 resistance butt welding, using direct current or alternating current with various pressure sequences.