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Qualification test of welders - Fusion welding - Part 1: Steels (ISO/DIS 9606-1:2007)

Prüfung von Schweißern - Schmelzschweißen - Teil 1: Stähle (ISO/DIS 9606-1:2007)

Épreuve de qualification des soudeurs - Soudage par fusion - Partie 1: Aciers (ISO/DIS 9606-1:2007)

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ICS:

25.160.10 Varilni postopki in varjenje Welding processes

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English Version

Qualification test of welders - Fusion welding - Part 1: Steels (ISO/DIS 9606-1:2007)

Épreuve de qualification des soudeurs - Soudage par
fusion - Partie 1: Aciers (ISO/DIS 9606-1:2007)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 121.

If this draft becomes a European Standard, 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.

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Foreword

This document (prEN ISO 9606-1:2007) 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 document is currently submitted to the parallel Enquiry.

This document will supersede EN 287-1:2004.

Endorsement notice

The text of ISO/DIS 9606-1:2007 has been approved by CEN as prEN ISO 9606-1:2007 without any modifications.

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DRAFT INTERNATIONAL STANDARD ISO/DIS 9606-1

ISO/TC 44/SC 11

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Qualification test of welders — Fusion welding —

Part 1: Steels

Épreuve de qualification des soudeurs — Soudage par fusion —

Partie 1: Aciers

[Revision of first edition (ISO 9606-1:1994)]

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The CEN Secretary-General has advised the ISO Secretary-General that this ISO/DIS covers a subject of interest to European standardization. **In accordance with the ISO-lead mode of collaboration as defined in the Vienna Agreement, consultation on this ISO/DIS has the same effect for CEN members as would a CEN enquiry on a draft European Standard.** Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month FDIS vote in ISO and formal vote in CEN.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

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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.

ISO 9606-1 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 11, *Qualification requirements for welding and allied processes personnel*.

This second/third/... edition cancels and replaces the first/second/... edition (), [clause(s) / subclause(s) / table(s) / figure(s) / annex(es)] of which [has / have] been technically revised.

ISO 9606 consists of the following parts, under the general title *Qualification test of welders — Fusion welding*:

- *Part 1: Steels*
- *Part 2: Aluminium and aluminium alloys*
- *Part 3: Copper and copper alloys*
- *Part 4: Nickel and nickel alloys*
- *Part 5: Titanium and titanium alloys, zirconium and zirconium alloys*

Annexes A and B of this part of ISO/DIS 9606-1:2007 are for information only.

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Qualification test of welders — Fusion welding — Part 1: Steels

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Introduction

The ability of a welder to follow verbal or written instructions and verification of a person's skills are important factors in ensuring the quality of the welded product.

The testing of a welder's skill in accordance with this standard depends on welding techniques and conditions used in which uniform rules are complied with, and standard test pieces are used.

The principle of this standard is that a qualification test qualifies a welder not only for the conditions used in the test, but also for all other conditions which are considered easier to weld in accordance with this standard. It is presumed that the welder has received training and/or has industrial practice within the range of qualification.

The qualification test can be used to qualify a welding procedure and a welder provided that all the relevant requirements e.g. test piece dimensions and testing requirements are satisfied (see ISO 15614-1).

Qualifications in accordance with ISO 9606-1 or any other welder qualification standard existing at the date of publication of this standard are, at the end of their period of validity, to be interpreted in accordance with the requirements of this standard.

Requests for official interpretations of any aspect of this standard should be directed to the Secretariat of ISO/TC 44/SC 11 via your national standards body, a complete listing which can be found at www.iso.org.

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1 Scope

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This International Standard defines the requirements for qualification testing of welders for fusion welding of steels.

It provides a set of technical rules for a systematic qualification test of the welder, and enables such qualifications to be uniformly accepted independently of the type of product, location and examiner/examining body.

When qualifying welders, the emphasis is placed on the welder's ability to manually manipulate the electrode/welding torch/welding blowpipe and thereby producing a weld of acceptable quality.

The welding processes referred to in this standard include those fusion welding processes which are designated as manual or partly mechanized welding. It does not cover fully mechanized and automated welding processes (see ISO 14732).

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 referred document (including any amendments) applies.

ISO 857-1, *Welding and allied processes — Vocabulary — Part 1: Welding processes*

ISO 4063, *Welding and allied processes — Nomenclature of processes and reference numbers*

ISO 5173, *Destructive tests on welds in metallic materials — Bend tests*

ISO 5817, *Welding — Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) — Quality levels for imperfections*

ISO 6947, *Welds — Working positions — Definitions of angles of slope and rotation*

ISO 9017, *Destructive tests on welds in metallic materials — Fracture test*

ISO 15607, *Specification and approval of welding procedures for metallic materials — General rules*

ISO/TR 15608, *Welding — Guidelines for a metallic material grouping system*

ISO 15609-1, *Specification and approval of welding procedures for metallic materials — Welding procedure specification — Part 1: Arc welding*

ISO 15609-2, *Specification and approval of welding procedures for metallic materials — Welding procedure specification — Part 2: Gas welding*

ISO 17636, *Non-destructive examination of welds — Radiographic examination of welded joints*

ISO 17637, *Non-destructive examination of fusion welds — Visual examination*

ISO 17639, *Destructive tests on welds in metallic materials — Macroscopic and microscopic examination of welds*

ISO 17640, *Non destructive examination of welds — Ultrasonic examination of welded joints*

ISO/TR 25901, *Welding and related processes — Vocabulary*

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3 Terms and definitions

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For the purposes of this part of ISO 9606, the following terms and definitions apply.

3.1

welder

person who holds and manipulates the electrode holder, welding torch or blowpipe by hand

[ISO/TR 25901]

3.2

examiner

person who has been appointed to verify compliance with the applicable standard

NOTE In certain cases, an external independent examiner can be required.

[ISO/TR 25901]

3.3

examining body

organization that has been appointed to verify compliance with the applicable standard

NOTE In certain cases, an external independent examining body can be required.

[ISO/TR 25901]

3.4

material backing

backing using material for the purpose of supporting molten weld metal