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Utgåva 1

**Specifikation för och kvalificering av
svetsprocedurer för metalliska material –
Svetsprocedurkontroll –
Del 10: Torr övertryckssvetsning
(ISO 15614-10:2005)**

**Specification and qualification of welding
procedures for metallic materials – Welding
procedure test –
Part 10: Hyperbaric dry welding
(ISO 15614-10:2005)**

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The European Standard EN ISO 15614-10:2005 has the status of a Swedish Standard. This document contains the official English version of EN ISO 15614-10:2005.

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English version

Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 10: Hyperbaric dry welding (ISO 15614-10:2005)

Descriptif et qualification d'un mode opératoire de soudage pour les matériaux métalliques - Epreuve de qualification d'un mode opératoire de soudage - Partie 10: Soudage hyperbar en caisson (ISO 15614-10:2005)

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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.

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EN ISO 15614-10:2005(E)

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Foreword

This document (EN ISO 15614-10:2005) 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of an identical text or by endorsement, at the latest by August 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.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.

Endorsement notice

The text of ISO 15614-10:2005 has been approved by CEN as EN ISO 15614-10:2005 without any modifications.

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Introduction

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

This part of ISO 15614 does not invalidate previously qualified welding procedures in accordance with other standards or specifications, providing the technical requirements are satisfied and the previous qualifications are relevant to the application and production work on which they are to be employed.

Where additional tests have to be carried out to make the qualification technically equivalent, it is only necessary to do the additional tests in accordance with this part of ISO 15614.

Requested for official interpretations of any aspect of this standard should be directed to the Secretariat of ISO/TC 44 via your 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 10: Hyperbaric dry welding

1 Scope

This part of ISO 15614 specifies how to qualify welding procedure specifications for welding in hyperbaric dry environments.

It also specifies the minimum testing requirements necessary for qualification of welding procedures.

This part of ISO 15614 may be used to qualify welding procedures using mechanized and automated welding.

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

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 referenced document (including any amendments) applies.

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

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

ISO 14175, *Welding consumables — Shielding gases for arc welding and cutting*

ISO 15607:2003, *Specification and qualification of welding procedures for metallic materials — General rules*

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

ISO 15618-2, *Qualification testing of welders for underwater welding — Part 2: Diver-welders and welding operators for hyperbaric dry welding*

EN 288-9, *Specification and approval of welding procedures for metallic materials — Part 9: Welding procedure test for pipeline welding on land and offshore site butt welding of transmission pipelines*

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15607 and ISO 15618-2, and the following, apply.

3.1

repair

any operation which involves welding to rectify the weld, outside the normal welding cycle

3.2

full penetration repair

weld repair through the whole thickness of the qualification joint

3.3

internal repair

weld applied to rectify a weld from the inside surface or the root side of a weld, after excavation and re-preparation, using either a single or a multi-pass weld deposition sequence

3.4

make

specific trade or brand name of the consumable, but not its designation

3.5

examiner

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

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

[ISO 15607:2003, definition 3.24¹⁾]

3.6

examining body

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

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

[ISO 15607:2003, definition 3.25¹⁾]

4 Preliminary welding procedure specification (pWPS)

The preliminary welding procedure specification shall be prepared in accordance with ISO 15609-1. It shall specify all relevant parameters and tolerances, including the following additional items if applicable:

- water depth at which welding is to be carried out;
 - gas composition in the hyperbaric chamber or habitat;
 - partial pressure of oxygen;
 - temperature range in the hyperbaric chamber or habitat;
 - relative humidity;
 - method of measuring heat input and/or weld deposition rate;
-

1) This term and definition have been reproduced for clarity.