SLOVENSKI STANDARD
oSIST prEN ISO 15611:2022

01-september-2022

Popis in kvalifikacija varilnih postopkov za kovinske materiale - Kvalifikacija na podlagi predhodnih varilskih izkušenj (ISO/DIS 15611:2022)

Specification and qualification of welding procedures for metallic materials - Qualification based on previous welding experience (ISO/DIS 15611:2022)

Anforderung und Qualifizierung von Schweißverfahren für metallische Werkstoffe - Qualifizierung aufgrund von vorliegender schweißtechnischer Erfahrung (ISO/DIS 15611:2022)

Descriptif et qualification d'un mode opératoire de soudage pour les matériaux métalliques - Qualification sur la base de l'expérience en soudage (ISO/DIS 15611:2022)

Ta slovenski standard je istoveten z: **prEN ISO 15611**

ICS:

25.160.10	Varilni postopki in varjenje	Welding processes

oSIST prEN ISO 15611:2022 **en,fr,de**

DRAFT INTERNATIONAL STANDARD

ISO/DIS 15611

ISO/TC **44**/SC **10** Secretariat: **DIN**

Voting begins on: **2022-07-18**

Voting terminates on: **2022-10-10**

Specification and qualification of welding procedures for metallic materials — Qualification based on previous welding experience

Descriptif et qualification d'un mode opératoire de soudage pour les matériaux métalliques — Qualification sur la base de l'expérience en soudage

ICS: 25.160.01

This document is circulated as received from the committee secretariat.

ISO/CEN PARALLEL PROCESSING

Reference number
ISO/DIS 15611:2022(E)

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 10, *Quality management in the field of welding*.

This second edition cancels and replaces the first edition (ISO 15611:2003), which has been technically revised.

Any feedback, question or request for official interpretation related to any aspect of this document should be directed to the Secretariat of ISO/TC 44/SC 10 via your national standards body. A complete listing of these bodies can be found at www.iso.org/members.html. Official interpretations, where they exist, are available from this page: https://committee.iso.org/sites/tc44/home/interpretation.html.

The main changes compared to the previous edition are as follows:

— normative references have been updated;

— further changes to be identified after DIS ballot.

Introduction

In ISO 15607, one of the methods of welding procedure qualification is by relating to previous welding experience. Many manufacturers have considerable experience in fabricating welded structures. Welded components and structures may have been supplied to end users/clients for a variety of applications and have performed satisfactorily over a period of time in service. If this experience is traceable and documented this standard provides a route to welding procedure qualification based on this experience.

This document is a part of a series of standards, details of this series are given in ISO 15607:2019, Annex A.

Specification and qualification of welding procedures for metallic materials — Qualification based on previous welding experience

1 Scope

This document gives the necessary information to explain the requirements referenced in ISO 15607 about the qualification of welding procedures based on previous welding experience.

In addition, it gives the range of qualification and the validity.

The use of this document may be restricted by an application standard or a specification.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 14555, *Welding — Arc stud welding of metallic materials*

ISO 15607, *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 15609-2, *Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 2: Gas welding*

ISO 15609-3, *Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 3: Electron beam welding*

ISO 15609-4, *Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 4: Laser beam welding*

ISO 15609-5, *Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 5: Resistance welding*

ISO 15609-6, *Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 6: Laser-arc hybrid welding*

ISO 15614-1, *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*

ISO 15614-2, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 2: Arc welding of aluminium and its alloys*

ISO 15614-3, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 3: Fusion welding of non-alloyed and low-alloyed cast irons*

ISO 15614-4, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 4: Finishing welding of aluminium castings*

ISO 15614-5, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 5: Arc welding of titanium, zirconium and their alloys*

ISO 15614-6, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 6: Arc and gas welding of copper and its alloys*

ISO 15614-8, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 8: Welding of tubes to tube-plate joints*

ISO 15614-10, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 10: Hyperbaric dry welding*

ISO 15614-11, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 11: Electron and laser beam welding*

ISO 15614-12, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 12: Spot, seam and projection welding*

ISO 15614-13, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 13: Upset (resistance butt) and flash welding*

ISO 15614-14, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 14: Laser-arc hybrid welding of steels, nickel and nickel alloys*

ISO 15620, *Welding — Friction welding of metallic materials*

ISO 18785-4, *Friction stir spot welding — Aluminium — Part 4: Specification and qualification of welding procedures*

ISO 25239-4, *Friction stir welding — Aluminium — Part 4: Specification and qualification of welding procedures*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Preliminary welding procedure specifications (pWPS)

The qualification of a welding procedure related to previous welding experience shall be based on a pWPS according to ISO 14555, to the relevant part of ISO 15609, to ISO 15620, to ISO 18785-4 or to ISO 25239-4. This pWPS shall specify the range for all the relevant parameters.

5 Qualification of the welding procedure

The essential items for the qualification are:

— pWPS according to ISO 14555;

— pWPS according to the relevant part of ISO 15609;

— pWPS according to ISO 15620;

— pWPS according to ISO 18785-4;

— pWPS according to ISO 25239-4;

— documentation of the existing previous welding experience (see clause 6).