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

Part 1: Arc welding

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

Partie 1: Soudage à l'arc

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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.

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*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Official interpretations of TC 44 documents, where they exist, are available from this page: https://committee.iso.org/sites/tc44/home/interpretation.html.

This second edition cancels and replaces the first edition (ISO 15609-1:2004), which has been technically revised. It also incorporates the Corrigendum ISO 15609-1:2004/Cor.1:2005.

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

— Clause 2 has been updated;

— editorial changes have been made;

— the former Note 1 in 4.1 has been moved to regular text;

— surface conditions have been added in 4.4.4;

— Subclause 4.4.10 has been technically revised;

— arc energy has been added in 4.4.17;

— Annex A has been revised.

A list of all parts in the ISO 15609 series can be found on the ISO website.

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Introduction

All new welding procedure specifications need to be prepared in accordance with this document from the date of its issue. However, this document does not invalidate previous welding procedure specifications made to former standards or specifications or previous editions of this document.

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

Part 1: Arc welding

1 Scope

This document specifies requirements for the content of welding procedure specifications for arc welding processes.

Details of the ISO 15609 series are given in ISO 15607. The variables listed in this document are those influencing the quality of the welded joint.

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

ISO 6848, *Arc welding and cutting — Nonconsumable tungsten electrodes — Classification*

ISO 6947, *Welding and allied processes — Welding positions*

ISO 14175, *Welding consumables — Gases and gas mixtures for fusion welding and allied processes*

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

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

ISO/TR 18491, *Welding and allied processes — Guidelines for measurement of welding energies*

ISO/TR 20172, *Welding — Grouping systems for materials — European materials*

ISO/TR 20173, *Welding — Grouping systems for materials — American materials*

ISO/TR 20174, *Welding — Grouping systems for materials — Japanese materials*

ISO/TR 25901 (all parts), *Welding and allied processes — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15607 and ISO/TR 25901 (all parts) 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 http://www.electropedia.org/

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