INTERNATIONAL STANDARD

ISO 17533

First edition
2015-08-01

Welding for aerospace applications — Welding information in design documents

Soudage pour applications aérospatiales — Informations de soudage dans les documents de conception

Reference number
ISO 17533:2015(E)

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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.

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 44, *Welding and allied processes*.

Requests for official interpretations of any aspect of this International Standard should be directed to the Secretariat of ISO/TC 44 via your national standards body. A complete listing of these bodies can be found at www.iso.org.

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Welding for aerospace applications — Welding information in design documents

1 Scope

This International Standard is applicable to welded and brazed metallic component parts used in aerospace construction. This International Standard specifies appropriate welding/brazing design information on drawings serving to ensure fit, form and function of welded/brazed joints.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2553, *Welding and allied processes — Symbolic representation on drawings — Welded joints*

3 Design documents content requirements

Intended materials shall be clearly defined in the design documents. Additional requirements (e.g. microstructural composition, grain direction) shall be described.

On drawings, welded/brazed joints shall be depicted and indicated with a symbol according to ISO 2553. If weld/braze joint details (type, location and implementation of a weld/braze joint) cannot be identified unambiguously by means of a weld symbol, then detail shall be represented separately (e.g. sectional view of the shape of the joint with dimensions).

Information relevant to manufacturing shall be specified in a design definition and be confirmed by the cognizant welding authority.

It is recommended that information relevant to manufacturing is specified in cooperation with the design/engineering authority, manufacturing and the cognizant welding authority.

The design definition for welding/brazing details shall contain, as a minimum, the following information:

a) welding/brazing process (see ISO 4063);

b) welding/brazing specification;

c) parent material condition (for aluminium see for example EN 4632-002);

d) requirements for the welded/brazed joint, e.g. safety class, acceptance level according to ISO/PWI 17927, ISO 16338, etc.;

e) filler material (if necessary);

f) pre-heat temperature;

g) post-weld/brazing heat treatment;

h) non-destructive testing;

i) cognizant welding authority.

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