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Aerospace — Rivets, solid, in corrosion-resisting steel — Procurement specification

Aéronautique et espace — Rivets ordinaires, en acier résistant à la corrosion — Spécification d'approvisionnement

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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).

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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 20, *Aircraft and space vehicles*, Subcommittee SC 4, *Aerospace fastener systems*.

This second edition cancels and replaces the first edition (ISO 12289:2003), of which it constitutes a minor revision.

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Aerospace — Rivets, solid, in corrosion-resisting steel — Procurement specification

1 Scope

This International Standard specifies the characteristics and quality assurance requirements for solid rivets made in corrosion-resisting steel for aerospace construction.

It is applicable whenever it is referenced in a definition document.

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 2859–1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 7870–1, *Control charts — Part 1: General guidelines*

ISO 7870–2, *Control charts — Part 2: Shewhart control charts*

ISO 7870–3, *Control charts — Part 3: Acceptance control charts*

ISO 17057, *Aerospace — Rivets, solid — Test method*

ASTM E112[1)], *Standard test methods for determining average grain size*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
batch
quantity of finished products, manufactured using the same processes, from a single material cast (single heat of alloy) having the same *definition document* (3.4) number, diameter and length code, heat treated together to the same specified condition and produced as one continuous run

3.2
rivet wire sample
length of wire, sampled at one end of the coil used for the manufacture of rivets of the *batch* (3.1)

Note 1 to entry: The rivet wire samples should undergo the same heat treatments as the rivets of the batch, at the same time.

3.3
rivet sample
rivet sampled at random from the *batch* (3.1)

1) Published by the American Society for Testing and Materials (ASTM), 1916, Race street, Philadelphia, PA 19103, USA.

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3.4
definition document
document specifying directly or indirectly all the requirements for products

Note 1 to entry: The definition document may be an International Standard, an in-house standard or a drawing.

3.5
crack
rupture in the material, which can extend in any direction and which can be intercrystalline or transcrystalline in character

3.6
seam
longitudinal open surface defect

3.7
lap
surface defect caused by folding over metal fins or sharp corners and then forming them into the surface

3.8
cold shut
doubling over of metal which can occur during the cold heading operation

3.9
blistering
defect in the metal on or near the surface, resulting from expansion of gas in a sub-surface zone

3.10
pit
small, sharp cavity in a metal surface caused by non-uniform electrodeposition or by corrosion

3.11
critical defect
defect that, according to judgement and experience, is likely to result in hazardous or unsafe conditions for individuals using, maintaining, or depending upon the considered product, or that is likely to prevent performance of the function of a major end item

3.12
major defect
defect, other than critical, that is likely to result in a failure or to reduce materially the usability of the considered product for its intended purpose

3.13
minor defect
defect that is not likely to reduce materially the usability of the considered product for its intended purpose, or that is a departure from established specifications having little bearing on the effective use or operation of this product

3.14
sampling plan
plan according to which one or more samples are taken in order to obtain information and to reach a decision, if possible

3.15
acceptable quality limit
AQL
maximum percent defective (or the maximum number of defects per hundred units) that, for purposes of sampling inspection, can be considered satisfactory as a process average

Note 1 to entry: Variant: quality level, which in a *sampling plan* (3.14), corresponds to a specified but relatively high probability of acceptance.

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