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Aerospace — Metric solid rivets — Test methods

Aéronautique et espace — Rivets ordinaires métriques — Méthodes d'essai

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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9417 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*.

Annex A forms an integral part of this International Standard.

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Aerospace — Metric solid rivets — Test methods

1 Scope

This International Standard specifies test methods for metric solid rivets intended for use in aerospace construction.

It applies to rivets for aerospace construction in conjunction with the relevant procurement specification, provided the specification refers to this International Standard.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 6507-1:1982, *Metallic materials — Hardness test — Vickers test — Part 1: HV 5 to HV 100.*

ISO 7500-1:1986, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tensile testing machines.*

3 Inspection and testing

In cases where the rivets are less than $3E$ long (see table 1), riveting wire shall be used. In this case, the specimens shall not be machined. They shall be representative of the material lot and of the heat treatment condition of the rivet. Testing shall be carried out at ambient temperature.

3.1 Hardness test

3.1.1 Test method

The apparatus, test specimens (see also 3.1.2) and procedure shall be in accordance with the Vickers hardness test specified in ISO 6507-1. The testing machine shall be calibrated as specified in annex A.

3.1.2 Measurement area of test specimens

3.1.2.1 Rivets

The measurement area of test specimens shall be located

a) on the shank or face machined parallel to the rivet shank; or

b) on a face sectioned through the shank midway between the tail and the underside of the rivet head.

3.1.2.2 Wires

The measurement area of test specimens shall be located

a) on a face machined parallel to the wire axis; or

b) on a face sectioned transversely through the wire.

3.2 Tensile test

3.2.1 Apparatus

3.2.1.1 Testing machine, capable of applying a tensile load at a controllable rate. The accuracy of the machine shall be verified to the requirements of ISO 7500-1. The test machine shall be calibrated as specified in annex A.

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