
Blind rivets — Mechanical testing

Rivets aveugles — Essais mécaniques

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Contents

Page

Foreword.....	iv
1 Scope	1
2 Normative reference	1
3 Shear and tensile tests.....	1
4 Mandrel head retention capability test	8
5 Mandrel push out resistance test (prior to setting).....	10
6 Mandrel break load test.....	11
Annex A (informative) Example of a suitable test fixture for tensile testing of rivets	13

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 14589 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

Annex A of this International Standard is for information only.

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Blind rivets — Mechanical testing

1 Scope

This International Standard specifies the methods of mechanical testing of blind rivets including:

- shear test (see clause 3),
- tensile test (see clause 3),
- mandrel head retention capability test (see clause 4),
- mandrel push out resistance test (prior to setting) (see clause 5), and
- mandrel break load test (see clause 6),

at an ambient temperature of 10 °C to 35 °C.

It applies to blind rivets with nominal diameters up to and including 6,4 mm.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 7500-1:1999, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system.*

3 Shear and tensile tests

3.1 Principle of shear and tensile tests

The tests consist of straining a blind rivet which is set in a test fixture by a shear load or tensile load to failure.

3.2 Test fixtures for shear and tensile tests

Two test fixtures are specified for each of both test methods. The test fixtures specified in 3.2.1.1 and 3.2.2.1 may be used for routine testing. The test fixtures specified in 3.2.1.2 and 3.2.2.2 may also be used for routine testing but are decisive in the case of dispute and are the referee test fixtures in such cases.

3.2.1 Test fixtures for shear testing

3.2.1.1 Routine shear testing

See Figure 1 for basic dimensions.