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Aerospace fluid systems — Test methods for fitting on tube assemblies

Circuits de fluides pour l'aérospatiale — Méthodes d'essai pour les raccords sur les assemblages de tubes

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Quality conformity inspection procedures **1**
5 Qualification test procedures **2**
5.1 Proof pressure test 2
5.2 Pneumatic pressure test 2
5.3 Impulse test 2
5.4 Hydrostatic burst pressure test 2
5.5 Flexure test 2
5.6 Stress corrosion test 2
5.7 Re-use capability 3
5.7.1 Port connections 3
5.7.2 Tube fittings 3
5.8 Tensile test 4
5.9 Thermal shock test 4
5.10 Fire test 4
6 Test specimens and test fluid **4**
6.1 Test specimens 4
6.2 Test fluid 5
Bibliography **6**

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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 document 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).

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This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 10, *Aerospace fluid systems and components*.

This second edition cancels and replaces the first edition (ISO 10583:1993), which has been technically revised.

The main changes are as follows:

— deletion of ISO 6771 from Clause 2;

— revision of subclause 5.10;

— revision of Table 1;

— addition of Bibliography.

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.

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Introduction

The intention of this document is to standardize test methods for the qualification of fittings on tube assemblies used in aircraft fluid systems. The tests are intended to simulate the most strenuous demands encountered in aircraft. These test methods are relevant for fittings on tube assemblies which are used in systems where a malfunction would affect the safety of flight.

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Aerospace fluid systems — Test methods for fitting on tube assemblies

1 Scope

This document specifies test methods for fitting assemblies used in aircraft fluid systems in the pressure and temperature ranges covered by pressure from classes B, to K, and temperature types I, II and III of ISO 6771.

This document applies each time that it is referred to in a procurement specification or other definition document which contains the pass and fail criteria for these tests.

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 2685, *Aircraft — Environmental test procedure for airborne equipment — Resistance to fire in designated fire zones*

ISO 6772, *Aerospace — Fluid systems — Impulse testing of hydraulic hose, tubing and fitting assemblies*

ISO 6773, *Aerospace — Fluid systems — Thermal shock testing of piping and fittings*

ISO 7137, *Aircraft — Environmental conditions and test procedures for airborne equipment*

ISO 7257, *Aircraft — Hydraulic tubing joints and fittings — Rotary flexure test*

ISO 9538, *Aerospace series — Hydraulic tubing joints and fittings — Planar flexure test*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
ambient temperature
temperature in the test laboratory between 15 °C and 35 °C

4 Quality conformity inspection procedures

Fitting components and assemblies shall be inspected using the normal tools and procedures.

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