SLOVENSKI STANDARD

SIST EN 3475-411:2006

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Aeronavtika ï Elektriļ ni kabli za uporabo v zraļ nih plovilih ï Preskusne metode ï 411. del: Odpornost proti tekoļ inam

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 411: Resistance to fluids

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Prüfverfahren - Teil 411: Beständigkeit gegen Flüssigkeiten

Série aérospatiale - Câbles électriques à usage aéronautique - Méthodes d'essais - Partie 411 : Résistance aux fluides

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English Version

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 411: Resistance to fluids

Série aérospatiale - Câbles électriques à usage aéronautique - Méthodes d'essais - Partie 411 : Résistance aux fluides

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Prüfverfahren - Teil 411: Beständigkeit gegen Flüssigkeiten

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This European Standard (EN 3475-411:2005) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2006, and conflicting national standards shall be withdrawn at the latest by May 2006.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard specifies methods of measuring the fluid resistance of a finished cable.

It shall be used together with EN 3475-100, EN 3909 and TR 4542.

2 Normative references

The following referenced documents are indispensable for the application 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.

EN 3475-100, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 100: General.*

EN 3475-201, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 201: Visual examination.*

EN 3475-302, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 302: Voltage proof test.*

EN 3475-503, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 503: Scrape abrasion.*

EN 3909, *Aerospace series — Test fluids for electric components and sub-assemblies.* [1)]

TR 4542, *Aerospace series — Guidance for fluid tests — Technical report.* [2)]

3 Test procedures

Two test procedures are proposed, depending on the need.

Test method 1: occasional contamination

Aim: to offer a test method to appreciate the behaviour of the insulation in case of occasional contamination.

See EN 3909.

Test method 2: extended contamination

Aim: to measure the fluid resistance and to be applied for qualification of a product.

See EN 3909 (and associated TR 4542).

Unless otherwise specified in the product standard, all fluids mentioned in EN 3909 Table 1 are mandatory.

1) Published as AECMA Prestandard at the date of publication of this standard.

2) In preparation at the date of publication of this standard.

4 Preparation of specimen

For each fluid to be tested, take a clean specimen at least 1 m in length from a finished cable.

If necessary an initial cleaning may be performed according to EN 3909.

Strip the two ends over 25 mm.

Unless otherwise stated in the product standard, each specimen shall be wound seven complete turns onto a mandrel of diameter 12 times the maximum outer diameter of the specimen without torsion, but with sufficient tension to ensure the specimen remains fully in contact with the mandrel.

Remove the mandrel.

5 Methods

With each so prepared specimen apply the procedure described in EN 3909 for method 1 or method 2.

Only the coiled part shall be contaminated.

6 Requirements

After being returned to ambient temperature and without final cleaning, examine the test sample visually, according to EN 3475-201 and record any change of condition from the initial examination.

The coiled part of the cable is then straightened.

The contaminated specimen shall pass:

— the voltage proof test, according to EN 3475-302 as defined in the product standard;

— the scrape abrasion test, according to EN 3475-503 as defined in the product standard for ambient temperature.