SLOVENSKI STANDARD
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Aerospace series - Fibres and cables, optical, aircraft use - Test methods - Part 511: Cable to cable abrasion

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Luft- und Raumfahrt - Faseroptische Leitungen für Luftfahrzeuge - Prüfverfahren - Teil 511: Abrieb Kabel gegen Kabel

Série aérospatiale - Fibres et câbles optiques à usage aéronautique - Méthodes d'essais - Partie 511: Abrasion câble a câble

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Luft- und Raumfahrt - Faseroptische Leitungen für Luftfahrzeuge - Prüfverfahren - Teil 511: Kabel zu Kabel Abriebbeständigkeit

This European Standard was approved by CEN on 1 March 2002.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 3745-511:2002) has been prepared by the European Association of Aerospace Manufacturers (AECMA).

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of an identical text or by endorsement, at the latest by December 2002, and conflicting national standards shall be withdrawn at the latest by December 2002.

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

1 Scope

This standard specifies a method of measuring the resistance of an optical cable to abrasion between cables.

2 Normatives references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 3745-100 Aerospace series – Fibres and cables, optical, aircraft use – Test methods – Part 100: General [1)]

EN 3745-201 Aerospace series – Fibres and cables, optical, aircraft use – Test methods – Part 201: Visual examination

3 Preparation of specimens

3.1 The specimens shall be prepared according to the product standard.

If not yet at standard test conditions, the specimens shall be subjected to standard test conditions and stabilized at these conditions for 24 h as defined in EN 3745-100.

3.2 Unless specified in the technical specification, the following details shall be stated:

- number of specimens;
- type and length of optical cable to be tested (cable B);
- type and length of other cable (cable A: electrical or optical);
- load M to be used;
- duration;
- intervals between visual examination of the cable.

4 Apparatus

The apparatus shall comprise:

- a specified cable (cable A) attached to a moving jig which oscillates with a frequency of 10 Hz and amplitude of (6,35 ± 0,25) mm peak to peak;
- the optical cable under test (cable B) which is secured to a fixed bracket and turns once around cable A;
- a load (M) applied to cable B which provides the tension in the cable. The length (*L*) has to be adjusted in order to avoid resonances in cable B during the test.

1) In preparation at the date of publication of this standard

A typical arrangement is shown in figure 1. The cable friction point shall be approximately in the middle of the cable A (± 10%) and the angle (α) shall be between 20° and 22°. The pulley diameter shall be greater than 14 times the cable diameter.

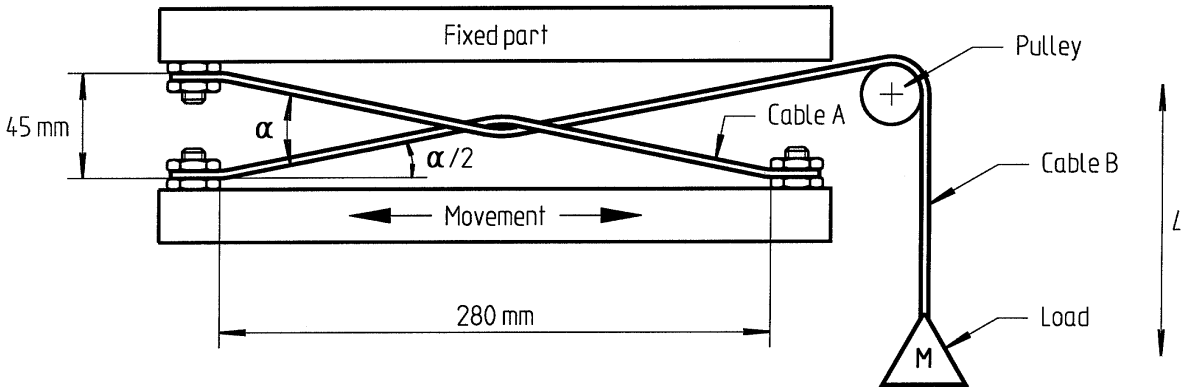

Figure 1

5 Method

5.1 Procedure

- Attach the optical cable B to the bracket and around the cable A.
- Apply the load (M) to the optical cable B.
- Begin the friction between cables.
- Make a visual examination of the cable B at the specified time intervals.

5.2 Final measurements and requirements

Examine cable B for damage in accordance with EN 3745-201 Visual examination.