SLOVENSKI STANDARD
oSIST prEN 3745-801:2022

01-julij-2022

Aeronavtika - Optična vlakna in kabli za uporabo v zračnih plovilih - Preskusne metode - 801. del: Premik vlaken pri kompresiji

Aerospace series - Fibres and cables, optical, aircraft use - Test methods -Part 801: Fibre movement under compression

Luft- und Raumfahrt - Faseroptische Leitungen für Luftfahrzeuge - Prüfverfahren - Teil 801: Faserbewegung unter Druck

Série aérospatiale - Fibres et câbles optiques à usage aéronautique - Méthodes d'essais - Partie 801 : Déplacement de la fibre sous compression

Ta slovenski standard je istoveten z: **prEN 3745-801**

ICS:

33.180.10	(Optična) vlakna in kabli	Fibres and cables
49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems

oSIST prEN 3745-801:2022 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 3745-801

May 2022

ICS 49.090

English Version

Aerospace series - Fibres and cables, optical, aircraft use - Test methods -Part 801: Fibre movement under compression

Série aérospatiale - Fibres et câbles optiques à usage aéronautique - Méthodes d'essais - Partie 801 : Déplacement de la fibre sous compression

Luft- und Raumfahrt - Faseroptische Leitungen für Luftfahrzeuge - Prüfverfahren - Teil 801: Faserbewegung unter Druck

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. prEN 3745-801:2022 E

Contents

Page

European foreword

This document (prEN 3745-801:2022) has been prepared by the Aerospace and Defence Industries Association of Europe — Standardization (ASD-STAN).

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

This document is currently submitted to the CEN Enquiry.

1 Scope

This document specifies a method of measuring the semi loose effect of a semi loose cable.

Pull proof optical contacts are used. The optical contact (ferule) is longitudinally moving to preserve the optical performance even when cables are pulled.

Consequently, the buffered fibre is moving beneath the strength members (called semi loose effect).

This document is describing a test methodology to assess the quality of the cable when contact is pulled or pushed.

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.

EN 2591-100:2022, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 100: General*

EN 2591-602, *Aerospace series — Element of electrical and optical connection — Test methods — Part 602: Optical elements — Variation of attenuation and optical discontinuity*

EN 3745-100, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 100: General*

EN 3745-301, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 301: Attenuation*

EN 4533-004, *Aerospace series — Fibre optic systems — Handbook — Part 004: Repair, maintenance, cleaning and inspection*

EN 61754-20,[1] *Fibre optic interconnecting devices and passive components — Fibre optic connector interface — Part 20: Type LC connector family*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological 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/

4 Preparation of specimens

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 on EN 2591-100;

— terminated with the specified contact and according to the relevant process.

[1] LC will be used to specify the EN 61754-20 contact in the context of this document.

If necessary, cable shall be preconditioned according an agreed standard.

5 Apparatus

The apparatus shall comprise:

— a Light Launch System (LLS) as defined in EN 2591-100;

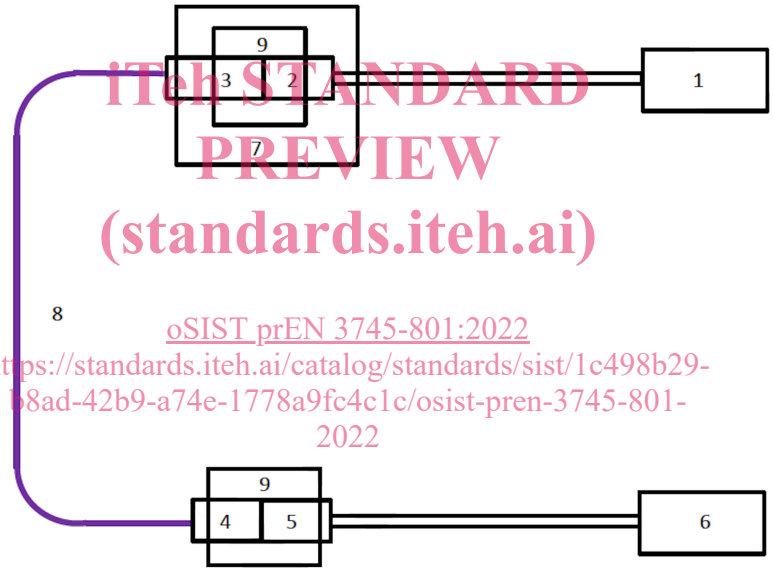
— a Light Detection System (LDS) as defined in EN 2591-100;

— a patch cord terminated with a fixed LC ferule on one end and with a contact compatible with the LLS system on the other end;

— a patch cord terminated with a LC ferule on one end and with a contact compatible with the LDS system on the other end;

— a test fixture capable of applying the right displacement to the connectorized cable under test;

— a typical arrangement is shown below:



Key

1	LLS providing the requested light profile	6	LDS
2	Launch patch cord with Fixed LC ferule (*) (**)	7	Apparatus permitting to create the right translation to the Key 3
3	Terminated end of the specimen under test (**)	8	Terminated specimen under test (**)
4	Opposite terminated end of the specimen under test	9	Mating sleeve
5	Receive patch cord with LC ferule (**)		

(*) the connector spring cavity shall be filled with epoxy to fix the ferule and consequently to know the perfect motion of the ferule terminated the specimen under test.

(**) Product standard can specify another type of pull proof contact; test bench shall be adapted consequently.

NOTE 1 Cable is free beneath the apparatus.

NOTE 2 It is the responsibility of the test owner to ensure the quality and the performance of the fixed ferule.