SLOVENSKI STANDARD
SIST EN 3745-203:2008

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Aeronavtika - Optiļ na vlakna in kabli za uporabo v zraļ nih plovilih - Preskusne metode - 203. del: Mere kablov

Aerospace series - Fibres and cables, optical, aircraft use - Test methods - Part 203: Cable dimensions

Luft- und Raumfahrt - Faseroptische Leitungen für Luftfahrzeuge - Prüfverfahren - Teil 203: Maße Leitungen

Série aérospatiale - Fibres et câbles optiques à usage aéronautique - Méthodes d'essais - Partie 203 : Dimensions des câbles

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Aerospace series - Fibres and cables, optical, aircraft use - Test methods - Part 203: Cable dimensions

Série aérospatiale - Fibres et câbles optiques à usage aéronautique - Méthodes d'essais - Partie 203 : Dimensions des câbles

Luft- und Raumfahrt - Faseroptische Leitungen für Luftfahrzeuge - Prüfverfahren - Teil 203: Maße Leitungen

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (EN 3745-203:2008) 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 Standard 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 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of an identical text or by endorsement, at the latest by October 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.

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1 Scope

This standard specifies a method of measuring the dimensions of fibre optic cables.

It shall be used together with EN 3745-100.

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

3 Preparation of specimens

3.1 Dimensions

3.1.1 Tube and jacket

Each sample shall consist of a cross-sectional slice of insulation from the cable. The sample should be cut and then be placed under the measuring equipment with the plane of cut perpendicular to the optical axis.

3.1.2 Tight buffer

Prepare a sample of a minimum of 3 m in length.

3.2 Mass

Prepare a sample of a minimum of 1 m in length.

4 Apparatus

4.1 Buffer and jacket dimensions

The measurements shall be carried out either with a profile projector, or measuring microscope or equivalent apparatus having at least 10 × magnification. Readings shall be taken to 2 decimal places and an estimated 3 decimal places with a specified thickness less than 0,5 mm.

4.2 Mass

The mass and length of the specimen shall be determined with an apparatus having an accuracy of at least ± 1 %.

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

5 Method

5.1 Buffer and external diameter

Measure the outside diameter (OD) of the specimen in at least three locations approximately one meter apart. Each measurement shall consist of two micrometer readings taken at 90° from each other.

5.2 Buffer tube and jacket thickness and concentricity

5.2.1 The sample shall be placed under the measuring equipment with the plane of cut perpendicular to the optical axis. The radial thickness shall be measured and recorded at the thinnest and thickest points.

5.2.2 The concentricity shall be expressed as 100 times the ratio of the minimum radial thickness to the maximum radial thickness.

5.3 Mass

The measurement shall be made on a specimen whose length shall be given in the technical specification.

6 Final measurements and requirements

6.1 Buffer dimensions

6.1.1 Tight buffer

The characteristics shall conform to requirements given in the technical specification or the product standard.

6.1.2 Loose tube

The characteristics shall conform to the requirements given in the technical specification or the product standard.

The minimum value of the concentricity shall conform to the requirements given in the technical specification or the product standard.

6.2 External diameter

The external diameter, minimum radial thickness, maximum radial thickness and concentricity shall conform to that stated in the product standard.

None of the individual readings shall exceed the maximum specified value defined in product standard.

6.3 Mass

The mass of the cable, expressed in kg/km, shall conform to the value given in the product standard.