SLOVENSKI STANDARD
SIST EN 3475-512:2021

01-maj-2021

Nadomešča:
SIST EN 3475-512:2004

Aeronavtika - Električni kabli za uporabo v zračnih plovilih - Metode preskušanja - 512. del: Upogibna trdnost

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 512: Flexure endurance

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Wechselbiegefestigkeit - Teil 512: Wechselbiegefestigkeit

Série aérospatiale - Câbles électriques à usage aéronautique - Méthodes d'essais - Partie 512 : Résistance à la flexion

Ta slovenski standard je istoveten z: **EN 3475-512:2021**

ICS:

29.060.20	Kabli	Cables
49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems

SIST EN 3475-512:2021 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 3475-512

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ICS 49.060

Supersedes EN 3475-512:2002

English Version

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 512: Flexure endurance

Série aérospatiale - Câbles électriques à usage aéronautique - Méthodes d'essais - Partie 512 : Résistance à la flexion

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Prüfverfahren - Teil 512: Wechselbiegefestigkeit

This European Standard was approved by CEN on 2 November 2020.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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

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European foreword

This document (EN 3475-512:2021) 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 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2021, and conflicting national standards shall be withdrawn at the latest by September 2021.

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

This document supersedes EN 3475-512:2002.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this document: 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 the United Kingdom.

The main changes with respect to the previous edition are listed in the following table.

prEN/EN Number	Edition	Publication Date	Modification
prEN 3475-512	P2	08/2019	3 – Terms and definitions: Addition of this clause. 5 – Apparatus and installation of specimens: Addition of “The test setup shall be designed to avoid any swing motion/displacement of the cable between the mandrels. The length should be sufficient to ensure that the weight shall not influence the bending motion.” 7 – Requirement: Addition of method B. Addition of “Unless otherwise specified, only method A is required.”

1 Scope

This document specifies a method of testing flexure endurance of the cable when it is subjected to alternating flexing.

It is used together with EN 3475-100.

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

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

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 http://www.iso.org/obp
- IEC Electropedia: available at http://www.electropedia.org/

4 Preparation of specimens and principle of test

Take specimens of adequate length from a finished cable and install them on apparatus described hereafter.

This test makes it possible to determine the resistance of the cable to cycles of repeated flexing.

With the cable vertical, a cycle is defined by a rotation of 90° left, return to the vertical, rotation of 90° right and return to the vertical.

The damage is detected by conductor breakage and thus an interruption of electrical continuity between the two ends of the tested specimen.

The test is normally performed on gauge 20 cables.

It is carried out at ambient temperature.

5 Apparatus and installation of specimens

The apparatus is described by Figure 1.

It is fitted with a counter and an automatic stop device controlled by interruption of electrical continuity.

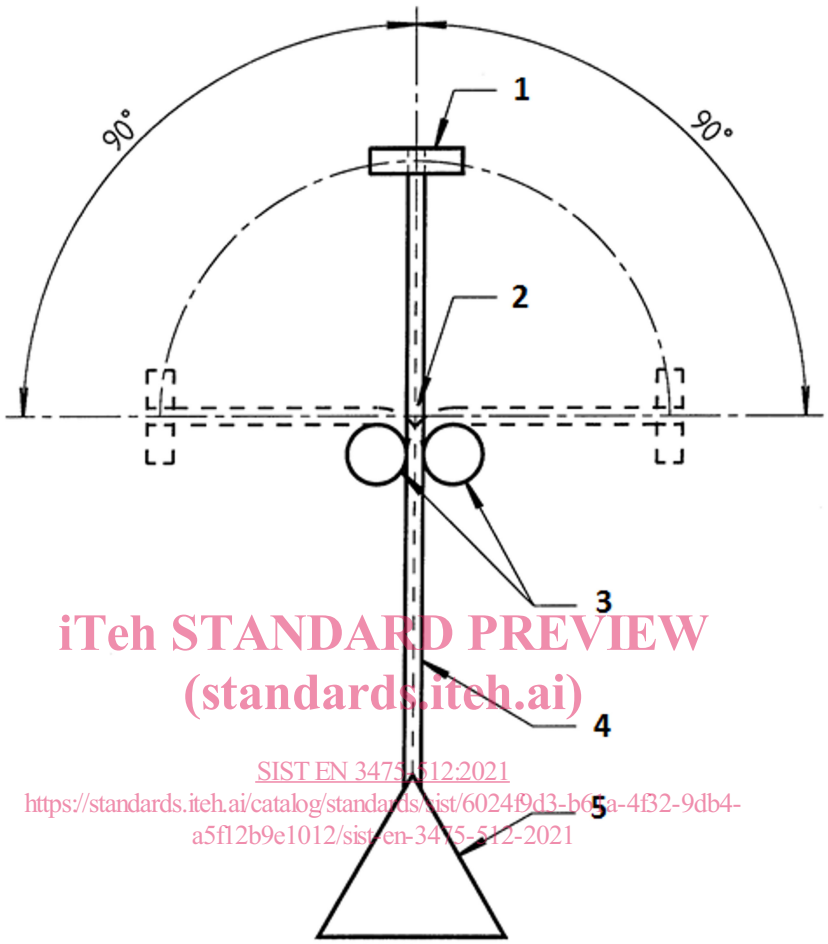
The rotation speed shall be a uniform rate of (18 ± 2) cycles/min.

The space between mandrels is equal to the maximum diameter of the tested cable.

The mandrel diameter *D* and weight *M* are specified in the product standard.

The test setup shall be designed to avoid any swing motion/displacement of the cable between the mandrels.

The length should be sufficient to ensure that the weight shall not influence the bending motion.



Key

1 Clamp
2 Centre of rotation
3 Mandrels (diameter *D*)
4 Cable
5 Weight *M*

Figure 1

6 Procedure

After installing a specimen and before commencing the full test, perform a preliminary run and, if necessary, adjust the distance, the mandrels and the attached weight such that possible resonance effects are avoided. For the actual test, actuate the detection circuit, reset the counter and run the machine until auto shut down takes place.