SLOVENSKI STANDARD
SIST EN 2591-308:2001

01-januar-2001

Aerospace series - Elements of electrical and optical connection - Test methods - Part 308: Sand and dust

Aerospace series - Elements of electrical and optical connection - Test methods - Part 308: Sand and dust

Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 308: Sand und Staub

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Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 308: Sable et poussieres

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Ta slovenski standard je istoveten z: **EN 2591-308:1998**

ICS:

49.060	Letalska in vesoljska elektriļ na oprema in sistemi	Aerospace electric equipment and systems

SIST EN 2591-308:2001 **en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 2591-308

June 1998

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Descriptors: aircraft industry, aircraft equipment, connecting equipment, test

English version

Aerospace series - Elements of electrical and optical connection - Test methods - Part 308: Sand and dust

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 308: Sable et poussières

Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 308: Sand und Staub

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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 Central Secretariat has the same status as the official versions.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries 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.

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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 1998, and conflicting national standards shall be withdrawn at the latest by December 1998.

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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, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA ŠOLSTVO, ZNANOST IN ŠPORT
Urad RS za standardizacijo in meroslovje
LJUBLJANA

SIST ....
PREVZET PO METODI RAZGLASITVE

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1 Scope

This standard specifies a method of assessing the ability of elements of connection to withstand the effects of driving fine sand and dust.

It shall be used together with EN 2591.

2 Normative 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 2591	Aerospace series - Elements of electrical and optical connection - Test methods - General
EN 2591-408	Aerospace series - Elements of electrical and optical connection - Test methods - Part 408: Mating and unmating forces [1)]

3 Preparation of specimens

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3.1 Specimens shall be prepared according to the technical specification.

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

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- number of mating and unmating operations before the test (if applicable);
- specimens mated or unmated and fitted with protective cover (if applicable);
- mounting method and definition of specimen wiring;
- type of cable (if applicable);
- positions and orientation of specimens in the test chamber;
- initial measurements and requirements (if applicable);
- speed of airflow in jet;
- number of cycles;
- final measurements and requirements (if applicable).

4 Apparatus

The test chamber shall be designed to:

- avoid turbulent flows ahead of the specimens and limit them as much as possible behind the specimens;
- favour uniform distribution of solid particles within the airflow.

The climatic test chamber shall be provided with measurement and control devices for maintaining the following parameters within specified limits throughout the test:

- concentration of sand and dust mixture (opacity-measuring photoelectrical cell systems are recommended);
- speed of airflow in jet;
- relative humidity and temperature around the specimens.

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

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The sand and dust shall be abrasives with the following characteristics:

- 100 % shall pass through a 150 µm mesh sieve;
- 98 % shall pass through a 100 µm mesh sieve;
- 90 % shall pass through a 75 µm mesh sieve;
- 75 % shall pass through a 45 µm mesh sieve;

The mixture shall contain between 97 % and 99 % in mass of SiO_2.

5 Method

5.1 Initial measurements and requirements (if applicable)

They shall be carried out as specified.

The specimens shall be tested to EN 2591-408.

5.2 Positions and orientation of the specimens in the test chamber

They shall be placed in the specified positions and orientation with respect to the airflow.

5.3 Procedure

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Each cycle shall last 3 h and consist of four phases, unless otherwise specified:

Phase 1: within 30 min, the test chamber shall be stabilized within the following limits:

- temperature: (30 ± 3) °C;
- relative humidity: lower than 30 %;
- speed of airflow: between 3 m/s and 10 m/s. The recommended speed is (3,5 ± 0,5) m/s;
- concentration of mixture: (6 ± 3) g/m^3 of air;

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Phase 2: the above conditions shall be maintained for 1 h.

Phase 3: within 30 min, the temperature shall be brought to (65 ± 5) °C, the other parameters remaining unchanged.

Phase 4: these conditions shall be maintained for 1 h.

Unless otherwise specified, one cycle shall be carried out for each position. Between two successive cycles, the temperature shall be reduced to (30 ± 3) °C within 2 h maximum.

5.4 Recovery

After the test and prior to any operation to prevent the effects of moisture, dust shall be removed from the specimens by shaking, wiping or brushing but no blower or suction devices shall be used to avoid dust ingress in the specimens.

The specimens shall be allowed to recover as long as required for it to reach ambient temperature.

5.5 Final measurements and requirements (if applicable)

Final measurements shall be made as specified.

The specimens shall be tested to EN 2591-408, recording the value of the first unmating.