SLOVENSKI STANDARD
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Aerospace series - Elements of electrical and optical connection - Test methods - Part 319: Gastightness of solderless wrapped connections

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Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 319: Gasdichtheit von lötfreien Wickelverbindungen

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 319: Etanchéité aux gaz des connexions enroulées sans brasure

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ICS:

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

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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

Ref. No. EN 2591-319:1997 E

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.

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of an identical text or by endorsement, at the latest by April 1998, and conflicting national standards shall be withdrawn at the latest by April 1998.

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.

1 Scope

This standard specifies a method of verifying the gastightness of solderless wrapped connections.

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 2591-101	Aerospace series - Elements of electrical and optical connection - Test methods - Part 101: Visual examination
EN 2591-102	Aerospace series - Elements of electrical and optical connection - Test methods - Part 102: Examination of dimensions and mass

3 Preparation of specimens

3.1 Specimens previously tested to EN 2591-101 and EN 2591-102 shall be prepared according to the technical specification.

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

- type of conductor;
- contact-conductor combinations;
- type of wrapping tool;
- requirement.

4 Apparatus

a) A sealed tube with a diameter of 16 mm and a length of 150 mm containing 1 cm^3 to 2 cm^3 of aqua regia (50 % nitric acid, 50 % hydrochloric acid).

b) A sealed tube with a diameter of 16 mm and a length of 150 mm containing approximately 1 cm^3 of a concentrated ammonium sulphide solution.

5 Method

5.1 The specimens shall be subjected to an atmosphere which changes the colour of the area of contacts not covered by the conductor. The change in colour shall be sufficient to give a sharp contrast between these areas and the rest of the contact.

5.2 Number of contacts to be tested

For each contact and conductor combination, 30 specimens shall be tested.

5.3 Procedure

The specimens shall be:

- exposed to aqua regia vapour in the sealed tube for 10 min without contact with the solution;
- then transferred to the second sealed tube where they shall be exposed to the ammonium sulphide vapour without contact with the solution until their visible area blackens;
- dried and the conductor carefully unwrapped.

5.4 Requirement

The areas shown in figure 1, detail X, shall be visually examined (EN 2591-101) with a magnification of 5 to 20. They shall be bright over at least 75 % of corners contacting the conductor, excluding those associated with the first and last turns.

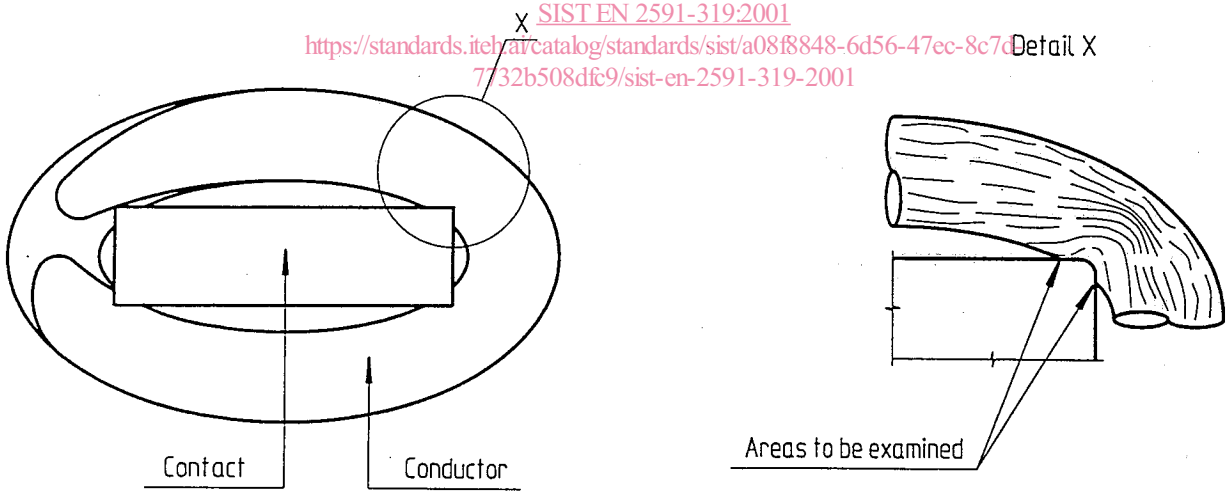

Figure 1