



SLOVENSKI STANDARD SIST EN 2829:2001

01-junij-2001

Aerospace series - Adhesion test for metallic coatings by shot peening

Aerospace series - Adhesion test for metallic coatings by shot peening

Luft- und Raumfahrt - Prüfung der Haftfestigkeit von metallischen Beschichtungen durch Kugelstrahlen

Série aérospatiale - Essai d'adhérence des revêtements métalliques par martelage

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ICS:

49.040	Prevleke in z njimi povezani postopki, ki se uporabljajo v letalski in vesoljski industriji	Coatings and related processes used in aerospace industry
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SIST EN 2829:2001

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EUROPEAN STANDARD

EN 2829

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 1994

ICS 49.040.40

Descriptors: Aircraft industry, metal coatings, coating processes, adhesion tests

English version

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The European Standards exist 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.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENEuropean Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 8-1050 Brussels

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 successively 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of an identical text or by endorsement, at the latest by June 1995, and conflicting national standards shall be withdrawn at the latest by June 1995.

In accordance with the CEN/CENELEC Internal Regulations, following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This standard specifies a test method to determine the adhesion of coatings by shot peening. It applies to ductile metal coatings, such as cadmium, silver or copper, with a hardness :

- < 250 HV for a coating thickness between 25 μm and 200 μm ;
- \geq 250 HV for a coating thickness between 10 μm and 60 μm .

It shall be applicable whenever referenced.

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 2409 Aerospace series - Shot peening for inducement of compressive surface stresses for metallic parts ¹⁾

3 Peening equipment

- steel balls of approximately 0,3 mm, 0,5 mm or 0,6 mm diameter ;
- any device fitted with a nozzle compatible with these balls ;
- plates according to EN 2409 type A

4 Procedure

4.1 Setting of the device

The intensity and duration of peening shall be such that a test plate (see 3) restrained flat between supports placed 32 mm apart, so that only one side is facing the shot stream, shows, when the restraint has been released, a deflection of :

- $(0,15 \pm 0,05)$ mm for a coating thickness \leq 100 μm ;
- $(0,25 \pm 0,05)$ mm for a coating thickness $>$ 100 μm .

4.2 Testing

The coating applied to the test specimen or part is submitted to peening according to 4.1.

5 Fault sanction

Neither peeling nor blistering are permissible after visual inspection, with the naked eye or a magnification of max. six times.

¹⁾ In preparation at the date of publication of this standard

6 Test report

It shall include the following :

- reference to this standard ;
- reference to the part or test specimen ;
- nature of the coating ;
- thickness of the coating ;
- diameter of the balls used ;
- deflection measured when setting the device ;
- test result.

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