Aerospace series - Vacuum deposition of cadmium

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 2535:2011 sisaldab Euroopa standardi EN 2535:2011 ingliskeelset teksti.	This Estonian standard EVS-EN 2535:2011 consists of the English text of the European standard EN 2535:2011.
Standard on kinnitatud Eesti Standardikeskuse 29.07.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 29.07.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 29.06.2011.	Date of Availability of the European standard text 29.06.2011.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 49.040

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 2535

June 2011

ICS 49.040

English Version

Aerospace series - Vacuum deposition of cadmium

Série aérospatiale - Cadmiage sous vide

Luft- und Raumfahrt - Aufdampfen von Kadmium im Vakuum

This European Standard was approved by CEN on 12 February 2011.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 2535:2011) 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of an identical text or by endorsement, at the latest by December 2011, and conflicting national standards shall be withdrawn at the latest by December 2011.

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1 Scope

This European Standard defines the method for depositing cadmium layers according to the vacuum deposition process, for use in aerospace construction.

According to this process, cadmium metal is vaporised under vacuum and deposited directly on the base material with an interlayer. The coating produced in this way is ductile and electrically conductive.

This standard should be applicable whenever referenced.

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 2828, *Aerospace series — Adhesion test for metallic coatings by burnishing*

EN 9100, *Aerospace series - Quality management systems - Requirements (based on ISO 9001:2000) and Quality systems - Model for quality assurance in design, development, production, installation and servicing (based on ISO 9001:1994)*

EN ISO 1463, *Metallic and oxide coatings — Measurement of coating thickness — Microscopical method*

EN ISO 2082, *Metallic and other inorganic coatings - Electroplated coatings of cadmium with supplementary treatments on iron or steel (ISO 2082:2008)*

EN ISO 2177, *Metallic coatings — Measurement of coating thickness — Coulometric method by anodic dissolution (ISO 2177:2003)*

EN ISO 2178, *Non-magnetic coatings on magnetic substrates — Measurement of coating thickness — Magnetic method (ISO 2178:1982)*

EN ISO 2819, *Metallic coatings on metallic substrates — Electrodeposited and chemically deposited coatings — Review of methods available for testing adhesion (ISO 2819:1980)*

ISO 4520, *Chromate conversion coatings on electroplated zinc and cadmium coatings*

EN ISO 9227, *Corrosion test in artificial atmospheres — Salt spray tests*

ISO 4520, *Chromate conversion coatings on electroplated zinc and cadmium coatings*

3 Purpose of process

This process enables any hydrogen absorption to be avoided.

It ensures protection against corrosion, in particular for steels of R_m max. > 1 450 MPa. It may be beneficial to tensile bolts of R_m max. > 1 250 MPa.

4 Limitation of process use

The contact of cadmium-plated parts with titanium, titanium alloys, fuels and fuel line shall be avoided at temperature < 150 °C.