SLOVENSKI STANDARD
SIST EN ISO 10111:2003

01-december-2003

Kovinske in druge anorganske prevleke - Merjenje mase na enoto površine - Pregled gravimetrijskih in kemijskih analiznih metod (ISO 10111:2000)

Metallic and other inorganic coatings - Measurement of mass per unit area - Review of gravimetric and chemical analysis methods (ISO 10111:2000)

Metallische und andere anorganische Überzüge - Messung der flächenbezogenen Masse - Übersicht über gravimetrische und chemische Analyseverfahren (ISO 10111:2000)

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Revetements métalliques et autres revetements inorganiques - Mesurage de la masse surfacique - Présentation des méthodes d'analyse gravimétrique et chimique (ISO 10111:2000)

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Ta slovenski standard je istoveten z: **EN ISO 10111:2001**

ICS:

25.220.40	Kovinske prevleke	Metallic coatings
71.040.40	Kemijska analiza	Chemical analysis

SIST EN ISO 10111:2003 **en**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 10111

December 2001

ICS 25.220.20; 25.220.40

English version

Metallic and other inorganic coatings - Measurement of mass per unit area - Review of gravimetric and chemical analysis methods (ISO 10111:2000)

Revêtements métalliques et autres revêtements inorganiques - Mesurage de la masse surfacique - Présentation des méthodes d'analyse gravimétrique et chimique (ISO 10111:2000)

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This European Standard was approved by CEN on 16 November 2001.

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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 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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

The text of the International Standard from Technical Committee ISO/TC 107 "Metallic and other inorganic coatings" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 262 "Metallic and other inorganic coatings", the secretariat of which is held by BSI.

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 2002, and conflicting national standards shall be withdrawn at the latest by June 2002.

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.

Endorsement notice

The text of the International Standard ISO 10111:2000 has been approved by CEN as a European Standard without any modification.

NOTE Normative references to International Standards are listed in annex ZA (normative).

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Annex ZA
(normative)
Normative references to international publications with their relevant European publications

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 (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

Publication	Year	Title	EN	Year
ISO 3892	2000	Conversion coatings on metallic materials - Determination of coating mass per unit area - Gravimetric methods	EN ISO 3892	2001

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INTERNATIONAL STANDARD

ISO 10111

First edition
2000-06-15

Metallic and other inorganic coatings — Measurement of mass per unit area — Review of gravimetric and chemical analysis methods

Revêtements métalliques et autres revêtements inorganiques — Mesurage de la masse surfacique — Présentation des méthodes d'analyse gravimétrique et chimique

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

International Standard ISO 10111 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 2, *Test methods*.

Annex A forms a normative part of this International Standard.

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Metallic and other inorganic coatings — Measurement of mass per unit area — Review of gravimetric and chemical analysis methods

WARNING — The methods referred to in this International Standard can involve hazardous materials, operations and equipment. This International Standard does not purport to address all of the safety problems associated with its use. It is the responsibility of whoever uses this International Standard to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to its use.

1 Scope

1.1 General

This International Standard outlines general methods for determining the average surface density over a measured area of anodic oxide or of a coating deposited autocatalytically, mechanically, by chemical conversion, by electrodeposition, by hot dip galvanizing and by vacuum using gravimetric and other chemical analysis procedures that have attained some degree of national or international standardization.

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A variety of procedures are described and include:

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— gravimetric procedures for chemical or electrochemical dissolution of the coating or the substrate to determine the coating surface density;

— analytical procedures that utilize dissolution of the coating for photometric or volumetric determination of the coating surface density;

— non-destructive instrumental physical analysis of the coating to determine the surface density.

With the exception of the gravimetric method described in ISO 3892:—, this International Standard does not give the measurement uncertainties of the methods cited.

1.2 Sources

The stripping methods cited in annex A are described in specifications in the open literature or have been used routinely by at least one laboratory.

1.3 Restrictions

The procedures described can be used for many coating-substrate combinations. They cannot be used where neither the coating nor substrate material can be completely removed, one from the other by chemical or physical means and there is a constituent common to both that is not readily separated (e.g. nickel phosphorus alloy on nickel).

NOTE The measurement of very thin coatings on very small pieces can result in a reduction in accuracy and a lack of repeatability. Several measurements using a combination of different procedures on similar samples might overcome this situation.

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