SLOVENSKI STANDARD
SIST EN ISO 2177:2004

01-september-2004

Nadomeġļa:
SIST EN ISO 2177:1999

Kovinske prevleke - Merjenje debeline prevleke - Kulometriļna metoda z anodnim raztapljanjem (ISO 2177:2003)

Metallic coatings - Measurement of coating thickness - Coulometric method by anodic dissolution (ISO 2177:2003)

Metallische Überzüge - Schichtdickenmessung - Coulometrisches Verfahren durch anodisches Ablösen (ISO 2177:2003)

Revetements métalliques - Mesurage de l'épaisseur - Méthode coulométrique par dissolution anodique (ISO 2177:2003)

Ta slovenski standard je istoveten z: **EN ISO 2177:2004**

ICS:

25.220.40	Kovinske prevleke	Metallic coatings

SIST EN ISO 2177:2004 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 2177

May 2004

ICS 25.220.40

Supersedes EN ISO 2177:1994

English version

Metallic coatings - Measurement of coating thickness - Coulometric method by anodic dissolution (ISO 2177:2003)

Revêtements métalliques - Mesurage de l'épaisseur - Méthode coulométrique par dissolution anodique (ISO 2177:2003)

Metallische Überzüge - Schichtdickenmessung - Coulometrisches Verfahren durch anodisches Ablösen (ISO 2177:2003)

This European Standard was approved by CEN on 1 April 2004.

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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.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

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

Foreword

The text of ISO 2177:2003 has been prepared by Technical Committee ISO/TC 107 "Metallic and other inorganic coatings" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 2177:2004 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 November 2004, and conflicting national standards shall be withdrawn at the latest by November 2004.

This document supersedes EN ISO 2177:1994.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 2177:2003 has been approved by CEN as EN ISO 2177:2004 without any modifications.

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

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 2064	1996	Metallic and other inorganic coatings - Definitions and conventions concerning the measurement of thickness	EN ISO 2064	2000

INTERNATIONAL STANDARD

ISO 2177

Third edition
2003-03-15

Metallic coatings — Measurement of coating thickness — Coulometric method by anodic dissolution

Revêtements métalliques — Mesurage de l'épaisseur — Méthode coulométrique par dissolution anodique

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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 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 2177 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 2, *Test methods*.

This third edition cancels and replaces the second edition (ISO 2177:1985), which has been technically revised.

Metallic coatings — Measurement of coating thickness — Coulometric method by anodic dissolution

1 Scope

This International Standard describes a coulometric method, by anodic dissolution, for measuring the thickness of metallic coatings. It is only applicable to conductive coatings.

Typical combinations of coatings and substrates that can be tested by this method are given in Table 1. Other combinations may be tested with electrolytes in current use (see Annex A), or new electrolytes may be developed for them but, in both cases, it is necessary to verify the suitability of the complete system.

This International Standard is also applicable to multi-layer systems, e.g Cu-Ni-Cr (see also 8.5).

It may be used to measure the thickness of coatings applied by various means, if due account is taken of special features such as the presence of an alloy layer. In some cases, the presence and thickness of diffusion layers can also be measured. It can also be used to measure the thickness of coatings on cylindrical specimens and wires (see 8.7).

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.

ISO 2064:1996, *Metallic and other inorganic coatings — Definitions and conventions concerning the measurement of thickness*

ISO 2080, *Surface treatment, metallic and other inorganic coatings — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 2064 and ISO 2080 as well as the following apply.

3.1
measuring area
area of the significant surface over which a single measurement is made

NOTE The measuring area for this method is the area enclosed by the sealing ring of the cell.