STN

Kovové a oxidové povlaky Meranie hrúbky povlaku Mikroskopická metóda (ISO 1463: 2021)

STN EN ISO 1463

03 8156

Metallic and oxide coatings — Measurement of coating thickness — Microscopical method

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/21

Obsahuje: EN ISO 1463:2021, ISO 1463:2021

Oznámením tejto normy sa ruší STN EN ISO 1463 (03 8156) z októbra 2004

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 1463

May 2021

ICS 25.220.20; 25.220.40

Supersedes EN ISO 1463:2004

English Version

Metallic and oxide coatings - Measurement of coating thickness - Microscopical method (ISO 1463:2021)

Revêtements métalliques et couches d'oxyde -Mesurage de l'épaisseur de revêtement - Méthode par coupe micrographique (ISO 1463:2021) Metall- und Oxidschichten - Schichtdickenmessung -Mikroskopisches Verfahren (ISO 1463:2021)

This European Standard was approved by CEN on 17 April 2021.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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 CEN-CENELEC Management Centre has the same status as the official versions.

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



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword	3

European foreword

This document (EN ISO 1463:2021) has been prepared by Technical Committee ISO/TC 107 "Metallic and other inorganic coatings" in collaboration with Technical Committee CEN/TC 262 "Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys" 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 2021, and conflicting national standards shall be withdrawn at the latest by November 2021.

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

This document supersedes EN ISO 1463:2004.

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

Endorsement notice

The text of ISO 1463:2021 has been approved by CEN as EN ISO 1463:2021 without any modification.

INTERNATIONAL STANDARD

ISO 1463

Fourth edition 2021-05

Metallic and oxide coatings — Measurement of coating thickness — Microscopical method

Revêtements métalliques et couches d'oxyde — Mesurage de l'épaisseur de revêtement — Méthode par coupe micrographique



ISO 1463:2021(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Cont	tents	;	Page
Forew	ord		iv
1	Scope		1
2	Normative references		
3	Terms and definitions		
4	Princi	iple	1
5	5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10 5.11 5.12 5.13 5.14	Surface roughness Taper of cross-section Deformation of coating Rounding of edge of coating Overplating Etching Smearing Magnification Calibration of stage micrometer Calibration of the microscope's length measuring device 5.10.1 Micrometer eyepiece 5.10.2 Digital image processing Uniformity of magnification Lens quality Orientation of measuring lines Tube length	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
6	-	ration of cross-sections	
7	Measu	urement	4
8		urement uncertainty	
9		eport	
Annex	A (info	ormative) Guidance on the preparation and measurement of cross-sections	6
Annex	B (info	ormative) Taper of cross-section and measurement of tooth-constructed coatings	9
Annex	C (info	ormative) Some typical etchants for use at room temperature	12
Biblio	graphy	<i>I</i>	13

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 262, *Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 1463:2003), which has been technically revised.

The main changes compared with the previous edition are as follows:

- digital image processing for light microscopes has been added;
- further hints and methods for the preparation of microsections have been added;
- one hazardous etching recipe has been removed from Annex C.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Metallic and oxide coatings — Measurement of coating thickness — Microscopical method

WARNING — The use of this document can involve hazardous materials, operations and equipment. This document does not purport to address all of the safety problems associated with its use. It is the responsibility of users of this document to take appropriate measures to ensure the safety and health of personnel prior to the application of the document.

1 Scope

This document specifies a method for the measurement of the local thickness of metallic coatings, oxide layers, and porcelain or vitreous enamel coatings, by the microscopical examination of cross-sections using an optical microscope.

2 Normative references

There are no normative references in this document.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN