ICS 25.220.20 SLOVENSKÁ TECHNICKÁ NORMA November 2016

STN	**Kovové a iné anorganické povlaky. Elektrolytické leštenie ako spôsob vyhladzovania a pasivovania (ISO 15730: 2000).**	**STN EN ISO 15730** 03 8536

Metallic and other inorganic coatings - Electropolishing as a means of smoothing and passivating stainless steel (ISO 15730:2000)

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. 10/16

Obsahuje: EN ISO 15730:2016, ISO 15730:2000

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 15730

April 2016

ICS 25.220.20

English Version

Metallic and other inorganic coatings - Electropolishing as a means of smoothing and passivating stainless steel (ISO 15730:2000)

Revêtements métalliques et autres revêtements inorganiques - Polissage électrolytique: procédé de brillantage (ou nivellement) et de passivation des aciers inoxydables (ISO 15730:2000)

Metallische und andere anorganische Überzüge - Elektropolieren als Mittel zum Glätten und Passivieren von rostfreiem Stahl (ISO 15730:2000)

This European Standard was approved by CEN on 2 April 2016.

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.

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

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European foreword

The text of ISO 15730:2000 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 15730:2016 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 October 2016, and conflicting national standards shall be withdrawn at the latest by October 2016.

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

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 15730:2000 has been approved by CEN as EN ISO 15730:2016 without any modification.

INTERNATIONAL STANDARD

ISO 15730

First edition
2000-12-15

Metallic and other inorganic coatings — Electropolishing as a means of smoothing and passivating stainless steel

Revêtements métalliques et autres revêtements inorganiques — Polissage électrolytique: procédé de brillantage (ou nivellement) et de passivation des aciers inoxydables

Reference number
ISO 15730:2000(E)

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Printed in Switzerland

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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 15730 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 8, *Chemical conversion coatings*.

Annex A of this International Standard is for information only.

Introduction

Electropolishing removes a small but finite amount of metal from the surface that, in addition to smoothing and brightening, produces a hygienically clean surface desirable for use by manufacturers of food processing and medical equipment.

In addition to improved passivation, electropolishing provides many other benefits. Some examples are surface stress relief, removal of surface carbon and oxides and reduction of friction. Hydrogen embrittlement of articles is not produced during the electropolishing process, which takes minutes to perform.

The quality of passivation depends on the type of stainless steel, the formulation of the electropolishing solution and the conditions of operation. Free iron on the surface of the stainless steel is removed resulting in improved corrosion resistance. No further chemical treatment is necessary in order to passivate the stainless steel surface. Surface smoothing obtained by electropolishing also improves passivation.

INTERNATIONAL STANDARD ISO 15730:2000(E)

Metallic and other inorganic coatings — Electropolishing as a means of smoothing and passivating stainless steel

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

Large quantities of hydrogen and oxygen gases are evolved at the electrodes during the electropolishing process. Proper ventilation procedures should be used to ensure their removal. Ignition of hydrogen gas can result in dangerous explosions.

1 Scope

This International Standard specifies the information to be supplied by the purchaser to the finisher, requirements and test methods for electropolishing as a means of smoothing and passivating stainless steel alloys in the S2XXXX, S3XXXX and S4XXXX series, and the precipitation hardened alloys (see ISO/TR 15510 for information on composition).

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

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

ISO 2080:1981, *Electroplating and related processes — Vocabulary*.

ISO 4519:1980, *Electrodeposited metallic coatings and related finishes — Sampling procedures for inspection by attributes*.

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

ISO/TR 15510, *Stainless steels — Chemical composition*.

ISO 16348:—[1)], *Metallic and other inorganic coatings — Definitions and conventions concerning appearance*.

1) To be published.