SLOVENSKI STANDARD
SIST EN ISO 17081:2008

01-julij-2008

Metoda merjenja prodiranja vodika ter določ anje njegovega vpijanja in prenosa v kovinah z elektrokemijsko tehniko (ISO 17081:2004)

Method of measurement of hydrogen permeation and determination of hydrogen uptake and transport in metals by an electrochemical technique (ISO 17081:2004)

Méthode de mesure de la perméation de l'hydrogene et détermination de l'absorption d'hydrogene et de son transport dans les métaux a l'aide d'une technique électrochimique (ISO 17081:2004)

Ta slovenski standard je istoveten z: **EN ISO 17081:2008**

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English Version

Method of measurement of hydrogen permeation and determination of hydrogen uptake and transport in metals by an electrochemical technique (ISO 17081:2004)

Méthode de mesure de la perméation de l'hydrogène et détermination de l'absorption d'hydrogène et de son transport dans les métaux à l'aide d'une technique électrochimique (ISO 17081:2004)

Elektrochemisches Verfahren zur Messung der Wasserstoffpermeation und zur Bestimmung von Wasserstoffaufnahme und -transport in Metallen (ISO 17081:2004)

This European Standard was approved by CEN on 21 March 2008.

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

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Foreword

The text of ISO 17081:2004 has been prepared by Technical Committee ISO/TC 156 “Corrosion of metals and alloys” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 17081:2008 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of an identical text or by endorsement, at the latest by October 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.

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.

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Endorsement notice

The text of ISO 17081:2004 has been approved by CEN as a EN ISO 17081:2008 without any modification.

INTERNATIONAL STANDARD

ISO 17081

First edition
2004-11-01

Method of measurement of hydrogen permeation and determination of hydrogen uptake and transport in metals by an electrochemical technique

Méthode de mesure de la perméation de l'hydrogène et détermination de l'absorption d'hydrogène et de son transport dans les métaux à l'aide d'une technique électrochimique

Reference number
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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.

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ISO 17081 was prepared by Technical Committee ISO/TC 156, *Corrosion of metals and alloys*.

Method of measurement of hydrogen permeation and determination of hydrogen uptake and transport in metals by an electrochemical technique

1 Scope

1.1 This International Standard specifies a laboratory method for the measurement of hydrogen permeation and for the determination of hydrogen atom uptake and transport in metals, using an electrochemical technique. The term “metal” as used in this International Standard includes alloys.

1.2 This International Standard describes a method for evaluating hydrogen uptake in metals, based on measurement of steady-state hydrogen flux. It also describes a method for determining effective diffusivity of hydrogen atoms in a metal and for distinguishing reversible and irreversible trapping.

1.3 This International Standard gives requirements for the preparation of specimens, control and monitoring of the environmental variables, test procedures and analysis of results.

1.4 This International Standard may be applied, in principle, to all metals for which hydrogen permeation is measurable and the method can be used to rank the relative aggressivity of different environments in terms of the hydrogen uptake of the exposed metal.

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 17475:—[1)], *Corrosion of metals and alloys — Electrochemical test methods — Guidelines for conducting potentiostatic and potentiodynamic polarization measurements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
charging
method of introducing atomic hydrogen into the metal by exposure to an aqueous environment under galvanostatic control (constant charging current), potentiostatic control (constant electrode potential), free corrosion or by gaseous exposure

3.2
charging cell
compartment in which hydrogen atoms are generated on the sample surface, including both aqueous and gaseous charging

1) To be published.