SLOVENSKI STANDARD
SIST EN ISO 12732:2008

01-julij-2008

Korozija kovin in zlitin - Merjenje elektrokemiļ ne potenciokinetiļ ne reaktivacije z uporabo metode z dvojno zanko (na osnovi Cihalove metode) (ISO 12732:2006)

Corrosion of metals and alloys - Electrochemical potentiokinetic reactivation measurement using the double loop method (based on Cihal's method) (ISO 12732:2006)

Corrosion des métaux et alliages - Mesurage de la réactivation électrochimique potentiocinétique par la méthode de la double boucle (dérivée de la méthode de Cihal) (ISO 12732:2006)

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Corrosion of metals and alloys - Electrochemical potentiokinetic reactivation measurement using the double loop method (based on Cihal's method) (ISO 12732:2006)

Corrosion des métaux et alliages - Mesurage de la réactivation électrochimique potentiocinétique par la méthode de la double boucle (dérivée de la méthode de Cihal) (ISO 12732:2006)

Korrosion von Metallen und Legierungen - Verfahren für die elektrochemische potentiodynamische Reaktivierungsmessung mit dem Double-loop-Verfahren (Cihal-Verfahren) (ISO 12732:2006)

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

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Foreword

The text of ISO 12732:2006 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 12732:2008 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of an identical text or by endorsement, at the latest by October 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.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 12732:2006 has been approved by CEN as a EN ISO 12732:2008 without any modification.

INTERNATIONAL STANDARD

ISO 12732

First edition
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Corrosion of metals and alloys — Electrochemical potentiokinetic reactivation measurement using the double loop method (based on Čihal's method)

Corrosion des métaux et alliages — Mesurage de la réactivation électrochimique potentiocinétique par la méthode de la double boucle (dérivée de la méthode de Čihal)

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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 12732 was prepared by Technical Committee ISO/TC 156, *Corrosion of metals and alloys*.

Corrosion of metals and alloys — Electrochemical potentiokinetic reactivation measurement using the double loop method (based on Čihal's method)

WARNING — This International Standard may involve hazardous materials, operations and equipment. It is the responsibility of whoever uses this standard to consult and establish appropriate safety and health practices, and determine the applicability of regulatory limitations prior to use.

1 Scope

This International Standard specifies the method for measuring the degree of sensitization (DOS) in stainless steel and nickel-based alloys using the Double Loop Electrochemical Potentiokinetic Reactivation (DL-EPR) test (based on Čihal's method).

The method may be used for the quantitative assessment of deleterious thermal effects resulting in the formation of alloy-element-depleted zones at grain boundaries or in the matrix. However, attention should be paid when testing heat-affected weld zones, due to possible non-uniform distribution of sensitized zones along the fusion lines.

The results of the test can be used as an index to identify the potential susceptibility of stainless steel and nickel-based alloys to intergranular corrosion, pitting corrosion, and intergranular-stress corrosion cracking, but prediction of these corrosion modes depends on complementary specific testing.

This International Standard describes the general methodology and, in Annex C, gives examples of suitable test exposure conditions for specific alloys.

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 8044:1999, *Corrosion of metals and alloys — Basic terms and definitions*

ISO 643:2003, *Steels — Micrographic determination of the apparent grain size*

3 Terms and definitions

For the purposes of this document, the terms and definitions in ISO 8044 and the following apply.

3.1
integrated charge
Q
charge measured during passivation (Q_p) and reactivation (Q_r), given by the time integral of current below the passivation and reactivation peak of the curve