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Corrosion of metals and alloys - Alternate immersion test in salt solution (ISO 11130:2017)

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. 09/18

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EUROPEAN STANDARD

EN ISO 11130

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English Version

**Corrosion of metals and alloys - Alternate immersion test
in salt solution (ISO 11130:2017)**Corrosion des métaux et alliages - Essai en immersions
alternées en solution saline (ISO 11130:2017)Korrosion von Metallen und Legierungen -
Wechseltauchprüfung in Salzlösung (ISO 11130:2017)

This European Standard was approved by CEN on 21 November 2017.

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EN ISO 11130:2018 (E)

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European foreword

This document (EN ISO 11130:2018) has been prepared by Technical Committee ISO/TC 156 “Corrosion of metals and alloys” 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of an identical text or by endorsement, at the latest by September 2018, and conflicting national standards shall be withdrawn at the latest by September 2018.

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Endorsement notice

The text of ISO 11130:2017 has been approved by CEN as EN ISO 11130:2018 without any modification.

INTERNATIONAL STANDARD

ISO 11130

Second edition
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Corrosion of metals and alloys — Alternate immersion test in salt solution

Corrosion des métaux et alliages — Essai en immersions alternées en solution saline



Reference number
ISO 11130:2010(E)

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ISO 11130:2010(E)**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 11130 was prepared by Technical Committee ISO/TC 156, *Corrosion of metals and alloys*.

This second edition cancels and replaces the first edition (ISO 11130:1999), of which Annex B has been technically revised.

Introduction

Corrosion of metals is influenced by factors which can vary significantly with environmental conditions. Therefore, corrosion resistance determined for metals during alternate immersion testing as described in this International Standard can vary greatly with the test solution selected, the temperature during immersion and the temperature and humidity during the drying periods of the test.

Consequently, the result of an alternate immersion corrosion test is not taken as an indication of the corrosion resistance of the metal tested in all the different service environments where the metal can be used.

Nevertheless, results obtained by the method described in this International Standard can indicate the relative corrosion resistance of different metals under in-service conditions, in particular when the service environment is similar to the test solution selected. The method can also be used to test metals under an applied tensile stress.

Corrosion of metals and alloys — Alternate immersion test in salt solution

1 Scope

This International Standard specifies a method for assessing the corrosion resistance of metals by an alternate immersion test in salt solution, with or without applied stress.

The test is particularly suitable for quality control during the manufacture of metals including aluminium alloys and ferrous materials, and also for assessment purposes during alloy development.

Depending upon the chemical composition of the test solution, the test can be used to simulate the corrosive effects of marine splash zones, de-icing fluids and acid salt environments.

The term “metal” as used in this International Standard includes metallic materials with or without corrosion protection.

The alternate immersion test applies to

- metals and their alloys,
- certain metallic coatings (anodic and cathodic with respect to the substrate),
- certain conversion coatings,
- certain anodic oxide coating, and
- organic coatings on metals.

This International Standard is not applicable to stainless steel.

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 4628-1, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 1: General introduction and designation system*

ISO 4628-2, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 2: Assessment of degree of blistering*

ISO 4628-3, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 3: Assessment of degree of rusting*

ISO 4628-4, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 4: Assessment of degree of cracking*

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ISO 4628-5, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 5: Assessment of degree of flaking*

ISO 7539-1, *Corrosion of metals and alloys — Stress corrosion testing — Part 1: General guidance on testing procedures*

ISO 8407, *Corrosion of metals and alloys — Removal of corrosion products from corrosion test specimens*

ISO 10289, *Methods for corrosion testing of metallic and other inorganic coatings on metallic substrates — Rating of test specimens and manufactured articles subjected to corrosion tests*

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