SLOVENSKI STANDARD
SIST EN ISO 7441:2015

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Nadomešča:
SIST EN ISO 7441:1999

Korozija kovin in zlitin – Ugotavljanje kontaktne (na stiku dveh kovin) korozije s preskušanjem v naravi (ISO 7441:2015)

Corrosion of metals and alloys - Determination of bimetallic corrosion in outdoor exposure corrosion tests (ISO 7441:2015)

Korrosion von Metallen und Legierungen - Bestimmung der Kontaktkorrosion durch Freibewitterungsversuche (ISO 7441:2015)

Corrosion des métaux et alliages - Détermination de la corrosion bimétallique par des essais de corrosion en milieu extérieur (ISO 7441:2015)

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Corrosion des métaux et alliages - Détermination de la corrosion bimétallique par des essais d'exposition de corrosion atmosphérique (ISO 7441:2015)

Korrosion von Metallen und Legierungen - Bestimmung der Kontaktkorrosion durch Freibewitterungsversuche (ISO 7441:2015)

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Foreword

This document (EN ISO 7441:2015) 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” the secretariat of which is held by BSI.

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INTERNATIONAL STANDARD

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Corrosion of metals and alloys — Determination of bimetallic corrosion in atmospheric exposure corrosion tests

Corrosion des métaux et alliages — Détermination de la corrosion bimétallique par des essais d'exposition de corrosion atmosphérique

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Foreword

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The committee responsible for this document is ISO/TC 156, *Corrosion of metals and alloys*.

This second edition cancels and replaces the first edition (ISO 7441:1984), which has been technically revised.

Introduction

Bimetallic corrosion occurs when a metal in electrical contact with a more noble metal corrodes at a higher rate than it would in the same environment but without this contact.

Bimetallic corrosion in the atmosphere, in contrast to that in electrolytes, is characterized by a large potential drop between the anode and the cathode. Therefore, bimetallic corrosion is usually limited to a distance within about 0,5 cm from the point of contact[1].

The determination of bimetallic corrosion in atmospheric exposure tests can be made with several methods, each with its own advantages. Three standardized tests are compared and described in this International Standard:

— rectangular plates;

— washers;

— wire on bolt.

The standard starts with an overview and comparison of the three methods, with the purpose of aiding the selection of an appropriate test method. Test procedures for the rectangular plate and washer test are included in this standard since no independent standard describes these methods while those who wish to use the wire on bolt test need to consult ASTM G116 for a complete description of the method.

The standard describes how to derive the bimetallic effect, which is a relative measure of the bimetallic corrosion of a metal compared to the corrosion of the same metal but without the bimetallic effect. A high galvanic effect does not necessarily mean that the bimetallic corrosion rate is high. Therefore, valuable complementary information is the classification of the corrosivity of the test site according to ISO 9223[2].