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Second edition
2018-07

Corrosion of metals and alloys — Accelerated testing involving cyclic exposure to salt mist, dry and wet conditions

Corrosion des métaux et alliages — Essais accélérés comprenant des expositions cycliques à des conditions de brouillard salin, de séchage et d'humidité



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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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

This second edition cancels and replaces the first edition (ISO 14993:2001), which has been technically revised. The main technical changes are as follows:

- the document has been harmonized with ISO 9227;
- the terms and definitions clause has been added;
- the allowed range of mass loss of steel reference specimen has been changed.

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Introduction

Corrosion of metallic materials with or without corrosion protection is influenced by many environmental factors, the importance of which may vary depending on the type of metallic material and the type of environment. It is impossible, therefore, to design accelerated laboratory corrosion tests in such a way that all environmental factors influencing resistance to corrosion are taken into account. Laboratory tests are, therefore, designed to simulate the effects of the most important factors that enhance the corrosion of metallic materials.

The accelerated corrosion test method described in this document is designed to simulate and enhance the environmental influence on a metallic material of exposure to an outdoor climate, where exposure to salt-contaminated conditions occurs and may promote corrosion.

The test method involves cyclic exposure of test specimens to a mist of salt solution, to drying conditions and to periods of high humidity. However, the method is mainly intended for comparative testing and the results obtained do not permit far-reaching conclusions on the corrosion resistance of the tested metallic material under the whole range of environmental conditions within which it may be used. Nevertheless, the method provides valuable information on the performance of materials exposed to salt-contaminated environments similar to those used in the test.