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Corrosion of metals and alloys — Guidelines for the evaluation of pitting corrosion

*Corrosion des métaux et alliages — Lignes directrices pour
l'évaluation de la corrosion par piqûres*



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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.

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This document was prepared by Technical Committee ISO/TC 156, *Corrosion of metals and alloys*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 262, *Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 11463:1995), which has been technically revised. The main changes compared with the previous edition are as follows:

- modern surface analysis and characterization techniques for ex situ examination have been included.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

It is important to be able to determine the extent of pitting and its characteristics, either in a service application, where it is necessary to estimate the remaining life in a metal structure, or in laboratory test programmes that are used to select pitting-resistant materials for a particular service. Corrosion pits can also act as the precursor to other damage modes such as stress corrosion cracking and corrosion fatigue.

The application of the materials to be tested will determine the minimum pit size to be evaluated and whether total area covered, average pit depth, maximum pit depth or another criterion is the most important to measure.