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Corrosion of metals and alloys — Determination of AC corrosion — Protection criteria

Corrosion des métaux et alliages — Détermination de la corrosion occasionnée par les courants alternatifs — Critères de protection

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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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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword — Supplementary information.

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

Introduction

This International Standard has incorporated criteria and thresholds together with experience gained from the most recent data. Various countries have a very different approach to the prevention of AC corrosion depending primarily on the DC interference situation. These different approaches are taken into account in two different ways

— either in presence of “low” on-potentials, which allows a certain level of AC voltage (up to 15 V), or

— in presence of “high” on-potentials (with DC stray current interference on the pipeline for instance) which requires the reduction of the AC voltage towards the lowest possible levels.

This International Standard also gives some parameters to consider when evaluating the AC corrosion likelihood, as well as detailed measurement techniques, mitigation measures, and measurements to carry out for commissioning of any AC corrosion mitigation system. Note that Annex E proposes other parameters and thresholds that require further validation based on practical experiences.