
**Corrosion of metals and alloys —
Determination of the corrosion rates
of embedded steel reinforcement in
concrete exposed to simulated marine
environments**

*Corrosion des métaux et alliages — Détermination des vitesses de
corrosion de l'acier encastrés simulée de l'armature dans le béton
exposé à l'environnement marin*

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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Introduction

Structurally deficient concrete is caused by deterioration due to corrosion, mainly induced by chlorides from de-icing salts and marine exposure. The structural durability of concrete has become an issue of common concern to engineering.

The high humidity and high salt spray characteristics of the marine environment need higher durability structures. More specific requirements for the corrosion-resistant properties of reinforced steel bars, as well as the corresponding testing technology requirements, have been put forward.

In consideration of engineering practices, corrosion properties could be predicted on the basis of testing the corrosion rate via the comparative test of the steel bar specimen and a reference steel bar specimen. This document is consistent with the actual conditions of concrete structure exposure and can provide support for the development and selection of corrosion-resistant steel.

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