

Corrosion of metals and alloys — Determination of the critical pitting temperature under potentiostatic control

ICS 77.060

National foreword

This British Standard is the UK implementation of EN ISO 17864:2008. It is identical with ISO 17864:2005. It supersedes BS ISO 17864:2005, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ISE/NFE/8, Corrosion of metals and alloys.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

Corrosion of metals and alloys - Determination of the critical
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17864:2005)

Corrosion des métaux et alliages - Détermination de la
température critique de piquûration des aciers inoxydables
sous contrôle potentiostatique (ISO 17864:2005)

Korrosion von Metallen und Legierungen - Bestimmung der
kritischen Lochkorrosionstemperatur bei potentiostatischer
Belastung (ISO 17864:2005)

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Foreword

The text of ISO 17864:2005 has been prepared by Technical Committee ISO/TC 156 “Corrosion of metals and alloys” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 17864:2008 by Technical Committee CEN/TC 262 “Metallic and other inorganic coatings” the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.

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Endorsement notice

The text of ISO 17864:2005 has been approved by CEN as a EN ISO 17864:2008 without any modification.

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Introduction

Stainless steel is susceptible to pitting corrosion, crevice corrosion, and stress-corrosion cracking, etc., although it is used as generally a corrosion-resistant material. Pitting phenomenon is generally of a random nature, therefore its measurement requires at least a couple of values. Critical pitting temperature defines the lowest potential-independent temperature, below which pitting does not occur.

The basic methodology was first standardized in ASTM G150, *Standard test method for electrochemical critical pitting temperature testing of stainless steels*.