
**Paints and varnishes — Determination of
resistance to cathodic disbonding of
coatings exposed to sea water**

*Peintures et vernis — Détermination de la résistance au décollement
cathodique des revêtements exposés à l'eau de mer*



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS

© ISO 2003

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword.....	iv
Introduction	v
1 Scope.....	1
2 Normative references	1
3 Terms and definitions.....	2
4 Principle	2
5 Required supplementary information	2
6 Test solutions.....	2
7 Apparatus.....	3
8 Sampling	5
9 Test panels	5
10 Procedure.....	9
11 Expression of results.....	11
12 Precision	12
13 Test report.....	12
Annex A (normative) Required supplementary information	13
Annex B (normative) Sacrificial anodes — Composition of zinc alloy	14

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 15711 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

This document is a preview generated by EVS

Introduction

This International Standard describes two methods for determining the ability of paint or other organic coatings applied to metallic substrates to withstand cathodic disbonding. These methods may also afford a basis for the comparison of particular coatings. The conditions of test are more severe than those likely to be encountered normally and so coating failure may be accelerated. It is recommended that the test be carried out for a period of at least 26 weeks and hence these methods are not suitable as a means of achieving quality control.

The methods are suitable for coatings used for the protection of ships and structures exposed to sea water. Method A is based on the procedure developed and evaluated by COIPM (Comité International Permanent pour la Protection des Matériaux en Milieu Marin).

The test result may be influenced not only by the properties of the coating system under test, but also by the nature and preparation of the substrate, the method of application of the coating system and other factors.

This document is a preview generated by EVS

Paints and varnishes — Determination of resistance to cathodic disbonding of coatings exposed to sea water

1 Scope

This International Standard describes two methods for determining the ability of paint, or other organic coatings, applied to metallic substrates to withstand cathodic disbonding when the surface coating may contain or develop discontinuities. The methods are applicable to coatings that are exposed to sea water, such as those applied to ships or marine structures. They are not suitable for the assessment of the ability of coatings to withstand cathodic disbonding on land-based structures.

Method A involves the use of a cathodic protection circuit, whereby the electrode potential of the test substrates is controlled potentiostatically.

Method B involves the use of sacrificial anodes attached to the test substrates. This reflects the practical method of cathodic protection commonly used on ships.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 554, *Standard atmospheres for conditioning and/or testing — Specifications*

ISO 1513, *Paints and varnishes — Examination and preparation of samples for testing*

ISO 1514, *Paints and varnishes — Standard panels for testing*

ISO 2808, *Paints and varnishes — Determination of film thickness*

ISO 3270, *Paints and varnishes and their raw materials — Temperatures and humidities for conditioning and testing*

ISO 3696, *Water for analytical laboratory use — Specification and test method*

ISO 4624, *Paints and varnishes — Pull-off test for adhesion*

ISO 4628-2, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 2: Assessment of degree of blistering*

ISO 8501-1, *Preparation of steel substrates before application of paints and related products — Visual assessment of surface cleanliness — Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings*

ISO 12944-6, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 6: Laboratory performance test methods*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*