
**Corrosion of metals and alloys —
Guidelines for exposing and evaluating
metals and alloys in surface sea water**

*Corrosion des métaux et alliages — Lignes directrices pour l'exposition
et l'évaluation des métaux et alliages à la surface de l'eau de mer*



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.

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.

International Standard ISO 11306 was prepared by Technical Committee ISO/TC 156, *Corrosion of metals and alloys*.

© ISO 1998

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 the publisher.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet central@iso.ch
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland

Corrosion of metals and alloys — Guidelines for exposing and evaluating metals and alloys in surface sea water

1 Scope

1.1 This International Standard gives guidance on the conditions and procedures to be followed when conducting exposures of metals and alloys to surface sea water such that meaningful comparisons may be made for different locations. This International Standard applies to exposure areas from above water level which are wet for a significant period (splash and tidal zones) down to a depth at which the composition of the sea water is similar to that at the surface.

1.2 This practice gives guidance on procedures for the evaluation of the effects of sea water on metals and alloys.

1.3 Because of the variability and complexity of sea water, exposures over a minimum period of one year are considered necessary to minimize the influence of these variable factors.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 8407:1991, *Corrosion of metals and alloys — Removal of corrosion products from corrosion test specimens*.

ISO 11463:1995, *Corrosion of metals and alloys — Evaluation of pitting corrosion*.

3 Control specimens

It is prudent, because of the inherent variability in processing conditions, that control specimens be used in corrosion tests. Two kinds of control specimens are needed as follows.

A specimen for which performance is well established in the given environment and which actually does corrode (for example, mild steel). Its corrosion rate will help to determine the length of the test period.

A specimen that is known to be normally resistant in the given environment (for example, copper). The purpose of this specimen is to make sure that no unusual conditions, such as chemical pollution, were encountered during the test period. In the case of evaluations of aluminium alloys, care should be exercised in the location of these copper specimens (see 6.2).