

Evaluation of resistance of steel products to hydrogen induced cracking (HIC)

The European Standard EN 10229:1998 has the status of a
British Standard

ICS 77.060

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

BSI
Documents



Document Sharing Hub

National foreword

This British Standard is the English language version of EN 10229:1998.

The UK participation in its preparation was entrusted to Technical Committee ISE/72, Methods of physical and metallographic testing, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 9 and a back cover

This British Standard, having been prepared under the direction of the Engineering Sector Board, was published under the authority of the Standards Board and comes into effect on 15 July 1998

© BSI 1998

ISBN 0 580 29798 5

Amendments issued since publication

Amd. No.	Date	Text affected

ICS 77.060

Descriptors: Tests, cracking tests, estimation, cracking (fracturing), crack propagation, definitions, test specimen, procedure

English version

Evaluation of resistance of steel products to hydrogen induced cracking (HIC)

Evaluation de la résistance des produits en acier à la fissuration induite par l'hydrogène (HIC)

Bewertung der Beständigkeit von Stahlerzeugnissen gegen wasserstoffinduzierte Rißbildung (HIC)

This European Standard was approved by CEN on 2 March 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

© 1998 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Foreword

This European Standard has been prepared by Technical Committee ECISS/TC 1, Steels — Mechanical and physical tests, the secretariat of which is held by AFNOR.

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 September 1998, and conflicting national standards shall be withdrawn at the latest by September 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Contents

	Page
Foreword	2
Introduction	3
1 Scope	3
2 Definitions	3
2.1 sample	3
2.2 test piece	3
2.3 section	3
2.4 crack	3
2.5 hydrogen induced crack	3
2.6 separation between cracks	3
2.7 isolated crack	3
2.8 crack system	3
2.9 extent of cracking	3
2.10 stepwise crack	3
3 Principle of the method	3
4 Test solutions	4
4.1 Test solution A	4
4.2 Test solution B (synthetic seawater)	4
4.3 Volume ratio	4
4.4 Reagent purity	4
5 Apparatus	4
6 Test Pieces	4
6.1 Location and orientation	4
6.2 Size	4
6.3 Preparation	5
7 Test procedure	5
7.1 Test batch	5
7.2 Degreasing	5
7.3 Test piece exposure	5
7.4 De-aeration and saturation	5
7.5 Test period	5
8 Evaluation of test pieces	5
8.1 Blisters	5
8.2 Test piece sectioning	5
8.3 Preparation of sections	5
8.4 Evaluation of cracking	6
9 Ratio calculations	6
10 Test report	6