

**Corrosion protection of steel structures by
protective paint systems - Assessment of, and
acceptance criteria for, the adhesion/cohesion
(fracture strength) of a dry film - Part 2: Cross-cut
test and X-cut testing**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 16276-2:2007 sisaldab Euroopa standardi EN ISO 16276-2:2007 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 21.06.2007 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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This Estonian standard EVS-EN ISO 16276-2:2007 consists of the English text of the European standard EN ISO 16276-2:2007.

This standard is ratified with the order of Estonian Centre for Standardisation dated 21.06.2007 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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ICS 87.020

Võtmesõnad:

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English Version

Corrosion protection of steel structures by protective paint systems - Assessment of, and acceptance criteria for, the adhesion/cohesion (fracture strength) of a coating - Part 2: Cross-cut testing and X-cut testing (ISO 16276-2:2007)

Anticorrosion des structures en acier par systèmes de peinture - Évaluation et critères d'acceptation de l'adhésion/cohésion (résistance à la rupture) d'un revêtement - Partie 2: Essai de quadrillage et essai à la croix de Saint André (ISO 16276-2:2007)

Korrosionsschutz von Stahlbauten durch Beschichtungssysteme - Beurteilung der Adhäsion/Kohäsion (Haftfestigkeit) einer Beschichtung und Kriterien für deren Annahme - Teil 2: Gitterschnitt- und Kreuzschnittprüfung (ISO 16276-2:2007)

This European Standard was approved by CEN on 14 May 2007.

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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 CEN Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 16276-2:2007) has been prepared by Technical Committee CEN/TC 139 "Paints and varnishes", the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 35 "Paints and varnishes".

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 November 2007, and conflicting national standards shall be withdrawn at the latest by November 2007.

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

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strength) of a coating —**

Part 2:

Cross-cut testing and X-cut testing

*Anticorrosion des structures en acier par systèmes de peintures —
Évaluation et critères d'acceptation de l'adhésion/cohésion (résistance à
la rupture) d'un revêtement —*

Partie 2: Essai de quadrillage et essai à la croix de Saint André



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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 16276-2 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 139, *Paints and varnishes*, in collaboration with Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 14, *Protective paint systems for steel structures*.

ISO 16276 consists of the following parts, under the general title *Corrosion protection of steel structures by protective paint systems — Assessment of, and acceptance criteria for, the adhesion/cohesion (fracture strength) of a coating*:

- *Part 1: Pull-off testing*
- *Part 2: Cross-cut testing and X-cut testing*

Introduction

The main purpose of this part of ISO 16276 is to supplement the ISO 12944 series with regard to the field assessment of, and acceptance criteria for, the adhesion/cohesion of a coating.

NOTE This part of ISO 16276 is intended for assessment of cross-cut testing and X-cut testing of paint coatings on steel structures on site. ISO 2409 specifies a cross-cut test and ASTM D 3359 an X-cut test for general purposes, without instructions for interpretation of the results and without acceptance or rejection criteria.

Fracture strength testing is normally destructive and therefore requires repair work, the extent of which will depend on the specification and on the durability required of the protective paint coating.

An objective of this part of ISO 16276 is to minimize variability and achieve uniformity of practice in the assessment of the fracture strength of a protective paint coating and to establish acceptance/rejection criteria for such coatings. The method uses test equipment based on the cross-cut and X-cut principles.

Corrosion protection of steel structures by protective paint systems — Assessment of, and acceptance criteria for, the adhesion/cohesion (fracture strength) of a coating —

Part 2: Cross-cut testing and X-cut testing

1 Scope

This part of ISO 16276 specifies procedures for rating the resistance of coating systems when a cut in the form of a right-angle lattice pattern (cross-cut) or in the form of an X (X-cut) is made into the coating, penetrating through to the substrate.

This part of ISO 16276 is only applicable if the cross-cut or X-cut test method is specified, together with the rating from the appropriate rating scale.

NOTE The characteristics of the coating can make the assessment of the result of a cross-cut or X-cut test difficult.

This part of ISO 16276 also specifies suitable equipment and defines inspection areas, sampling plans and acceptance/rejection criteria.

It does not specify ratings for particular coating systems.

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 2409:2006, *Paints and varnishes — Cross-cut test*

ISO 12944-7, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 7: Execution and supervision of paint work*

ISO 12944-8, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 8: Development of specifications for new work and maintenance*

ISO 19840, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Measurement of, and acceptance criteria for, the thickness of dry films on rough surfaces*

ASTM D 3359-02, *Standard Test Methods for Measuring Adhesion by Tape Test*