

Vitreous and porcelain enamels - Low voltage test for detecting and locating defects

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 8289:2002 sisaldab Euroopa standardi EN ISO 8289:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 14.02.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 8289:2002 consists of the English text of the European standard EN ISO 8289:2001.</p> <p>This document is endorsed on 14.02.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This standard specifies two low voltage tests for detecting and locating defects that extend to the basis metal in vitreous and porcelain enamel coatings.</p>	<p>Scope:</p> <p>This standard specifies two low voltage tests for detecting and locating defects that extend to the basis metal in vitreous and porcelain enamel coatings.</p>
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ICS 25.220.50

Võtmesõnad: definitions, determination, enamels, extralow voltage, extra-low voltage, low voltage, materials testing, non-metallic coatings, pores, porosity, porosity test, protective coatings, surface defects, test equipment, testing, tests, weak points, vitreous enamel

English version

Vitreous and porcelain enamels

Low voltage test for detecting and locating defects
(ISO 8289 : 2000)

Emaux vitrifiés – Essai à basse tension
pour la détection et la localisation des
défauts (ISO 8289 : 2000)

Emails und Emailierungen – Niedrig-
spannungsprüfung zum Nachweis
und Lokalisieren von Fehlstellen
(ISO 8289 : 2000)

This European Standard was approved by CEN on 2001-06-24.

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

The European Standards exist 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 Management Centre has the same status as the official versions.

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CEN

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

Management Centre: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 8289 : 2000 Vitreous and porcelain enamels – Low voltage test for detecting and locating defects, which was prepared by ISO/TC 107 'Metallic and other inorganic coatings' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 262 'Protection of metallic materials against corrosion', the Secretariat of which is held by BSI, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by February 2002 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 8289 : 2000 was approved by CEN as a European Standard without any modification.

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1 Scope

This International Standard specifies two low voltage tests for detecting and locating defects that extend to the basis metal in vitreous and porcelain enamel coatings.

Method A (electrical) is suitable for the rapid detection and determination of the general location of defects. Method B (optical), based on colour effects, is suitable for the more precise detection of defects and their exact locations. Method A is commonly applied to flat surfaces, whereas method B is preferred for more intricate shapes.

NOTE 1 Selection of the correct test method is critical to distinguish the areas of increased conductivity detected by method B from actual pores that extend to the basis metal, which can be detected by both methods.

NOTE 2 The low voltage test is a non-destructive method of detecting defects (see clause 3) and therefore, is completely different from the high voltage test specified in ISO 2746. The results of high and low voltage tests are not comparable and will differ.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

IEC 60086-2, *Primary batteries — Part 2: Specification sheets*.

3 Term and definition

For the purposes of this International Standard, the following term and definition applies.

3.1

defect

pore, crack or spall that penetrates or extends to the basis metal

NOTE In certain areas, defects may be unavoidable being caused during the production of the article, e.g., burnishing tool marks.

4 Principle

Defects are detected by an electrical or electroacoustical method (method A) or an optical one (method B) based on colour effects. Testing is carried out at a low voltage, contact being made with the defect by means of a conductive solution.

5 Test reagent

Dissolve $3,0 \text{ g} \pm 0,1 \text{ g}$ sodium nitrite (NaNO_2) in 100 ml of tap water and add 2 drops of a liquid dishwashing detergent.