

**Mittepurustav katsetamine.
Defektoskoopilised katsed. Osa 3:
Etalonblokid**

Non-destructive testing - Penetrant testing - Part 3:
Reference test blocks

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 3452-3:1999 sisaldab Euroopa standardi EN ISO 3452-3:1998 + AC:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 23.11.1999 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 3452-3:1999 consists of the English text of the European standard EN ISO 3452-3:1998 + AC:2001.</p> <p>This document is endorsed on 23.11.1999 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 European Standard describes two types of reference blocks: - Type 1 reference blocks are used to determine the sensitivity levels of both fluorescent and colour contrast penetrant product families; - Type 2 reference blocks are used for routine assessment of the performance of both fluorescent and colour contrast penetrant facilities and part-used containers.</p>	<p>Scope:</p> <p>This European Standard describes two types of reference blocks: - Type 1 reference blocks are used to determine the sensitivity levels of both fluorescent and colour contrast penetrant product families; - Type 2 reference blocks are used for routine assessment of the performance of both fluorescent and colour contrast penetrant facilities and part-used containers.</p>
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Võtmesõnad: fluorescent materials, impregnating tests, liquid penetrant tests, non-destructive tests, reference materials

ICS 19.100

Descriptors: Non-destructive testing, penetrant testing.

English version

Non-destructive testing
Penetrant testing

Part 3: Reference test blocks
(ISO 3452-3 : 1998)

Essais non destructifs – Examen par
ressuage – Partie 3: Pièces de
référence (ISO 3452-3 : 1998)

Zerstörungsfreie Prüfung – Eindring-
prüfung – Teil 3: Kontrollkörper
(ISO 3452-3 : 1998)

This European Standard was approved by CEN on 1998-05-01.

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.

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 Central Secretariat 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

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

Contents

	Page
Foreword	2
Introduction	2
1 Scope	3
2 Normative references	3
3 Description of reference blocks	3
4 Type 1 reference block design and dimensions	3
5 Type 2 reference block design and dimensions	5
6 Identification	8
Annex ZA (normative) Normative references to international publications with their relevant European publications	8

Foreword

International Standard

ISO 3452-3 : 1998 Non-destructive testing – Penetrant testing – Part 3: Reference test blocks, which was prepared by ISO/TC 135 'Non-destructive testing' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 138 'Non-destructive testing', the Secretariat of which is held by AFNOR, as a European Standard.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association and supports essential requirements of the relevant EU Directives.

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 June 1999 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 3452-3 : 1998 was approved by CEN as a European Standard without any modification.

Introduction

At the present time, one part of this Standard is published independently on the European and ISO levels, the others are under the Vienna Agreement and consequently have the ISO number at the European level. However, the Vienna agreement was applied during the work, so some European Standards have referenced them under their previous European number. The following table gives the correspondance between these different numbers.

Title	previous number*	official number
Non-destructive testing - Penetrant testing		
Part 1: General principles		EN 571-1
Part 2: Testing of penetrant materials	prEN 571-2	prEN ISO 3452-2
Part 3: Reference test blocks	prEN 571-3	EN ISO 3452-3
Part 4: Equipment	prEN 956	EN ISO 3452-4
*number under which this document is referenced in some European Standards		

1 Scope

This European standard describes two types of reference blocks:

- Type 1 reference blocks are used to determine the sensitivity levels of both fluorescent and colour contrast penetrant product families;
- Type 2 reference blocks are used for routine assessment of the performance of both fluorescent and colour contrast penetrant facilities and part-used containers.

The reference blocks are used in the same conditions as the pieces to be tested according to EN 571-1.

2 Normative references

This European standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 571-1	Non destructive testing - Penetrant testing - Part 1: General principles
prEN ISO 3452-2	Non-destructive testing - Penetrant testing - Part 2: Testing of penetrant materials (ISO/DIS 3452-2:1996)
EN 10027-1	Designation systems for steel - Part 1: Steel names, principal symbols
EN 10088-1	Stainless steels - Part 1: List of standard stainless steels
EN 10204	Metallic products - Types of inspection documents
EURONORM 96	Tool steels - Quality requirements ¹

3 Description of reference blocks

The type 1 reference block consists of a set of four nickel-chrome plated panels with 10, 20, 30 and 50 μm thickness of plating, respectively. The 10, 20 and 30 μm panels are used for determination the sensitivity of fluorescent penetrant systems. The sensitivity of colour contrast penetrant systems is determined using the 30 and 50 μm panels.

The type 2 reference block consists of a single panel of which one half has been plated with electroless nickel and a thin layer of chromium and the other half prepared to achieve areas of specific roughness. The plated side exhibits five star-shaped discontinuities.

4 Type 1 reference block design and dimensions

The type 1 panels are rectangular in shape with typical dimensions of 35 mm x 100 mm x 2 mm (see figure 1). Each panel consists of a uniform layer of nickel-chromium plated on to a brass base, the thickness of nickel-chromium being 10, 20, 30 and 50 μm respectively. Transverse cracks are made in each panel by stretching the panels in the longitudinal direction. The width to depth ratio of each crack should be approximately 1:20.

¹ Until this EURONORM is transformed into a European Standard it can be either implemented or reference is made to the corresponding national standards