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**Mittepurustav katsetamine.
Defektoskoopilised katsed. Osa 4: Seadmed**

Non-destructive testing - Penetrant testing - Part 4:
Equipment

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 3452-4:1999 sisaldab Euroopa standardi EN ISO 3452-4:1998 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 3452-4:1999 consists of the English text of the European standard EN ISO 3452-4:1998.</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: This European standard specifies the characteristics of equipment used in penetrant testing.</p>	<p>Scope: This European standard specifies the characteristics of equipment used in penetrant testing.</p>
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ICS 19.100

Võtmesõnad: liquid penetrant tests, non-destructive tests, test equipment

ICS 19.100

Descriptors: Non-destructive testing, penetrant testing.

English version

Non-destructive testing
Penetrant testing
Part 4: Equipment
(ISO 3452-4 : 1998)

Essais non destructifs – Examen par
ressuage – Partie 4: Equipement
(ISO 3452-4 : 1998)

Zerstörungsfreie Prüfung – Eindring-
prüfung – Teil 4: Geräte
(ISO 3452-4 : 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

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Foreword

International Standard

ISO 3452-4 : 1998 Non-destructive testing – Penetrant testing – Part 4: Equipment, 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 3452-4 : 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 specifies the characteristics of equipment used in penetrant testing. The characteristics of equipment required for carrying out penetrant testing depend on the number of tests to be made and on the size of the components to be tested. Two types of equipment are included in this standard:

- a) equipment suitable for carrying out in situ penetrant testing techniques;
- b) fixed installations.

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 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 for the examination
prEN ISO 3452-2	Non-destructive testing - Penetrant testing - Part 2: Testing of penetrant materials (ISO/DIS 3452-2:1996)
EN ISO 3452-3	Non-destructive testing - Penetrant testing - Part 3: Reference blocks (ISO 3452-3:1998)
prEN ISO 3059	Non-destructive testing - Penetrant testing and magnetic particle testing - Viewing conditions.

3 General

Equipment used in penetrant testing shall be selected and applied considering the following general aspects:

- equipment should be selected being suitable for the penetrant testing technique;
- all relevant health, safety and environmental requirements shall be complied with;
- the application shall be in accordance with the requirements of EN 571-1.

4 Equipment for in situ inspection

The equipment used for in situ inspection shall fulfill the requirements of EN 571-1, prEN ISO 3452-2 and EN ISO 3452-3. Depending on the process being employed the following testing equipment may be used:

- portable spray equipment
- cloth (lint free)
- brushes
- personal protective equipment
- white light source
- UV(A) source.

5 Equipment for fixed installations

5.1 General requirements

All materials of construction used for the manufacture of fixed penetrant inspection installations, e.g. tanks, pipework and ducting, shall be manufactured from materials which are resistant to attack by the products used throughout the complete process. In addition, these materials shall not cause any modification to the properties of the penetrant systems used.