

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

**Non-destructive testing - Penetrant testing - Part 3:
reference test blocks (ISO 3452-3:2013)**

EESTI STANDARDI EESSÕNA

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English Version

**Non-destructive testing - Penetrant testing - Part 3: Reference
test blocks (ISO 3452-3:2013)**

Essais non destructifs - Examen par ressuage - Partie 3:
Pièces de référence (ISO 3452-3:2013)

Zerstörungsfreie Prüfung - Eindringprüfung - Teil 3:
Kontrollkörper (ISO 3452-3:2013)

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Foreword

This document (EN ISO 3452-3:2013) has been prepared by Technical Committee CEN/TC 138 "Non-destructive testing", the secretariat of which is held by AFNOR, in collaboration with Technical Committee ISO/TC 135 "Non-destructive testing".

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of an identical text or by endorsement, at the latest by May 2014, and conflicting national standards shall be withdrawn at the latest by May 2014.

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Endorsement notice

The text of ISO 3452-3:2013 has been approved by CEN as EN ISO 3452-3:2013 without any modification.

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Non-destructive testing — Penetrant testing —

Part 3: Reference test blocks

1 Scope

This International 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 testing.

The reference blocks are to be used in accordance with part 1 of this International Standard.

2 Normative references

The following referenced documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10088-1, *Stainless steels — Part 1: List of standard stainless steels*

EN 10204, *Metallic products — Types of inspection documents*

ISO 4957, *Tool steels*

ISO 10474, *Steel and steel products — Inspection documents*

ISO 15510, *Stainless steels — Chemical composition*

3 Description of reference blocks

The Type 1 reference block consists of a set of four nickel-chrome plated panels with 10 µm, 20 µm, 30 µm and 50 µm thickness of plating, respectively. The 10 µm, 20 µm, 30 µm and 50 µm panels can be used for determination of the sensitivity of fluorescent penetrant systems. The sensitivity of colour contrast penetrant systems is determined using the 30 µm 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 × 100 mm × 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 µm, 20 µm, 30 µm 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.