

ICS 19.100

English Version

**Non-destructive testing - Penetrant and magnetic particle testing  
using blue light**

Essais non destructifs - Essais par ressuage et essais par  
magnétoscopie à la lumière bleue

Zerstörungsfreie Prüfung - Eindring- und  
Magnetpulverprüfung unter Anwendung von blauem Licht

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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## Foreword

This document (CEN/TR 16638:2014) has been prepared by Technical Committee CEN/TC 138 “Non-destructive testing”, the secretariat of which is held by AFNOR.

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## 1 Scope

This Technical Report specifies the requirements for penetrant and magnetic particle testing, the materials and viewing conditions when using fluorescent detection media excited by actinic blue light.

It is not intended that this “sub-method” technique is used as a substitute for the existing colour contrast and fluorescent techniques standardised in the EN ISO 3452 series and EN ISO 9934 series.

## 2 Normative references

The following 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 1330-7:2005, *Non-destructive testing - Terminology - Part 7: Terms used in magnetic particle testing*

CEN/TR 14748, *Non-destructive testing - Methodology for qualification of non-destructive tests*

EN ISO 3059, *Non-destructive testing - Penetrant testing and magnetic particle testing - Viewing conditions (ISO 3059)*

EN ISO 3452-1:2013, *Non-destructive testing - Penetrant testing - Part 1: General principles (ISO 3452-1:2013)*

EN ISO 3452-2:2013, *Non-destructive testing - Penetrant testing - Part 2: Testing of penetrant materials (ISO 3452-2:2013)*

EN ISO 3452-4, *Non-destructive testing - Penetrant testing - Part 4: Equipment (ISO 3452-4)*

EN ISO 9712, *Non-destructive testing - Qualification and certification of NDT personnel (ISO 9712)*

EN ISO 9934-1, *Non-destructive testing - Magnetic particle testing - Part 1: General principles (ISO 9934-1)*

EN ISO 9934-2, *Non-destructive testing - Magnetic particle testing - Part 2: Detection media (ISO 9934-2)*

EN ISO 9934-3, *Non-destructive testing - Magnetic particle testing - Part 3: Equipment (ISO 9934-3)*

EN ISO 12706:2009, *Non-destructive testing - Penetrant testing - Vocabulary (ISO 12706:2009)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12706:2009, EN 1330-7:2005 and the following apply.

**3.1 actinic blue light**  
monochromatic blue light in a specific range which excites fluorescent penetrants and fluorescent magnetic particles used for the purpose of non-destructive testing