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BSI Standards Publication

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

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National foreword

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A list of organizations represented on this committee can be obtained on request to its secretary.

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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

This Technical Report was approved by CEN on 9 December 2013. It has been drawn up by the Technical Committee CEN/TC 138.

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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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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