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Part 16: Non-destructive testing — Penetrant testing

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

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European foreword

This document (EN 2002-16:2019) has been prepared by the Aerospace and Defence Industries Association of Europe — Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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of an identical text or by endorsement, at the latest by May 2020, and conflicting national standards shall be withdrawn at the latest by May 2020.

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Introduction

This document is part of the series of EN metallic material standards for aerospace applications. The general organization of this series is described in EN 4258.

1 Scope

This document specifies the requirements for penetrant testing of metallic materials for aerospace applications. It is limited to the direction of surface-breaking defects, e.g. cracks, laps, seams and inclusions.

It shall be applied when referred to in the EN technical specification or material standard unless otherwise specified on the drawing, order or inspection schedule.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1330-1, *Non destructive testing — Terminology — Part 1: List of general terms*

EN 1330-2, *Non-destructive testing — Terminology — Part 2: Terms common to the non-destructive testing methods*

EN 4179, *Aerospace series — Qualification and approval of personnel for non-destructive testing*

EN 4258, *Aerospace series — Metallic materials — General organization of standardization — Links between types of EN standards and their use*

EN 4259, *Aerospace series — Metallic materials — Definition of general terms*[1)]

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

EN ISO 12706, *Non-destructive testing — Penetrant testing — Vocabulary*

ISO 3452-1, *Non-destructive testing — Penetrant testing — Part 1: General principles*[2)]

ISO 3452-2, *Non-destructive testing — Penetrant testing — Part 2: Testing of penetrant materials*[3)]

ISO 3452-3, *Non-destructive testing — Penetrant testing — Part 3: Reference test blocks*[4)]

ISO 3452-4, *Non-destructive testing — Penetrant testing — Part 4: Equipment*[5)]

ASTM E433-71, *Standard Reference Photographs for Liquid Penetrant Inspection*[6)]

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 4259 apply.

For the other terms, see EN 1330-1, EN 1330-2 and EN ISO 12706.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at http://www.iso.org/obp

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