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Non-destructive testing — Infrared thermography —

Part 2: Test method for integrated performance of system and equipment

Essais non destructifs — Thermographie infrarouge — Partie 2: Méthode d'essai relative aux performances intégrées du système et de l'appareillage

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Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 General requirements **1**
4.1 Environmental requirements 1
4.2 Testing equipment and imaging methods requirements 2
4.2.1 General 2
4.2.2 Blackbody simulator 2
4.2.3 Common target 2
4.2.4 MRTD four-shot target 2
4.2.5 MDTD disk target 3
4.2.6 Optical table 4
4.2.7 Positioning stage 4
4.2.8 Infrared radiometer 4
4.2.9 Collimator 4
4.3 Document requirements 4
4.3.1 Testing specification 4
4.3.2 Test report 5
4.3.3 Test record 5
5 Testing method **5**
5.1 Noise equivalent temperature difference (NETD) 5
5.2 Minimum resolvable temperature difference (MRTD) 6
5.3 Minimum detectable temperature difference (MDTD) 7
5.4 Field of view (FOV), instantaneous field of view (IFOV) and spatial resolution 8
5.5 Minimum working distance 8
5.6 Maximum temperature measurement range 9
5.7 Temperature measurement uniformity 9
5.8 Operating temperature range 10
Bibliography **11**

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 135, *Non-destructive testing*, Subcommittee SC 8, *Thermographic testing*.

A list of all parts in the ISO 18251 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Industrial applications of infrared thermographic testing are getting wider along with remarkable improvement of thermographic technologies. The effectiveness of any application of infrared thermographic testing depends upon proper and correct usage of the system and equipment. The purpose of this document is to provide a test method for the integrated performance of the system and equipment for infrared thermography in the field of industrial non-destructive testing. The establishment of this document can solve the problem that there is no ISO standard for the performance test method of the infrared equipment and system. The main interested parties who can benefit from this document are manufacturers and users of the infrared testing equipment and system.

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Non-destructive testing — Infrared thermography —

Part 2: Test method for integrated performance of system and equipment

1 Scope

This document specifies a test method for integrated performance parameters specified in ISO 18251-1 of an infrared (IR) imaging system and related equipment used in non-destructive testing (NDT). It also aims to assist the user in the selection of an appropriate system for a particular testing task.

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.

ISO 10878, *Non-destructive testing — Infrared thermography — Vocabulary*

ISO 10880, *Non-destructive testing — Infrared thermographic testing — General principles*

ISO 18251-1, *Non-destructive testing — Infrared thermography — Part 1: Characteristics of system and equipment*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 10878 and ISO 18251-1 apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 General requirements

4.1 Environmental requirements

General environmental requirements shall be in accordance with ISO 10880 and the following.

The test for integrated performance shall be carried out in a stable indoor environment within the temperature range from 20 °C to 25 °C and with a relative humidity in the range from 40 % to 80 %. The IR imaging system and related equipment shall not be affected by shocks, vibrations, external electromagnetic fields or external radiation sources affecting the readings of measuring instruments.

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