SLOVENSKI STANDARD
oSIST prEN 17119:2017

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Neporušitveno preskušanje - Termografsko preskušanje - Aktivna termografija

Non-destructive testing - Thermographic testing - Active thermography

Zerstörungsfreie Prüfung - Thermografische Prüfung - Aktive Thermografie

Essais non destructifs - Analyse thermographique - Thermographie active

Ta slovenski standard je istoveten z: prEN 17119

ICS:

19.100 Neporušitveno preskušanje Non-destructive testing

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English Version

Non-destructive testing - Thermographic testing - Active thermography

Zerstörungsfreie Prüfung - Thermografische Prüfung - Aktive Thermografie

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 138.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (prEN 17119:2017) has been prepared by Technical Committee CEN/TC 138 "Non-destructive testing", the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

1 Scope

This document defines the procedures for non-destructive testing using active thermography.

These testing procedures can be applied to different materials (e.g. composites, metals and coatings) and are appointed, but not limited to the:

— detection of discontinuities (e.g. voids, cracks, inclusions, delaminations);

— determination of layer or part thicknesses;

— determination and comparison of thermophysical properties.

This standard is describing data acquisition and analysis principles for active thermography and is giving an informative guideline for appropriate selection of the excitation source. Acceptance criteria are not defined in this standard.

Active thermography is applied in industrial production (e.g. compound materials, vehicle parts, engine parts, power plant parts, joining technology, electronic devices) and in maintenance and repair (e.g. aerospace, power plants, civil engineering).

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 16714-1, *Non-destructive testing - Thermographic testing - Part 1: General principles*

EN 16714-2, *Non-destructive testing - Thermographic testing - Part 2: Equipment*

EN 16714-3, *Non-destructive testing - Thermographic testing - Part 3: Terms and definitions*

EN 15042-2:2006, *Thickness measurement of coatings and characterization of surfaces with surface waves - Part 2: Guide to the thickness measurement of coatings by photothermic method*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16714-3, EN 15042-2:2006 and the following apply.

3.1
amplitude image
image of the spatial distribution of the amount of radiation emitted by the body at a frequency *f*

3.2
derivative image
image of the spatial distribution of the first or higher order temporal derivative of the temperature response to excitation

3.3
dynamic temperature contrast
local distribution of the temporally varying temperature difference relative to a reference temperature