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Non-destructive testing - Thermographic testing - Part
3: Terms and definitions

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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ICS 01.040.19, 19.100

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EUROPEAN STANDARD

EN 16714-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

Non-destructive testing - Thermographic testing - Part 3: Terms and definitions

Essais non destructifs - Analyses thermographiques -
Partie 3: Termes et définitions

Zerstörungsfreie Prüfung - Thermografische Prüfung -
Teil 3: Begriffe

This European Standard was approved by CEN on 25 June 2016.

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European foreword

This document (EN 16714-3:2016) has been prepared by Technical Committee CEN/TC 138 “Non-destructive testing”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

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EN 16714, *Non-destructive testing — Thermographic testing* consists of the following parts:

- *Part 1: General principles*
- *Part 2: Equipment*
- *Part 3: Terms and definitions*

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard establishes terms and definitions for thermographic testing.

2 Terms and definitions

2.1

absorptance

α

ratio of absorbed radiant power to the incident radiant power

Note 1 to entry: Absorptance may vary with wavelength, temperature and angle.

2.2

active thermography

thermographic procedure in which an artificial or natural source of energy is used to produce a non-stationary heat flux for the purpose of testing

2.3

anti-reflectance coating

coating of infrared or optical elements (lenses, protective windows) to increase the transmission of certain wavelength ranges by minimizing or suppressing reflections at interfaces

2.4

atmospheric temperature

T_{atm}

temperature of the atmosphere between camera and measured object

2.5

atmospheric attenuation

reduction of flux densities of electromagnetic radiation on the path through the atmosphere

Note 1 to entry: The atmosphere between object and camera attenuates IR radiation. Besides absorption of radiation by gases, e.g. water vapour (H₂O) and carbon dioxide (CO₂), radiation is attenuated by scattering (dust, fog, rain, snow, etc.).

2.6

comparative thermography

thermographic procedure that evaluates temperature differences or phase differences or differences of secondary parameters

2.7

chromatic aberration

wavelength dependent aberration of lens

Note 1 to entry: Due to dispersion (wavelength dependent index of refraction), different spectral parts are imaged in different image planes. This aberration is increasing with the spectral bandwidth of captured radiation.