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

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NATIONAL FOREWORD

See Eesti standard EVS-EN 16714-3:2016 sisaldab Euroopa standardi EN 16714-3:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 16714-3:2016 consists of the English text of the European standard EN 16714-3:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 10.08.2016.	Date of Availability of the European standard is 10.08.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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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

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

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of an identical text or by endorsement, at the latest by February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

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

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 (H_2O) and carbon dioxide (CO_2), 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.