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**Non-destructive testing — Infrared
thermography — Vocabulary**

Essais non destructifs — Thermographie infrarouge — Vocabulaire



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Foreword

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The committee responsible for this document is ISO/TC 135, *Non-destructive testing*, Subcommittee SC 8, *Infrared thermography for non-destructive testing*.

Introduction

This International Standard is a compilation of terms and definitions to provide a precise understanding or interpretation of infrared thermography and thermal/infrared non-destructive testing. These serve to secure the foundation of infrared thermography technology growth within the academic and industrial communities.

מפואר

Non-destructive testing — Infrared thermography — Vocabulary

Scope

This International Standard defines terms used in infrared thermography for non-destructive testing and forms a common basis for standard general use.

1 Terms and definitions

1.1

absorptivity

α

absorptance

absorptance coefficient

proportion (as a fraction of 1) of the radiant energy impinging on a material's surface that is absorbed by the material

NOTE 1 Absorptivity is dimensionless.

NOTE 2 For a blackbody, this is unity (1,0). Technically, absorptivity is the internal absorptance per path length. In thermography, the two terms, absorptivity and absorptance, are often used interchangeably.

NOTE 3 Absorptance is the ratio between the radiation energy absorbed by a body and the total radiation incident on the body.

NOTE 4 Absorptivity can vary with wavelength and be quoted for a specified band width or a specific wavelength. See 1.136, Spectral absorption coefficient.

1.2

active thermography

infrared thermographic examination of materials and objects which requires additional thermal stimulation

NOTE The thermal stimulation can be optical, sonic (ultrasonic), inductive, microwave or use any other form of energy.

1.3

ambient operating range

range of ambient temperatures over which an instrument is designed to operate within reported performance specifications

1.4

ambient temperature

temperature of the air in the vicinity of a test object (target)

NOTE "Ambient temperature" is not to be confused with "reflected ambient temperature", which is a term often used to mean "reflected apparent temperature".

1.5

ambient temperature compensation

correction built into infrared instruments to provide automatic compensation of temperature readings affected by the ambient temperature