

Non destructive testing - Radiation method - Computed tomography - Part 1: Terminology

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 16016-1:2011 sisaldab Euroopa standardi EN 16016-1:2011 ingliskeelset teksti.

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ICS 01.040.19, 19.100

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ICS 01.040.19; 19.100

English Version

Non destructive testing - Radiation methods - Computed tomography - Part 1: Terminology

Essais non destructifs - Méthodes par rayonnements -
Tomographie numérisée - Partie 1: Terminologie

Zerstörungsfreie Prüfung - Durchstrahlungsverfahren -
Computertomografie - Teil 1: Terminologie

This European Standard was approved by CEN on 29 July 2011.

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Foreword

This document (EN 16016-1:2011) 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of an identical text or by endorsement, at the latest by March 2012, and conflicting national standards shall be withdrawn at the latest by March 2012.

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

EN 16016 consists of the following parts:

- *Non destructive testing — Radiation methods — Computed tomography — Part 1: Terminology;*
- *Non destructive testing — Radiation methods — Computed tomography — Part 2: Principle, equipment and samples;*
- *Non destructive testing — Radiation methods — Computed tomography — Part 3: Operation and interpretation;*
- *Non destructive testing — Radiation methods — Computed tomography — Part 4: Qualification.*

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1 Scope

This European Standard defines terms used in the field of tomography.

This European Standard contains not only tomography-specific terms but also other more generic terms spanning imaging and radiography. The definitions for some of these terms feature a discussion point to refocus the term in the more specific context of computed tomography.

1 Domaine d'application

La présente Norme européenne définit des termes utilisés dans le domaine de la tomographie.

Elle contient non seulement des termes spécifiques de la tomographie, mais également des termes plus généraux recouvrant l'imagerie et la radiographie. Les définitions de certains de ces termes comportent un élément de discussion destiné à recentrer le terme dans le contexte plus spécifique de la tomographie informatisée.

1 Anwendungsbereich

Dieses Dokument legt die auf dem Gebiet der Tomografie verwendeten Begriffe fest.

Dieses Dokument enthält nicht nur für die Tomografie spezifische Benennungen, sondern auch allgemeinere Benennungen, die übergreifend für die Bildgebung und Durchstrahlung gelten. Die Definitionen für einige dieser Benennungen stellen einen Diskussionspunkt dar, mit dem Ziel, die jeweiligen Begriffe in einen spezifischeren Zusammenhang mit Computertomografie zu bringen.

2 Terms and definitions

2.1

absorption (photoelectric)

mode of interaction between photons and matter whereby a photon is absorbed by an atom which then emits an electron whose kinetic energy is exactly equal to the energy-depleted photon's electron-binding energy

NOTE See also **compton scattering** (2.6).

2 Termes et définitions

2.1

absorption (photoélectrique)

mode d'interaction entre photons et matière, dans lequel un photon est absorbé par un atome, qui émet ensuite un électron dont l'énergie cinétique est exactement égale à l'énergie du photon incident moins l'énergie de liaison de l'électron

NOTE Voir également **diffusion Compton** (2.6).

2.2

angular increment

angular spacing between adjacent CT projections (2.12)

2 Begriffe

2.1

Absorption (photoelektrische)

Art der Wechselwirkung zwischen Photonen und Materie, wobei ein Photon durch ein Atom absorbiert wird, das anschließend ein Elektron aussendet, dessen kinetische Energie genau der Elektronenbindungsenergie eines energieabgereicherten Photons entspricht

ANMERKUNG Siehe auch **Compton-Streuung** (2.6).

2.2

Winkelinkrement

Winkelabstand zwischen benachbarten CT-Projektionen (2.12)