Irish Standard
I.S. EN ISO 15708-1:2019

Non-destructive testing - Radiation methods for computed tomography - Part 1: Terminology (ISO 15708-1:2017)

I.S. EN ISO 15708-1:2019

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN ISO 15708-1:2019 is the adopted Irish version of the European Document EN ISO 15708-1:2019, Non-destructive testing - Radiation methods for computed tomography - Part 1: Terminology (ISO 15708-1:2017)

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 15708-1

April 2019

ICS 19.100

Supersedes EN 16016-1:2011

English Version

Non-destructive testing - Radiation methods for computed tomography - Part 1: Terminology (ISO 15708-1:2017)

Essais non destructifs - Méthodes par rayonnements pour la tomographie informatisée - Partie 1: Terminologie (ISO 15708-1:2017)

Zerstörungsfreie Prüfung - Durchstrahlungsverfahren für Computertomografie - Teil 1: Terminologie (ISO 15708-1:2017)

This European Standard was approved by CEN on 11 February 2019.

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

The text of ISO 15708-1:2017 has been prepared by Technical Committee ISO/TC 135 "Non-destructive testing" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 15708-1:2019 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of an identical text or by endorsement, at the latest by October 2019, and conflicting national standards shall be withdrawn at the latest by October 2019.

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.

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Endorsement notice

The text of ISO 15708-1:2017 has been approved by CEN as EN ISO 15708-1:2019 without any modification.

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INTERNATIONAL STANDARD

ISO 15708-1

Second edition
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Non-destructive testing — Radiation methods for computed tomography —

Part 1: Terminology

Essais non destructifs — Méthodes par rayonnements pour la tomographie informatisée —

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www. iso. org/directives).

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This document was prepared by the European Committee for Standardization (CEN) (as EN 16016-1) and was adopted, under a special "fast-track procedure", by Technical Committee ISO/TC 135, *Non-destructive testing*, Subcommittee SC 5, *Radiographic testing*, in parallel with its approval by the ISO member bodies.

The first edition (ISO 15708-1:2002) having been cancelled and replaced by ISO 15708-2:2017, this second edition of ISO 15708-1 has been repurposed with a different title and scope and takes into consideration developments in computed tomography (CT) and computational power over the preceding decade.

A list of all parts in the ISO 15708 series can be found on the ISO website.

Non-destructive testing — Radiation methods for computed tomography —

Part 1: Terminology

1 Scope

This document gives the definitions of terms used in the field of computed tomography (CT). It presents a terminology that is not only CT-specific but which also includes other more generic terms and definitions spanning imaging and radiography. Some of the definitions represent discussion points aimed at refocusing their terms in the specific context of computed tomography.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
absorption
photoelectric absorption
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 1 to entry: See also *Compton scattering* (3.6).

3.2
angular increment
angular spacing between adjacent *CT projections* (3.12)

3.3
artefact
artificial feature which appears on the *CT image* (3.11) but does not correspond to a physical feature of the object

3.4
beam hardening
spectrum hardening
spectral change of a polychromatic beam caused by preferential attenuation of lower energy photons

Note 1 to entry: See also *cupping effect* (3.17).