SLOVENSKI STANDARD
SIST EN ISO 15708-4:2019

01-julij-2019

Nadomešča:
SIST EN 16016-4:2012

Neporušitvene preiskave - Sevalne metode za računalniško tomografijo - 4. del: Usposobljenost (ISO 15708-4:2017)

Non-destructive testing - Radiation methods for computed tomography - Part 4: Qualification (ISO 15708-4:2017)

Zerstörungsfreie Prüfung - Durchstrahlungsverfahren für Computertomografie - Teil 4: Qualifizierung (ISO 15708-4:2017)

Essais non destructifs - Méthodes par rayonnements pour la tomographie informatisée - Part 4: Qualification (ISO 15708-4:2017)

Ta slovenski standard je istoveten z: **EN ISO 15708-4:2019**

ICS:

19.100	Neporušitveno preskušanje	Non-destructive testing

SIST EN ISO 15708-4:2019 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 15708-4

March 2019

ICS 19.100

Supersedes EN 16016-4:2011

English Version

Non-destructive testing - Radiation methods for computed tomography - Part 4: Qualification (ISO 15708-4:2017)

Essais non destructifs - Méthodes par rayonnements pour la tomographie informatisée - Part 4: Qualification (ISO 15708-4:2017)

Zerstörungsfreie Prüfung - Durchstrahlungsverfahren für Computertomografie - Teil 4: Qualifizierung (ISO 15708-4:2017)

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

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

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European foreword

The text of ISO 15708-4:2017 has been prepared by Technical Committee 135 "Non-destructive testing" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 15708-4:2019 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of an identical text or by endorsement, at the latest by September 2019, and conflicting national standards shall be withdrawn at the latest by September 2019.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 15708-4:2017 has been approved by CEN as EN ISO 15708-4:2019 without any modification.

INTERNATIONAL STANDARD

ISO 15708-4

First edition
2017-02

Non-destructive testing — Radiation methods for computed tomography —

Part 4: Qualification

Essais non destructifs — Méthodes par rayonnements pour la tomographie informatisée —
Partie 4: Qualification

Reference number
ISO 15708-4:2017(E)

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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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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html

This document was prepared by the European Committee for Standardization (CEN) (as EN 16016-4) 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 national bodies of ISO.

It 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 4: Qualification

1 Scope

This document specifies guidelines for the qualification of the performance of a CT system with respect to various inspection tasks.

It is applicable to *industrial* imaging (i.e. non-medical applications) and gives a consistent set of CT performance parameter definitions, including how those performance parameters relate to CT system specifications.

This document deals with computed axial tomography and excludes other types of tomography such as translational tomography and tomosynthesis.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 15708-2, *Non-destructive testing — Radiation methods for computed tomography — Part 2: Operation and interpretation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15708-1 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

4 Qualification of the inspection

4.1 General

CT is used in industry both for defect testing and dimensional testing and measurement. Since CT does not directly provide measurement of desired quantities such as, for example, pore size or wall thickness, these quantities must be derived from the X-ray linear attenuation data represented by the CT grey values. The detectability of features and the degree of accuracy required depend on the inspection task, the specification of the available test equipment and the analysis and evaluation methods used. When determination of such quantities is required, a special task-specific qualification test of the CT system is required. The qualification measures are described in 4.2 and 4.3. The qualification should be carried out by trained personnel. The trained personnel shall be able to prove they have undergone training and qualification in digital industrial radiography or radioscopy.