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Non-destructive testing — Radiation methods for computed tomography —

Part 3: Operation and interpretation

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

Partie 3: Fonctionnement et interprétation

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Foreword

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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 document 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 Technical Committee ISO/TC 135, *Non-destructive testing*, Subcommittee SC 5, *Radiographic testing,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 138, *Non-destructive testing,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 15708-3:2017), which has been technically revised.

The main changes are as follows:

— correction of Figure 5;

— correction and reordering of content in Clause 5;

— correction of definitions for N_C and N_A in Formula A.1;

— correction of definition for σ in Formula A.2;

— editorial changes.

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

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Non-destructive testing — Radiation methods for computed tomography —

Part 3: Operation and interpretation

1 Scope

This document provides an overview of the operation of a computed tomography (CT) system. This document specifies steps for interpretation of CT results with the aim of providing the operator with technical information to enable selection of suitable parameters.

This document is applicable to industrial imaging (i.e. non-medical applications) and specifies a consistent set of definitions of CT performance parameters, including how these performance parameters relate to CT system specifications.

This document is applicable to computed axial tomography.

This document does not apply to 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 15708-1, *Non-destructive testing — Radiation methods for computed tomography — Part 1: Vocabulary*

ISO 15708-2:2025, *Non-destructive testing — Radiation methods for computed tomography — Part 2: Principle, equipment and samples*

ISO 15708-4:2025, *Non-destructive testing — Radiation methods for computed tomography — Part 4: Qualification*

3 Terms and definitions

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

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

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

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

4 Operational procedure

4.1 General

For target-oriented computer tomography (CT) non-destructive testing inspection procedures, the test and measurement tasks are defined in advance with regard to the size and type of features/defects to be verified,