

ISO 15708-3:2017-02 (E)

Non-destructive testing - Radiation methods for computed tomography - Part 3: Operation and interpretation

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Operational procedure	1
4.1	General	1
4.2	CT system set-up	2
4.2.1	General	2
4.2.2	Geometry	2
4.2.3	X-ray source	3
4.2.4	Detector	3
4.3	Reconstruction parameters	3
4.4	Visualization	3
4.5	Analysis and interpretation of CT images	4
4.5.1	General	4
4.5.2	Feature testing/defect testing	4
4.5.3	Dimensional testing	4
5	Requirements for acceptable results	7
5.1	Image quality parameters	7
5.1.1	Contrast	7
5.1.2	Noise	8
5.1.3	Signal to noise ratio	9
5.1.4	Contrast to noise ratio	9
5.1.5	Spatial resolution	10
5.2	Suitability of testing	12
5.3	CT examination interpretation and acceptance criteria	12
5.4	Records and reports	12
5.5	Artefacts	13
5.5.1	General	13
5.5.2	Beam hardening artefacts	13
5.5.3	Edge artefacts	14
5.5.4	Scattered radiation	15
5.5.5	Instabilities	15
5.5.6	Ring artefacts	15
5.5.7	Centre of rotation error artefacts	16
5.5.8	Motion artefacts	17
5.5.9	Artefacts due to an insufficient number of projections	18
5.5.10	Cone beam artefacts	18
Annex A (informative)	Spatial resolution measurement using line pair gauges	19
Bibliography		23