

PCN24/GEN/Appendix Z3

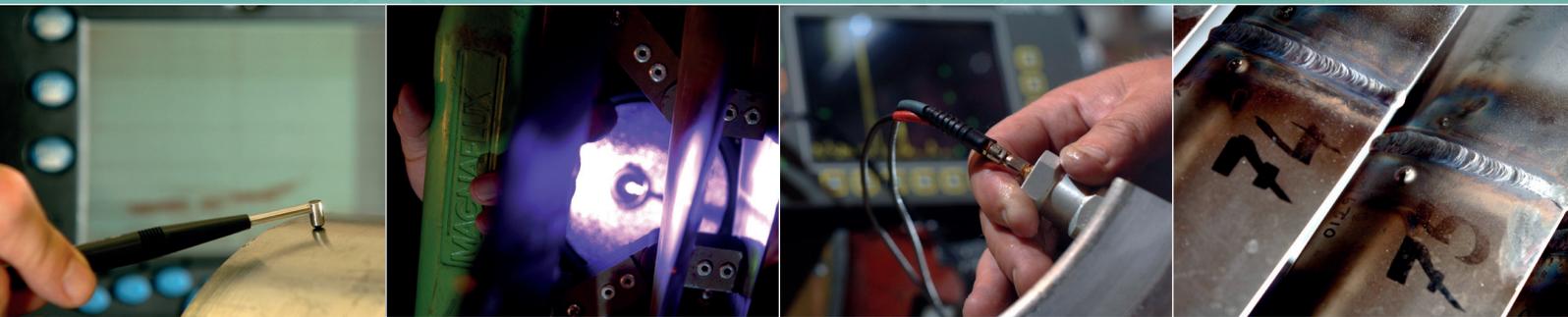
NDT standards list

Issue 1 • January 2026



A division of

BINDT
THE BRITISH INSTITUTE OF
NON-DESTRUCTIVE TESTING



Contents

Section	PCN24/GEN/Appendix Z3: Content	Page
	Document title cover sheet.....	1
	Scope.....	3
	Computed radiography (CR).....	3
	Eddy current testing (ET).....	4
	Magnetic testing (MT).....	4
	Penetrant testing (PT).....	5
	Radiographic testing (RT).....	5
	Ultrasonic testing (UT).....	6
	Ultrasonic testing – Time-of-flight diffraction (TOFD).....	6
	Phased array ultrasonic testing (PAUT).....	7
	Visual testing (VT).....	7
	Weld inspection (WI).....	7
	Change control record.....	8

The British Institute of Non-Destructive Testing is an accredited Certification Body offering personnel and quality management systems assessment and certification against criteria set out in international and European standards through the PCN Certification Scheme.

©2026 The British Institute of Non-Destructive Testing. All Rights Reserved.

This document is protected by UK and international copyright laws and remains the intellectual property of BINDT. Reproduction and distribution of the document without the written permission of BINDT is strictly prohibited.



Scope

The aim of this document is to provide guidance to Approved Training Organisations (ATOs) and Authorised Qualifying Bodies (AQB) in respect of preparing candidates for PCN certification in respect of the following aspects of involvement with non-destructive testing (NDT) standards:

1. Knowledge and awareness;
2. Interpretation skills; and
3. Implementation of the requirements.

Key standards have been highlighted for the following five types of NDT standard:

Type 1 – General (physical) principles of the test method.

Type 2 – Terminology related to the test method and associated techniques.

Type 3 – Calibration and/or performance checks performed on equipment or media used by the test method.

Type 4 – Application of the test method on a product.

Type 5 – Flaw characterisation, evaluation and accept/reject criteria.

It is acknowledged that this list of standard types and the following standards referenced are not exhaustive and that a wide range of standards bodies and authorities have been omitted, with no slight intended against those, nor any inference that those are either inadequate, inferior or not applicable in any given application of NDT or a person's employment.

The ISO standardisation process tends to separate out the aspects listed above into separate standards, or parts of one standard, in order to more concisely address those specific aspects, subsequently lending clarity and transparency that those inexperienced in the use of NDT standards might appreciate.

Note: Due to the volume of new issues of standards continuously published, the years of the standards listed in this document have been removed. Please refer to the latest version of each standard reference below.

Computed radiography (CR)

Type of standard	Reference	Title
General application of the method	BS EN ISO 16371-2	Non-destructive testing – Industrial computed radiography with storage phosphor imaging plates – Part 2: General principles for testing of metallic materials using X-rays and gamma rays
Terminology	BS EN 1330-3	Non-destructive testing – Terminology – Terms used in industrial radiographic testing
Equipment/materials verification	BS EN ISO 16371-1	Non-destructive testing – Industrial computed radiography with storage phosphor imaging plates – Part 1: Classification of systems
	BS EN ISO 19232-5	Non-destructive testing – Image quality of radiographs – Part 5: Determination of the image unsharpness and basic spatial resolution value using duplex wire-type image quality indicators
Product-specific application	BS EN ISO 17636-2	Non-destructive testing of welds – Radiographic testing – Part 2: X- and gamma ray techniques with digital detectors
	BS EN ISO 20769-1	Non-destructive testing – Radiographic inspection of corrosion and deposits in pipes by X- and gamma rays – Part 1: Tangential radiographic inspection
	BS EN ISO 20769-2	Non-destructive testing – Radiographic inspection of corrosion and deposits in pipes by X- and gamma rays – Part 2: Double-wall radiographic inspection
Flaw assessment	BS EN ISO 10675-1	Non-destructive testing of welds – Acceptance levels for radiographic testing – Steel, nickel, titanium and their alloys

Eddy current testing (ET)

Type of standard	Reference	Title
General application of the method	BS EN ISO 15549	Non-destructive testing – Eddy current testing – General principles
Terminology	BS EN ISO 12718	Non-destructive testing – Eddy current testing – Vocabulary
Equipment/materials verification	BS EN ISO 15548-1	Non-destructive testing – Equipment for eddy current examination – Part 1: Instrument characteristics and verification
	BS EN ISO 15548-3	Non-destructive testing – Equipment for eddy current examination – Part 3: System characteristics and verification
Product-specific application – Welds	BS EN ISO 17643	Non-destructive testing of welds – Eddy current examination of welds by complex-plane analysis
Product-specific application – Wrought products	BS EN 1971-2	Copper and copper alloys – Eddy current test for measuring defects on seamless round copper and copper alloy tubes – Test with an internal probe on the inner surface
	BS EN 2360	Non-conductive coatings on non-magnetic electrically conductive base metals – Measurement of coating thickness – Amplitude-sensitive eddy current method
Flaw assessment		

Magnetic testing (MT)

Type of standard	Reference	Title
General application of the method	BS EN ISO 9934-1	Non-destructive testing – Magnetic particle testing – Part 1: General principles
Terminology	BS EN ISO 12707	Non-destructive testing – Magnetic particle testing – Vocabulary
Equipment/materials verification	BS EN ISO 9934-2	Non-destructive testing – Magnetic particle testing – Part 2: Detection media
	BS EN ISO 9934-3	Non-destructive testing – Magnetic particle testing – Part 3: Equipment
	BS EN ISO 3059	Non-destructive testing – Penetrant testing and magnetic particle testing – Viewing conditions
	PD CEN/TS 17108	Non-destructive testing – Lighting in penetrant and magnetic particle testing, good practice
Product-specific application – Castings	BS ISO 4986	Steel and iron castings – Magnetic particle testing
Product-specific application – Welds	BS EN ISO 17638	Non-destructive testing of welds – Magnetic particle testing
Flaw assessment	BS EN 1369	Founding – Magnetic particle testing
	BS EN ISO 23278	Non-destructive testing of welds – Magnetic particle testing – Acceptance Levels
	BS EN ISO 5817	Welding – Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) – Quality levels for imperfections
	BS EN 10228-1	Non-destructive testing of steel forgings – Part 1: Magnetic particle inspection

Penetrant testing (PT)

Type of standard	Reference	Title
General application of the method	BS EN ISO 3452-1	Non-destructive testing – Penetrant testing – Part 1: General principles
Terminology	BS EN ISO 12706	Non-destructive testing – Penetrant testing – Vocabulary
Equipment/materials verification	BS EN ISO 3452-2	Non-destructive testing – Penetrant testing – Part 2: Testing of penetrant materials
	BS EN ISO 3452-4	Non-destructive testing – Penetrant testing – Part 4: Equipment
	BS EN ISO 3059	Non-destructive testing – Penetrant testing and magnetic particle testing – Viewing conditions
	PD CEN/TS 17108	Non-destructive testing – Lighting in penetrant and magnetic particle testing – Good practice
Product-specific application	BS EN ISO 3452-5	Non-destructive testing – Penetrant testing – Part 5: Penetrant testing at temperatures higher than 50°C
	BS EN ISO 3452-6	Non-destructive testing – Penetrant testing – Part 6: Penetrant testing at temperatures lower than 10°C
	BS EN 10228-2	Non-destructive testing of steel forgings – Part 2: Penetrant Testing
	BS EN ISO 10893-4	Non-destructive testing of steel tubes – Part 4: Liquid penetrant inspection of seamless and welded steel tubes for the detection of surface imperfections
Flaw assessment – Castings	BS EN 1371-1	Founding – Liquid penetrant testing – Part 1: Sand, gravity die and low-pressure die castings
	BS EN 1371-2	Founding – Liquid penetrant testing – Part 2: Investment castings
Flaw assessment – Welds	BS EN ISO 23277	Non-destructive testing of welds – Penetrant testing – Acceptance levels
Flaw assessment – Wrought products	BS EN 10228-2 (forgings)	Non-destructive testing of steel forgings – Penetrant testing

Radiographic testing (RT)

Type of standard	Reference	Title
General application of the method	BS EN ISO 5579	Non-destructive testing – Radiographic testing of metallic materials using film and X- or gamma rays – Basic rules
Terminology	BS EN 1330-3	Non-destructive testing – Terminology – Terms used in industrial radiographic testing
Equipment/materials verification	BS EN ISO 19232-1	Non-destructive testing – Image quality of radiographs – Part 1: Determination of the image quality value using wire type image quality indicators
	BS EN ISO 19232-2	Non-destructive testing – Image quality of radiographs – Part 2: Determination of the image quality value using step/hole-type image quality indicators
	BS EN ISO 19232-5	Non-destructive testing – Image quality of radiographs – Part 5: Determination of the image unsharpness and basic spatial resolution value using duplex wire-type image quality indicators
	BS EN ISO 5580	Non-destructive testing – Industrial radiographic illuminators – Minimum requirements
Product-specific application – Castings	BS EN 12681-1	Founding – Radiographic testing – Film techniques
	BS ISO 4993	Steel and iron castings – Radiographic testing
Product-specific application – Welds	BS EN ISO 17636-1	Non-destructive testing of welds – Radiographic testing – Part 1: X- and gamma ray techniques with film
Flaw assessment – Castings	BS 2737	Terminology of internal defects in castings as revealed by radiography
Flaw assessment – Welds	BS EN ISO 10675-1	Non-destructive testing of welds – Acceptance levels for radiographic testing – Part 1: Steel, nickel, titanium and their alloys

Ultrasonic testing (UT)

Type of standard	Reference	Title
General application of the method	BS EN ISO 16810	Non-destructive testing – Ultrasonic testing – General principles
	BS EN ISO 16809	Non-destructive testing – Ultrasonic thickness measurement
Terminology	ISO 5577	Non-destructive testing – Ultrasonic testing – Vocabulary
Equipment/materials verification	BS EN ISO 22232-3	Non-destructive testing – Characterisation and verification of ultrasonic test equipment – Part 3: Combined equipment
	BS EN ISO 16811	Non-destructive testing – Ultrasonic testing – Sensitivity and range setting
Product-specific application – Castings	BS EN 12680-1	Founding – Ultrasonic examination – Part 1: Steel castings for general purposes
	BS EN 12680-2	Founding – Ultrasonic examination – Part 2: Steel castings for highly stressed components
Product-specific application – Welds	BS EN ISO 17640	Non-destructive testing of welds – Ultrasonic testing – Techniques, testing levels and assessment
	BS EN ISO 23279	Non-destructive testing of welds – Ultrasonic testing – Characterisation of discontinuities in welds
Product-specific application – Wrought products	BS EN 10228-3 (forgings)	Non-destructive testing of steel forgings – Part 3: Ultrasonic testing of ferritic and martensitic steel forgings
	BS EN 10228-4 (forgings)	Non-destructive testing of steel forgings – Part 4: Ultrasonic testing of austenitic and austenitic-ferritic stainless steel forgings
	BS EN 10308 (bar)	Non-destructive testing – Ultrasonic testing of steel bars
	BS EN 10160 (plate)	Ultrasonic testing of steel flat product of thickness equal or greater than 6 mm (reflection method)
Flaw assessment – Castings	BS EN 12680-1	Founding – Ultrasonic examination – Part 1: Steel castings for general purposes
	BS EN 12680-2	Founding – Ultrasonic examination – Part 2: Steel castings for highly stressed components
Flaw assessment – Welds	BS EN ISO 11666	Non-destructive testing of welds – Ultrasonic testing – Acceptance levels
Flaw assessment – Wrought products	BS EN 10228-3 (forgings)	Non-destructive testing of steel forgings – Part 3: Ultrasonic testing of ferritic or martensitic steel forgings
	BS EN 10228-4 (forgings)	Non-destructive testing of steel forgings – Part 4: Ultrasonic testing of austenitic and austenitic-ferritic stainless steel forgings

Ultrasonic testing – Time-of-flight diffraction (TOFD)

Type of standard	Reference	Title
General application of the method	BS EN ISO 16810	Non-destructive testing – Ultrasonic testing – General principles
	BS EN ISO 16809	Non-destructive testing – Ultrasonic thickness measurement
	BS EN ISO 16828	Non-destructive testing – Ultrasonic testing – Time-of-flight diffraction technique as a method for the detection and sizing of discontinuities
Terminology	BS EN ISO 5577	Non-destructive testing – Ultrasonic testing – Vocabulary
Equipment/materials verification	BS EN ISO 22232-3	Non-destructive testing – Characterisation and verification of ultrasonic test equipment – Part 3: Combined equipment
Product-specific application	BS EN ISO 10863	Non-destructive testing of welds – Ultrasonic testing – Use of time-of-flight diffraction technique (TOFD)
Flaw assessment	BS EN ISO 15626	Non-destructive testing of welds – Time-of-flight diffraction technique (TOFD) – Acceptance levels
	BS EN ISO 16828	Non-destructive testing – Ultrasonic testing – Time-of-flight diffraction technique as a method for the detection and sizing of discontinuities

Phased array ultrasonic testing (PAUT)

Type of standard	Reference	Title
General application of the method		
Terminology	BS EN 16018	Non-destructive testing – Terminology – Terms used in ultrasonic testing with phased arrays
Equipment/materials verification	BS EN ISO 18563-3	Non-destructive testing – Characterisation and verification of ultrasonic phased array equipment – Part 3: Complete systems
Product-specific application	BS EN ISO 13588	Non-destructive testing of welds – Ultrasonic testing – Use of automated phased array technology
Flaw assessment	BS EN ISO 19285	Non-destructive testing of welds – Phased array ultrasonic testing (PAUT) – Acceptance levels

Visual testing (VT)

Type of standard	Reference	Title
General application of the method	BS EN 13018	Non-destructive testing – Visual testing – General principles
Terminology	BS EN 1330-10	Non-destructive testing – Terminology – Part 10: Terms used in visual testing
Equipment/materials verification	BS EN 13927	Non-destructive testing – Visual testing – Equipment
Product-specific application	BS EN ISO 17637	Non-destructive testing of welds – Visual testing of fusion-welded joints
	BS EN 10163-1	Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections – Part 1: General requirements
	BS EN 10163-2	Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections – Part 2: Plate and wide flats
	BS EN 10163-3	Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections – Part 3: Sections
Flaw assessment	BS EN ISO 5817	Welding – Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) – Quality levels for imperfections
	BS EN ISO 17635	Non-destructive testing of welds – General rules for metallic materials

Weld inspection (WI)

Type of standard	Reference	Title
General application of the method	PD CEN/TR 15135	Welding – Design and non-destructive testing of welds
Terminology	BS 499-1	Welding terms and symbols – Glossary for welding, brazing and thermal cutting
Equipment/materials verification	BS EN ISO 9017	Destructive tests on welds in metallic materials – Fracture tests
	BS EN ISO 2553	Welding and allied processes – Symbolic representation on drawings – Welded Joints
Product-specific application	BS EN ISO 17637	Non-destructive testing of welds – Visual testing of fusion-welded joints
Flaw assessment	BS EN ISO 5817	Welding – Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) – Quality levels for imperfections
	BS EN ISO 10042	Welding – Arc-welded joints in aluminium and its alloys – Quality levels for imperfections
	BS EN ISO 23279	Non-destructive testing of welds – Ultrasonic testing – Characterisation of discontinuities in welds
	BS EN ISO 6520-1	Welding and allied processes – Classification of geometric imperfections in metallic materials – Part 1: Fusion welding

Change control record

PCN24/GEN/Appendix Z3 – Document issue and review status		
Document issue for review	Changes/amendments	Current document status
Issue 1	Updated to the PCN24 format.	January 2026.

