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PCN CERTIFICATION AVAILABLE

Introduction

The British Institute of NDT issues PCN certification to NDT personnel according to the industrial or product sector in which they are applying the NDT method. In most instances, there will be a further categorisation of certification according to the type of material or configuration of structure that the certified individual is recognised as competent to test.

Scope

This document summarises the categories of certification available in each of the sectors. Some certificates are "multi-sectoral", which means that the holder may have been examined on specific knowledge relating to castings, weldments and wrought products. The relevant appendix should be consulted to ascertain that this is the case.

Associated documents

PCN/GEN: General requirements for the certification of personnel engaged in non-destructive testing.

PSL/8A: PCN Documents - Issue status

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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.



WELDS (SINGLE PRODUCT SECTOR)

Ultrasonic Testing (PCN/GEN Appendix C1)

<u>Clause</u>	<u>Certification category</u>
3.1	Level 1 Group 3.1 Butt welds in plate
3.2.1	Level 2 Group 3.1 Butt welds in plate
	Level 2 Group 3.2 Butt welds in pipe and tube
	Level 2 Group 3.7 Constructional T joints
	Level 2 Group 3.8 Nozzles and variable configuration welds
	Level 2 Group 3.9 Nodes
3.3	Level 3 Ultrasonic Testing of Welds

Ultrasonic Testing (PCN/GEN Appendix C1)

<u>Clause</u>	<u>Certification category</u>
3	Level 2 Critical assessment of weld defects (category 'w').

Radiographic Testing (PCN/GEN Appendix C2)

<u>Clause</u>	<u>Certification category</u>
3.1.1	Level 1 X-Radiography of Light Metal Welds
3.1.2	Level 1 X-Radiography of Dense Metal Welds
3.1.3	Level 1 Gamma Radiography of Dense Metal Welds
3.1.4	Level 1 X-Radiography and Gamma Radiography of Dense Metal Welds
3.1.5	Level 1 X-Radiography of Light and Dense Metal Welds and Gamma Radiography of Dense Metal Welds
3.2.1	Level 2 X-Radiography of Light Metal Welds
3.2.2	Level 2 X-Radiography of Dense Metal Welds
3.2.3	Level 2 Gamma Radiography of Dense Metal Welds
3.2.4	Level 2 X-Radiography and Gamma Radiography of Dense Metal Welds
3.2.5	Level 2 X-Radiography of Light and Dense Metal Welds and Gamma Radiography of Dense Metal Welds
3.3	Level 3 Radiographer (Welds)
3.4.1	Radiographic Interpreter of Dense Metal Welds
3.4.2	Radiographic Interpreter of Light Metal Welds

Eddy Current (PCN/GEN Appendix C3A)

<u>Clause</u>	<u>Certification category</u>
3.1.1	Level 1 Single frequency Eddy Current Testing of Welds
3.2.1	Level 2 Single frequency Eddy Current Testing of Welds
3.3	Level 3 Eddy Current Testing of Welds

Ultrasonic Testing TOFD (PCN/GEN Appendix C4)

<u>Clause</u>	<u>Certification category</u>
3.1	Level 1 Ultrasonic Time of Flight Diffraction Testing of Linear Butt Welds
3.2	Level 2 Ultrasonic Time of Flight Diffraction Testing of Linear Butt Welds
3.3	Level 3 Ultrasonic Time of Flight Diffraction Testing

Weld Inspector (PCN/WI)

<u>Clause</u>	<u>Certification category</u>
7.1.1	Weld Inspection Level 1
7.1.2	Weld Inspection Level 2
7.1.3	Weld Inspection Level 3

CASTINGS (SINGLE PRODUCT SECTOR)

Ultrasonic Testing (PCN/GEN Appendix B1)

<u>Clause</u>	<u>Certification category</u>
3.1	Level 1 Ultrasonic Testing (Castings)
3.2	Level 2 Ultrasonic Testing (Castings)
3.3	Level 3 Ultrasonic Testing (Castings)

Radiographic Testing (PCN/GEN Appendix B2)

<u>Clause</u>	<u>Certification category</u>
3.1.1	Level 1 X-Radiography of Light Metal Castings
3.1.2	Level 1 X-Radiography of Dense Metal Castings
3.1.3	Level 1 Gamma Radiography of Dense Metal Castings
3.1.4	Level 1 X-Radiography and Gamma Radiography of Dense Metal Castings
3.1.5	Level 1 X-Radiography of Light and Dense Metal Castings and Gamma Radiography of Dense Metal Castings
3.2.1	Level 2 X-Radiography of Light Metal Castings
3.2.2	Level 2 X-Radiography of Dense Metal Castings
3.2.3	Level 2 Gamma Radiography of Dense Metal Castings
3.2.4	Level 2 X-Radiography and Gamma Radiography of Dense Metal Castings
3.2.5	Level 2 X-Radiography of Light and Dense Metal Castings and Gamma Radiography of Dense Metal Castings
3.3.1	Level 3 Radiographer (Castings)
3.4.1	Radiographic Interpreter of Dense Metal Castings
3.4.2	Radiographic Interpreter of Light Metal Castings

WROUGHT PRODUCTS (SINGLE PRODUCT SECTOR)

Ultrasonic Testing (PCN/GEN Appendix D1)

<u>Clause</u>	<u>Certification category</u>
3.1	Level 1 Ultrasonic Testing: Bar, Billet and Plate
3.2.1	Level 2 Ultrasonic Testing: Bar, Billet and Plate
3.2.2	Level 2 Ultrasonic Testing: Bar, Billet, Plate and General Forgings
3.3	Level 3 Ultrasonic Testing of Wrought Products

Eddy Current Testing (PCN/GEN Appendix D2)

<u>Clause</u>	<u>Certification category</u>
3.1	Level 1 Eddy Current Testing of General Wrought Products (category 's')
3.2.1	Level 2 Eddy Current Testing of General Wrought Products (category 's')
3.2.2	Level 2 Eddy Current Testing of Tubular Wrought Products (category 't')
3.3	Level 3 Eddy Current Testing of Wrought Products

Ultrasonic (PCN/GEN/ISO 20807 Appendix A 1.1)

<u>Clause</u>	<u>Certification category</u>
1.	Level 2 Ultrasonic Testing of Wrought Plate –Including thickness gauging

PRE AND IN-SERVICE INSPECTION (MULTI-SECTORAL)

Magnetic Particle Testing (PCN/GEN Appendix E1)

<u>Clause</u>	<u>Certification category</u>
3.1	Level 1 (portable equipment and fixed installations) General Engineering Products (multi-sector)
3.2.	Level 2 (portable equipment and fixed installations) General Engineering Products (multi-sector)
3.2.1	Level 2 Castings
3.2.2	Level 2 Welds
3.2.3	Level 2 Wrought Products
3.3	Level 3 General Engineering Products (multi-sector)

Liquid Penetrant Testing (PCN/GEN Appendix E2)

<u>Clause</u>	<u>Certification category</u>
3.1	Level 1 (Dye penetrant, fluorescent penetrant) General Engineering Products (multi-sector)
3.2.	Level 2 (Dye penetrant, fluorescent penetrant) General Engineering Products (multi-sector)
3.2.1	Level 2 Castings
3.2.2	Level 2 Welds
3.2.3	Level 2 Wrought Products
3.3	Level 3 General Engineering Products (multi-sector)

Radiation Safety (PCN/GEN Appendix E3)

<u>Clause</u>	<u>Certification category</u>
5.1	Basic Radiation Safety (BRS - mandatory for all radiographers)
5.2	Radiation Protection to Supervisor level (RPS - optional for all radiographers)

Visual Testing (PCN/GEN Appendix E5)

<u>Clause</u>	<u>Certification category</u>
3.1	Level 1 General Engineering Products (multi-sector)
3.2.	Level 2 General Engineering (multi-sector)
3.2.1	Level 2 Castings
3.2.2	Level 2 Welds
3.2.3	Level 2 Wrought Products
3.3	Level 3 General Engineering Products (multi-sector)

UT Phased Array (PCN/GEN Appendix E9)

<u>Clause</u>	<u>Certification category</u>
5.1	Level 1 UTPA Data Collection (welds only).
5.2	Level 2 UTPA (includes Interpretation) of Castings, or Welds, or Wrought Products (or any combination thereof).
5.3	Interpretation of UTPA data from tests of Castings, or Welds, or Wrought Products (or any combination thereof).
5.4	Level 3 UTPA of Castings, Welds and Wrought Products.

Digital Radiographic Testing (PCN/GEN Appendix E10)

<u>Clause</u>	<u>Certification category</u>
4.1	Digital Radiographic Testing Level 1
4.1.1	Welds
4.1.2	Castings
4.1.3	Profile/Tangential
4.1.4	Other specialised techniques may be added as appropriate
4.2	Digital Radiographic Testing Level 2
4.2.1	Welds
4.2.2	Castings
4.2.3	Profile/Tangential
4.2.4	Other specialised techniques may be added as appropriate
4.3	Digital Radiographic Interpretation
4.3.1	Welds
4.3.2	Castings
4.3.3	Profile/Tangential
4.3.4	Other specialised techniques may be added as appropriate

AEROSPACE (MULTI-SECTORAL)

Eddy Current Testing (PCN/GEN Appendix A1)

<u>Clause</u>	<u>Certification category</u>
3.2.1	Level 2 Eddy Current Testing of Aerospace Materials and Components
3.2.2	Level 2 Eddy Current Testing of Aerospace Materials, Components and Structures
3.3	Level 3 Eddy Current Testing Aerospace Materials, Components and Structures

Ultrasonic Testing (PCN/GEN Appendix A2)

<u>Clause</u>	<u>Certification category</u>
3.2.1	Level 2 Ultrasonic Testing of Aerospace Materials and Components
3.2.2	Level 2 Ultrasonic Testing of Aerospace Materials, Components and Structures
3.3	Level 3 Ultrasonic Testing Aerospace Materials, Components and Structures

Radiographic Testing (PCN/GEN Appendix A3)

<u>Clause</u>	<u>Certification category</u>
3.1	Level 2 Radiographic Testing Aerospace materials and components.
3.2	Level 2 Radiographic Testing Aerospace materials, components and structures.
3.3	Level 3 Radiographic Testing Aerospace materials, components and structures.

Radiographic Testing (Aerospace Welds) (PCN/GEN Appendix A4)

<u>Clause</u>	<u>Certification category</u>
3.2	Level 2 Radiographic Testing (Aerospace Welds)
3.3	Level 3 Radiographic Testing (Aerospace Welds)

Magnetic Particle Testing (PCN/GEN Appendix A5)

<u>Clause</u>	<u>Certification category</u>
3.2	Level 2 Magnetic Particle Testing (Aerospace products)
3.3	Level 3 Magnetic Particle Testing (Aerospace products)

Liquid Penetrant Testing (PCN/GEN Appendix A6)

<u>Clause</u>	<u>Certification category</u>
3.2	Level 2 Liquid Penetrant Testing (Aerospace products)
3.3	Level 3 Liquid Penetrant Testing (Aerospace products)

RAILWAY PRODUCTS (MULTI-SECTORAL)

Ultrasonic Testing of Railway Axles (PCN/GEN Appendix F1)

<u>Clause</u>	<u>Certification category</u>
3.1	Level 1 Ultrasonic Testing of Railway Axles
3.2	Level 2 Ultrasonic Testing of Railway Axles
3.3	Level 3 Ultrasonic Testing of Railway Axles

Ultrasonic Testing of Rail (PCN/GEN Appendix F2)

<u>Clause</u>	<u>Certification category</u>
3.1.1	Level 1 Ultrasonic Testing of Rail: U1/U2 - Fish-plated joints
3.1.2	Level 1 Ultrasonic Testing of Rail: U3 - 070 Test System
3.1.3	Level 1 Ultrasonic Testing of Rail: U4 - Bolt hole crack size estimation
3.1.4	Level 1 Ultrasonic Testing of Rail: U5 - Squat assessment
3.1.5	Level 1 Ultrasonic Testing of Rail: U7 - Rail measurement
3.1.6	Level 1 Ultrasonic Testing of Rail: U10 - Adjustment switches
3.1.7	Level 1 Ultrasonic Testing of Rail: U14 - Gauge corner cracking
3.1.8	Level 1 Ultrasonic Testing of Rail: U8 - Vertical and longitudinal defect characterisation
3.3.1	Level 2 Ultrasonic Testing of Rail: U1/U2 - Fish-plated joints
3.3.2	Level 2 Ultrasonic Testing of Rail: U3 - 070 Test System
3.3.3	Level 2 Ultrasonic Testing of Rail: U4 - Bolt hole crack size estimation
3.3.4	Level 2 Ultrasonic Testing of Rail: U5 - Squat assessment
3.3.5	Level 2 Ultrasonic Testing of Rail: U7 - Rail measurement
3.3.6	Level 2 Ultrasonic Testing of Rail: U8 - Vertical and longitudinal defect characterisation

- 3.3.7 Level 2 Ultrasonic Testing of Rail: U10 - Adjustment switches
- 3.3.8 Level 2 Ultrasonic Testing of Rail: U14 - Gauge corner cracking
- 3.2 Level 1 Ultrasonic Testing of Rail Welds: U6 - Alumino-thermic welds
- 3.4 Level 2 Ultrasonic Testing of Rail Welds: U6 - Alumino-thermic welds
- 3.5 Level 3 Ultrasonic Testing of Rail

Magnetic Particle Testing of Railway Running Rail and Associated Components (PCN/GEN Appendix F3)

Clause Certification category

- 3.1 Level 1 Railway Running Rail and Associated Components
- 3.2 Level 2 Railway Running Rail and Associated Components

Liquid Penetrant Testing of Railway Running Rail and Associated Components (PCN/GEN Appendix F4)

Clause Certification category

- 3.1 Level 1 Railway Running Rail and Associated Components
- 3.2 Level 2 Railway Running Rail and Associated Components