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## ROYAL TECH TRAINING & CONSULTANCY

Method & level 1	Magnetic Particle Testing (Multi sector) – Level 1
Minimum Course Duration - Days & Hours	3 DAYS - 21 HOURS
Revision & updated on	Rev 6- Updated on 22-4-26

### Prerequisite Mandatory Product Technology Course

Please be informed that PCN has introduced a new requirement for all first-time PCN aspirants. Effective from 1st November 2025, candidates must complete an online Product Technology Training before registering for any PCN course at an approved institute.


The mandatory Product Technology Training Course being introduced exceeds these 'basic prior knowledge' requirements and all students (at whatever level) are required to complete this Product Technology training in advance of attending their first BINDT ATO-approved training course.

This also applies to Level 3 bespoke training where the applicant does not hold a valid ISO 9712 certificate. This training course need only be completed once. Valid ISO 9712 certificates are those recognised by BINDT and as listed in ICNDT OP19 – MRA Schedule 2 and/or European Federation for Non-Destructive Testing (EFNDT) MRA Schedule 2.

If you have already completed this course, please reply with a copy of your certificate. If you have not yet completed it, please follow the instructions below:

#### Key Points to Note:

- Training Access: <https://wcet-online-training.bindt.org/> (Step-by-step registration guidance is attached).
- A fee of **£60 + VAT** (charged by BINDT) is payable online and is valid for **365 days**.
- Duration: The 24-hour course can be completed online at your convenience.
- Upon payment, you will gain access to course materials consisting of **three modules**: -  
**Module 1:** Industrial Materials –  
**Module 2:** Manufacturing Processes –  
**Module 3:** Introduction to NDT (*Total course duration: approximately 24 hours*)
- A **minimum passing score of 80%** is required.
- Each candidate will have **three attempts** to achieve the passing score.
- Certification: Upon passing, you will receive a Course Completion Certificate, which is mandatory for your registration.
- We encourage all new aspirants to complete this training at the earliest to avoid any delay in the registration process.
- Should you have any questions, please feel free to contact the **Royal Tech team** for assistance.
- Once Product Technology Certificate received, we will proceed with your enrolment for any Level course

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## PCN Level 1 Magnetic Particle Inspection

**Duration:** 3 days (21 Hours) min duration

### Course Overview:

This course provides comprehensive knowledge of the theory and practice of magnetic particle testing for candidates to reach the Level 1 standard. You will learn to explain the basic principles of magnetic particle inspection methods, to carry out magnetic particle inspection & to write clear and concise inspection instructions and test reports.

### Course Content:

1. Basics of NDT, classifications of NDT
2. History and Principles of magnetism, Magnetic properties of materials, Presentation of the MPI, Applicability and limits
3. Electric & magnetic circuits, typical values, units, Magnetic field created by electric circuits
4. Magnetic flux of a magnetic discontinuity, Influence of depth and orientation of a magnetic discontinuity on its detection
5. Nonmagnetic materials, Magnetic materials. Curie point.
6. Magnetization, detection media and test of detection media indication.
7. Magnetizing equipment, Viewing condition, Measurement and calibration, Demagnetization
8. Product technology- welding, casting, forging, wrought and its associate defects
9. Application of a written instruction
10. Practical exercise and Daily assessment

### Course objectives:

1. Understand the basic principles of magnetic particle inspection
2. Understanding Electromagnetic induction, Magnetic Parameters, properties
3. Understanding the methods of magnetization, detection media, equipment's
4. Carry out Magnetic Particle Inspection on welds, casting, wrought using a range of magnetizing methods
5. Follow and apply the instructions
6. Meet the syllabus requirements for PCN Level 1 as per PCN GEN Appendix Z1 & PCN24/GEN/APP/MT & PCN24/AQB/REQ/MT

### Experience:

- 15 days
- Note: . One-day duration is at least seven hours, which can be achieved on a single day or by accumulating hours. The maximum allowable hours in any one day is 12 hours. Experience in days is achieved by dividing the total accumulated hours by 7.