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## ROYAL TECH TRAINING & CONSULTANCY

Method & Level	Time of Flight Diffraction Ultrasonic Testing – Level 3
Minimum Course Duration - Days & Hours	5 Days - 35Hrs * (duration depends on the gap analysis)
Revision & Updated on	Rev 6- Updated on 22-4-2026

### 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 3- Time of Flight Diffraction Ultrasonic Testing

**Duration: 5days (35 Hours)**

### Course Overview:

The course is designed to provide guidance for preparing TOFD LEVEL 3 examination as per PCN requirements for welds sector. The aim of this course is to ensure candidates understood the scope of the examination, theory concepts & procedure requirements as per CP 25. On arrival, Mock test on the method is conducted and gap analysis report is prepared based on the outcome of mock test. This will also enable candidates to identify their weak subject areas. Training duration is decided based on the weak areas and candidate requirement.

### Course content

1. Introduction, history of TOFD, advantages, limitation, application
2. TOFD fundamentals, principles, signals, advantages, limitations, TOFD calculations, dead zones
3. Techniques, probes, coverage, its implications
4. Set up, calibration, equipment's, faults, Selection of parameters for TOFD technique on welds
5. Digitisation, electronics of equipment, displays
6. Errors in TOFD, quality assessment and its parameters, data analysis- classifications of defects
7. Creation of scan plan, Scan plan, Selection of parameters, Calibration, blocks and Validation blocks
8. Understanding Specifications, procedures, techniques, Analysis of codes, standards, Procedure writing
9. Daily assessment and End of course examinations

### Course objective

1. Understanding the physics of ultrasound, Diffraction techniques, dead zone, time of flight calculations, set up, scan plan, calibration, coverage, digitisations, display views & its applications
2. Duties and Responsibilities of an certified TOFD Level 3
3. Demonstrating the ability and competence to evaluate and interpret results in terms of existing standards, codes, and specifications
4. Understanding the various products and its inspection methodology with ToFD
5. Selection of parameters, techniques and its implementation as per the requirement
6. Establishing the procedure, acceptance criteria when not available and guidance to all levels
7. calibration and validation process
8. Meet the syllabus requirements for PCN Level 3 as per PCN24/ GEN Appendix Z1, PCN24/GEN/APP/UT & PCN24/AQB/REQ/UT

Eligibility & Experience:

**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.**

1. Higher education\*, with Level 2 -270 days
2. With Level 2 - 450 days
3. Direct access, with higher education\* - 540 days
4. PCN UT Level 3 or any BINDT recognised UT Level 3 qualification is mandatory to be eligible for TOFD Level 3 exam
5. PCN TOFD Level 2 or any BINDT recognised TOFD Level 2 qualification is mandatory to be eligible for TOFD Level 3 exam
6. Refer PSL-68\_PCN eligibility for holders of other certification for TOFD Level -2 exams
7. Refer PCN24- GEN (latest issue for experience requirement), PCN 24-PSL 30 and RT-FM-A-03 - JOINING INSTRUCTIONS- (latest) for Training duration, experience requirement.