ROYAL TECH TRAINING & CONSULTANCY

Method & level	Time of Flight Diffraction Testing(welds)- Level 2
Minimum Course Duration - Days & Hours	10 DAYS - 70 HOURS
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

PCN Level 2 Time of Flight Diffraction Testing

Duration: 10 days (70 hours) minimum duration

Course Overview:

This course provides the knowledge required to operate equipment and perform manual & encoded TOFD testing on welds. The course covers theoretical aspects on TOFD application, its advantages and limitations. It also includes requirements of code & standards. The course also covers in depth practical aspects for application of TOFD on plate butt welds.

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, setup files
8. Calibrations such as velocity, wedge, PCS, optimization
9. Testing of specimen samples
10. Data acquisition & verification of data analysis and data auditing
11. Locating, Flaw characterization and sizing
12. Practical exercise and Daily assessment

Course objectives:

1. Understand the basic concepts of TOFD technique, probes, parameters, coverage.
2. Understanding Scan planning with various software's
3. Understanding equipment Electronics, digitisation
4. Calibrating using calibration blocks for weld inspection
5. Optimisations of Set up for various welds
6. Performing inspection and data collection Calibrate TOFD equipment using calibration blocks.
7. Understanding and performing analysis with various software's
8. Shall gain hands on experience in TOFD weld examination.
9. Meet the syllabus requirements for PCN Level 2 as per PCN24/ GEN Appendix Z1, PCN24/GEN/APP/UT & PCN24/AQB/REQ/UT

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. 180 days of experience required in order to gain full qualification or 45 days (25% of UT Exp)with UT L2
2. PCN UT Level 2 or any BINDT recognised UT Level 2 qualification is mandatory to be eligible for TOFD Level 2 exam
3. Refer PSL-68_PCN eligibility for holders of other certification for TOFD Level -2 exams
4. 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.