


DOCUMENT NAME	Course Curriculum					
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ROYAL TECH TRAINING & CONSULTANCY

Method & level	Time of Flight Diffraction Testing(welds)- Level 2
Course Duration - Days & Hours	8 DAYS - 80 HOURS
Revision & Updated on	Rev 1- Updated on 17-1-22

PCN Level 2 Time of Flight Diffraction Testing

Duration: 8 days (80 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 PCN/GEN Appendix C4

Experience:

1. 12 months experience required in order to gain full qualification.
2. PCN UT Level 2 or any BINDT recognised UT Level 2 qualification is mandatory to be eligible for TOFD Level 2 exam