


DOCUMENT NAME	Course Curriculum						
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ROYAL TECH TRAINING & CONSULTANCY

Method & level	Phased Array Ultrasonic Testing- welds- Level 2
Course Duration - Days & Hours	10 DAYS - 100 HOURS
Revision & updated on	Rev 1- Updated on 17-1-2022

PCN Level 2 Phased Array Ultrasonic Testing

Duration: 10days (100 Hours)

Course Overview:

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

Course content:

1. History of PAUT, TOFD, AUT. Advantages, limitations, application of PAUT
2. Fundamental of PA principles, operations, steering, focussing
3. Phased probes, wedges, classification, parameters
4. Beam forming, Parameters, lobes
5. Phased array scanning types, encoded systems, directional scanning's
6. Digitization principles, parameters, Displays
7. Scan plan, Selection of parameters, Calibration, blocks and Validation blocks
8. Data analysis- software's
9. Creation of scan plan, setup files
10. Calibrations such as velocity, wedge, sensitivity, TCG, optimization
11. Testing of specimen samples
12. Data acquisition & verification of data analysis and data auditing, Locating, Flaw characterization and sizing
13. Practical exercise and Daily assessment

Course objectives:

1. Understand the basic concept of Phased Array ultrasonics.
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
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 E9

Experience:

1. 4 months experience required in order to gain full qualification and certification.
2. PCN UT Level 2 or any BINDT recognised UT Level 2 qualification is mandatory to be eligible for PAUT Level 2 exam