


<b>DOCUMENT NAME</b>	<b>Course Curriculum</b>					
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## **ROYAL TECH TRAINING & CONSULTANCY**

Method & Level	Phased Array Ultrasonic Testing – welds-Level 3
Course Duration - Days & Hours	4 Days - 40Hrs * (duration depends on the gap analysis)
Revision & Updated on	Rev 1- Updated on 17-1-2022

### **PCN Level 3- Phased Array Ultrasonic Testing**

**Duration: 4days (40 Hours)**

#### **Course Overview:**

The course is designed to provide guidance for preparing PAUT LEVEL 3 examination as per PCN requirements for welds sector. The aim of this course is to ensure candidates understand the scope of the examination, theory concepts and 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. 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, near field calculations, time delay calculations, 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. Understanding Specifications, procedures, techniques, Analysis of codes, standards, Procedure writing
10. Daily assessment and End of course examinations

#### **Course objective**

1. Understanding the physics, fundamental, probe models and its applications
2. Understanding the importance of time delays, Scan plans digitisations, display views & its applications
3. Duties and Responsibilities of an certified PAUT Level 3
4. Demonstrating the ability and competence to evaluate and interpret results in terms of existing standards, codes, and specifications
5. Understanding the various product forms and its inspection methodology with PAUT
6. Selection of parameters, techniques and its implementation as per the equipment
7. Establishing the procedure, acceptance criteria when not available and guidance to all levels
8. calibration and validation process
9. Meet the syllabus requirements for PCN Level 2 as per PCN/GEN Appendix E9

#### **Eligibility & Experience:**

1. 24 months experience in PAUT required in order gaining full qualification.
2. PCN UT Level 3 or any BINDT recognised UT Level 3 qualification is mandatory to be eligible for PAUT Level 3 exam
3. PCN PAUT Level 2 or any BINDT recognised PAUT Level 2 qualification is mandatory to be eligible for PAUT Level 3 exam
4. Refer PSL-68\_PCN eligibility for holders of other certification for PAUT Level -2 exams