



# Phased array ultrasonic testing (PAUT)

Phased array detection (PAUT) is widely used in medical and industrial field; Phased array technology modifies electronically the acoustic (ultrasonic) probe characteristics to generate small waves that interact with each other. This interaction can be exploited to obtain focusing and beam steering at desired positions within the test medium. By using the superposition, Ultrasonic energy can be emitted as one single source that radiates out into a medium achieving focus and controlling sound beam direction in the ideal position. In the same way, the computer is to process the collected signal to form a permanent record of the relatively easy to analyzed image.

Phased array technology is the mainstream of the common ultrasonic detection (UT), representing the future of ultrasonic

testing. Realistically though there are many advantages to phased array technology, and one of the most obvious is the power of the imagining capability. The advantages of Phased Array over traditional UT system are basically to do with the ability to form and dynamically steer the ultrasonic beam.

We can provide Ultrasonic training courses and examinations suitable for any of the following certification

- PCN/ ISO 9712 Level 1,2, and 3
- SNT-TC-1A Level 1. 2 and 3 in accordance with your company written practice

We can also provide

- Preparing and approving written instruction
- Level 3 witness

SGS can tailor make the syllabus to satisfy the requirements of an individual's company specific written practice if requested.

In the PCN certification scheme Ultrasonic Testing is separated into three specific product sectors for certification purposes. these are

- Welds
- Wrought products (Forgings)
- Castings
- Multisector

PAUT examination contents include phased array specific theory, data collection, data analysis and etc.

## LEVEL 1

### WORK EXPERIENCE AND TRAINING HOURS' REQUIREMENTS

- 80 hours training
- 1 months work experience

PCN examination must hold current valid Level 2 or Level 3 certification in Ultrasonic Testing issued by a certification body recognised by BINDT.

### THEORY EXAMINATION SPECIFIC ONLY

Application of the Method and use of Codes, Specifications and Procedures, applicable to the company, including the relevant control checks.

### PRACTICAL EXAMINATION

Follow written instructions and process the inspection test pieces, recording and classifying the results according to written instructions (quality of the collected data), carry out pre-test calibration checks and post-test procedures.

## LEVEL 2

### WORK EXPERIENCE AND TRAINING HOURS' REQUIREMENTS

- 120 hours training
- 3 months work experience

PCN examination must hold current valid Level 2 or Level 3 certification in Ultrasonic Testing issued by a certification body recognised by BINDT.

### THEORY EXAMINATION SPECIFIC ONLY

Application of the Method to the specific requirements of the company, in particular making reference to hose Codes, Specifications and Procedures used by the Company, including the relevant control checks.

Product technology of the products for the relevant sector, i.e. welds, castings, forgings, this includes, manufacturing processes, defect formation and detection.

### PRACTICAL EXAMINATION

Production of written instruction, determine the best inspection techniques for the individual parts, process the inspection test pieces, interpreting and evaluating the results according to the applicable standards define limitation of PA, carry out pre-test calibration checks, post test procedures.

## CONTACT US

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WHEN YOU NEED TO BE SURE

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