

Level 2 Ultrasonic Phased Array Course Introduction

This 40 hour Level 2 course covers all of the required training subjects needed for certification in accordance with ASNT Recommended Practice SNT-TC-1A, (2011) as an ultrasonic phased array level 2 technician. It also meets or exceeds the requirements of NAS 410 and EN 4179.

Please Note: A pre requisite to enrolment on this course is that the person attending already be a certified Ultrasonic Level 2.

Course Description

- 40 hour (1 week) course for inspectors already certified level 2 or 3 in conventional ultrasonic inspection to enable them to progress into phased array inspection and have already successfully completed the Level 1 UT PA course.
- Formal classroom theory sessions covering, comparison of conventional ultrasonic theory and phased array theory and techniques.
- Structured hands-on practical exercises using the OmniScan® on a range of defect samples.
- Technique development training and set-up optimization.
- Software manipulation for imaging, data storage and set-up storing.
- This course can be used for certification requirements in accordance with employer based certification programs such as SNT-TC-1A, NAS-410 or EN4179.
- Assistance can be provided to enable course attendees to incorporate the additional requirements into their NDT personnel certification program.

Course Objectives

On successful completion of this course the attendee will:

- Be familiar with the history of the development of phased array
- Understand digitization concepts
- Be aware of the advantages of digitized signals
- Be familiar with phased array wave forming theory
- Understand the capabilities of electronic focusing, steering and scanning
- Be familiar with delay laws and focal laws
- Be familiar with UT PA applications
- Be familiar with the Olympus OmniScan® phased array instrument including the user interface options and menu system
- Be able to recall pre-stored set-up files and perform inspections
- Be able to program the equipment for new inspections and to save the set-up for future use
- Be able to perform equipment process control checks for performance optimization
- Be able to save data files
- Be able to update the software version from the Olympus web-site
- Be able to work to Prime Manufacturers Non Destructive Testing manuals.
- Be confident at optimizing display types
- Be capable of setting up and using advanced gates



- Be capable of setting up and using advanced reading fields for composite inspection
- Be familiar with composite defect types
- Be familiar with major welding techniques
- Be confident in shear wave sizing techniques
- Be able to set up, perform and analyze weld inspections
- Be able to perform shear wave process control checks
- Be able to define probes and wedges