

**Ultrasonic Phased Array Level 2 Course Outline (40 hours)**

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## Level 2 Ultrasonic Phased Array Course Introduction

### Course Description

- 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.

## **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

*TEST NDT does not have any pre-requisites for attending any of our courses, it is entirely up to the attendee to determine whether the course is suitable for their needs and whether they are capable of achieving the standards. Please study the applicable course outline and decide if the course is suitable for your needs before enrolling, if in doubt, please contact us to discuss. For employer funded attendees, please discuss the suitability of any of the courses with your employers responsible NDT level 3 before enrolling.*