



Davis
NDE, Inc.

An Introduction to Ultrasonic Phased Array and Flaw Detection and Sizing Applications

This Advanced Training Course provides participants with an introductory understanding of Ultrasonic Phased Array Examination and Applications

The following outlines the material to be discussed:

- ***Wave Physics of Phased Array Ultrasonics***
- ***Phased Array Transducers***
 - Probe Feature and Design
 - Beam and Wave Forming
 - Electronics and Computer Control
- ***Calibration of a Phased Array System (OmniScan)***
- ***Phased Array Scanning Applications***
 - Beam Focusing
 - Beam Steering
 - Electronic scanning
 - Combined scanning
 - Array Probe Selection
- ***Phased Array Data Presentation***
 - A, B C, S Scans
 - Sectorial Scans
 - Linear Scans
- ***Limitations (steering/array lobes)***
- ***DAC and TCG Calibrations***
- ***Encoder Calibration and Applications***
- ***Hands-on Phased Array Calibration and Examination Laboratory Exercises***

This program is ideally suited for UT level II, III and NDE Management and supervisory personnel. Theory and Wave Physics of Phased Arrays are explained with specific laboratory exercises.

Flaw Detection and Characterization Techniques, and Crack Sizing applications like Tip Diffraction Techniques will be covered in this class.