Course Outline

Phased Array (Basic)

Duration: 5 Days (40 Hours)

Introduction to Phased Array, Omniscan familiarization, setup and calibrations. Overview of weld inspection applications.

The following outlines the material to be discussed:

- Wave Physics of Phased Array Ultrasonic technique
- 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
  - Combined scanning
  - Array Probe Selection
- Phased Array Data Presentation
  - A, B, C, and S Scans
  - Sectorial Scans
  - Linear Scans
- Limitations
- DAC and TCG Calibrations
- Encoder Calibrations
- Phased Array Calibration and Inspection Exercises
- Weld Inspection Applications

Notes:

- This program is suited for UT inspectors
- The course has 16 hours of Phased Array theory and 24 hours of practical exercises and applications in welding inspection.
- It is recommended that participants be certified to Level II or Level III with experience in UT Flaw Detection