



## Course Outline

### Ultrasonic Testing Level II

**Duration: 5 Days (40 Hours)**

This course introduces the basic principles of ultrasonics and prepares the candidate for Angle Beam Inspections.

This course prepares a candidate to

- Perform Specific Calibrations
- Specific NDT Examinations
- Interpretation of Codes
- Evaluations for Accept or Reject Determinations according to written Instructions
- Record Results

The following outlines the material to be discussed:

- Personnel certification (covered in level I training)
- Manufacturing discontinuities (covered in level I training)
- Wave modes (covered in level I training)
- Acoustic impedance (covered in level I training)
- Refraction and reflection (covered in level I and II)
- Piezoelectric transducer (covered in level I training)
- Pulser receiver
- Attenuation (covered in level I training)
- Thickness measurement (covered in level I training)
- Immersion testing (covered in level I training)
- Flaw detection - 0 degree (covered in level I training)
- Calibration blocks
- Angle beam inspection
- Writing an ultrasonic procedure
- Codes and standards
- Introduction to advanced techniques
  - Time of Flight Diffraction
  - Phased Arrays
- Practicals
  - Shear Wave Testing on Plate and Pipe Samples with Weld defects – ID Cracks, OD Cracks, Slag, Porosity, Lack of Fusion, Lack of Penetration
- Examinations
  - General
  - Specific
  - Practical

Candidates must score a minimum of 70 % in each test and a minimum of 80% average for all the three tests.

**Prerequisite:** Successful completion of Ultrasonic Testing Level I Course