



COURSE TITLE : **PHASED ARRAY ULTRASONIC TESTING (PAUT) LEVEL-II (ASNT: SNT-TC-1A: 2011)**

SPONSORING DEPARTMENT : **NON DESTRUCTIVE TESTING (NDT) TRAINING CENTER**

COURSE DESCRIPTION:

The Advanced Ultrasonic Phased Array course provides the knowledge required to operate Omniscan equipment and perform manual & encoded Phased Array testing on welds. The course covers theoretical aspects on phased array application, its advantages and limitations, application of Phased Array per code requirements (ASME code case 2235, B31.3 code case 181, AWS D1.1, API etc). The course also covers in depth practical aspects for application of Phased Array on welds in Pipes & Plates using required accessories such as calibration blocks, validation samples, encoders, scanners etc. For this course we strongly recommend participants possess hands on experience in UT weld examination as Level II or Level III qualification.

LEARNING OBJECTIVES:

- Review of Basic principles, Process of various methods and Equipment.
- Phased array theory and application; System configuration; Plotting DAC, TCG.
- Calibration and Validation; Selection of parameters for PAUT technique.
- Creation of setup files; testing of specimen samples.
- Verification of data; Data acquisition and interpretation using different patterns.
- Data analysis - Flaw characterization, location and sizing.

COURSE OUTLINE:

- Hands-on practical training on many welds flaw samples.
- Review & Discussions.
- Mock Up Tests, Home Works, and Examinations.
- Test will be conducted in 3 methods:
 1. General
 2. Specific
 3. Practical
- The candidate successfully completes the course if he gets a minimum score of 70% in each test (General, Specific and Practical) and a minimum of 80% for the average of 3 tests.

WHO SHOULD ATTEND THIS COURSE:

- Should be High School graduate of science branch (minimum recommended level of education).
- Should have a minimum experience of 160 hours in method.
- Should have a minimum of Level-II Ultrasonic Testing.
- Certificates: Near Vision acuity (Jaeger Number 2 or Ortho-Rater 8), and Color Contrast Differentiation has to be submitted at the time of registration.

METHODOLOGY (THEORY/LAB. OR BOTH):

Theory and Lab.

MEDIUM OF INSTRUCTION:

English (course materials and visual aid packages are in English).

COURSE DURATION: 2 weeks of training plus 1-2 Days for Examinations.

HOURS PER DAY: 8 hours

TOTAL HOURS: 80 hours