



**COURSE TITLE : TIME OF FLIGHT DIFFRACTION (TOFD)  
LEVEL-II (ASNT: SNT-TC-1A: 2011)**

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

**COURSE DESCRIPTION:**

The advanced UT-TOFD testing course provides the knowledge required to operate Omniscan equipment and perform encoded TOFD testing application on welds. The course covers theoretical aspects on TOFD applications, its advantages and limitations, application of TOFD per code requirements in lieu of Radiography - ASME code case 2235, B31.3 code case 181, API etc. The course also covers in-depth practical training using required accessories such as calibration blocks, validation samples, encoders, scanners etc. For this course we strongly recommend participants possess Level II or Level III certification in ultrasonic testing and good working knowledge and hands on practical experience in ultrasonic testing of welds.

**LEARNING OBJECTIVES:**

- Review of Basic principles, Process of various methods and Equipment.
- TOFD theory and application.
- System configuration.
- Calibration and Validation.
- Selection of parameters for TOFD technique.
- Creation of setup files.
- Testing of specimen samples.
- Verification of data.
- Data acquisition and interpretation.
- 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