



COURSE TITLE : **EDDY CURRENT TESTING
 LEVEL-I (ASNT: SNT-TC-1A: 2011)**

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

COURSE DESCRIPTION:

Fundamentals: Principles of Electromagnetic Testing, Eddy Current Instrumentation, Read out Mechanisms, Eddy Current sensing elements, Test System Calibration. Test Frequency selection & Coupling factors, Factors affecting Eddy Current Techniques. Eddy Current Applications. Equipment: Operation, Calibration & Testing of MS 5800. Specific Application: Tube Inspection using ET method.

LEARNING OBJECTIVES:

Upon completion of this course the trainees will be able to:

- Get familiarize with the basic Principles of Tube Inspection Method.
- Get familiarize with the scope & limitations of each methods.
- Setup & calibrate equipment, MS 5800.
- Write / Generate test Reports.

COURSE OUTLINE:

- Hands-On Practical on large number of diversely flawed tubes. Mock up heat Ex-changers with artificial flaws incorporated on different tube material & dimensions.
- 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 210 hours in method and 400 hours in NDT.
- 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: 1 week

HOURS PER DAY: 8 hours

TOTAL HOURS: 40 hours



COURSE TITLE : **EDDY CURRENT TESTING
LEVEL-II (ASNT: SNT-TC-1A: 2011)**

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

COURSE DESCRIPTION:

Fundamentals: Principles of Electromagnetic Testing, Principles of Flux Leakage Testing, Eddy Current Instrumentation, Read Out Mechanisms, Eddy Current & Flux Leakage sensing elements, Test System Calibration. Test Frequency selection & Coupling factors, Factors affecting Eddy Current & Flux Leakage Techniques. Eddy Current & Flux Leakage Applications. Equipment: Operation, Calibration & Testing of MS 5800. General discussion: Tube Inspection using RFT, IRIS & MFL Methods. Interpretation and Evaluations of test results against ASME Section-V & ASTM Standards.

LEARNING OBJECTIVES:

Upon completion of this course the trainees will be able to:

- Get familiarize with the basic Principles of Eddy Current Testing.
- Get familiarize with the scope & limitations of the method.
- Setup & calibrate equipment, MS 5800.
- Interpret & evaluate results with respect to applicable Codes, Standards & Specifications.
- Write / Generate test Reports based on the Company Procedure.

COURSE OUTLINE:

- Hands-On Practical on large number of diversely flawed tubes. Mock up heat Ex-changers with artificial flaws incorporated on different tube material & dimensions.
- 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 & 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 630 hours in method and 1200 hours in NDT.
- 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

HOURS PER DAY: 8 hours

TOTAL HOURS: 80 hours