

Non-Destructive Testing Courses by TCR Arabia (1/3)

Eddy Current Testing – Level II

SCOPE

This course covers ECT probes, ECT Instrumentation and prepares an inspector to perform Tubing Inspections. This course prepares a candidate to:

- Setup and calibrate equipment
- Interpret and Evaluate Results with respect to Applicable Codes, Standards and Specifications
- Familiar with the scope and limitations of the Methods
- Write test reports

Training

GENERAL TRAINING

Electromagnetic Theory

- Eddy Current Theory
- Types of Eddy Current sensing probes

Factors that affect Coil Impedance

- Test part
- Conductivity

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Eddy Current Testing – Level II

- Permeability
- Thickness

Test system

- Frequency
- Coupling
- Field strength
- Test coil and shape

Probes Design

- Surface Inspection Probes
- Tube Inspection Probes

Non Ferromagnetic Tubing Inspection- Conventional ECT

- ASME Calibration Standard
- Bobbin Probe
- Differential and Absolute Inspection
- Selection of Probe Size
- Selection of ECT frequency

- Depth Curves
- Sizing if defects

Ferromagnetic Tubing Inspection- Remote Field ECT

- RFECT Theory
- Probes
- Selection of Probe Size
- Selection of Probe Frequency
- Impedance Plane Analysis

ECT Instruments

- Minimum requirements for Surface Inspection
- Portable Instrumentation
- Minimum requirements for Tubing Inspection
- Computer Controlled Instrumentation
- Sampling Rate and Pull Speed

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Eddy Current Testing – Level II

SPECIFIC TRAINING

Codes and Standards

- ASME Section V
- ASTM Standards

PRACTICAL TRAINING

- Setting up the Instrument
- Selection of Frequencies for Tube Inspection
- Selection of Probe Size
- Calibrations
- Depth Curve
- Data Acquisition
- Test on Various Samples
- Prepare test Report

EXAMINATIONS

- General
- Specific
- Practical Tests

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

The duration of this course is for 5 days and it is conducted by NDT experts from TCR Arabia. Students will be given an ASNT Level II certificate at the end of this course.

All courses, unless specified in advanced with the client, will be conducted at the training facility located at: **TCR Arabia Limited I Gas Gardens, King Abdulaziz Seaport, Dammam, Saudi Arabia**