**Ultrasonic Testing Level II**

**Course Objectives:**

* Basic operation of a pulse echo system; Pulse length and considerations for penetration and resolution requirements.
* Definition of penetration and resolution; pulse damping; Pulse repetition frequency; the piezoelectric phenomenon; The "A" scan presentation, Basic design and operation of a general purpose ultrasonic flaw detector.
* Basic design and operation of transducers; Types of waves and their characteristics; Refraction and mode conversion.
* Practical consideration of sound velocity; Acoustic impedance and practical considerations.
* Refraction index; Beam physics; Review of the basic operation of an immersion testing facility; the advantages & disadvantages of the techniques; Focus transducer technology; Calculating water path distance.
* Horizontal linearity/vertical linearity; near surface resolution/far surface resolution; sensitivity/ signal to noise ratio; Distance Amplitude Correction (DAC); Evaluation of flaws for type of defect.
* Interpreting results based on ASTM / ASME standards and specifications.
* Interpret the Company Procedure to perform acceptance/rejection.

**Course Outlines:**

* Hands-On Practical on many corroded specimens and Lamination check for Plate & Pipes.
* Hands-On Practical on Flawed forged specimens.
* 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) & a minimum of 80% for the average of 3 tests.

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**Who Should Attend?**

* 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.

**Duration:** 10 Days

**For more information:**

Industrial Relations- Special Programs Unit:

Tel.: +966 (013) 340-2011 / (013) 340-2140

Fax : +966 (013) 340-2060

Email: [specialprograms@jic.edu.sa](mailto:specialprograms@jic.edu.sa)