



Radiography Testing - Level-II

Course Duration: 80 Hours (Both Level-I (40 Hours) & Level II (40 Hours))

In addition to producing high quality radiographs, the radiographer must also be skilled in radiographic interpretation. Interpretation of radiographs takes place in three basic steps: (1) detection, (2) interpretation, and (3) evaluation. All of these steps make use of the radiographer's visual acuity. Visual acuity is the ability to resolve a spatial pattern in an image. The ability of an individual to detect discontinuities in radiography is also affected by the lighting condition in the place of viewing, and the experience level for recognizing various features in the image. The following material was developed to help students develop an understanding of the types of defects found in weldments and how they appear in a radiograph.

Training Course Objective:

The student will learn the basics of industrial radiography, and explore RT applications, equipment, process controls, and limitations. Course content also includes radiation safety, radiographic film behavior and processing, image quality control and specification process controls. Course objectives include recognition of common industry requirements for radiation safety, technique, and process variables; laboratory environment efficient work practices; basic material form types and applications within the method and also method ethics.

- As per SNT-TC 1A 2016 Edition is the Recommended Practice for NDT Level II Personnel.
- Select Proper Test Technique, Equipment, Films, IQI and other test parameters
- Set up the Equipment
- Perform testing, manually process film for high contrast and resolution and interpret the results as per applicable standards.
- Have knowledge of the scope and limitations of RT.
- Be familiar with production processes of the test material and knowledge of type and location of expected defects.
- Describe the operational steps in the radiography test method and understand the importance of each step.
- * To develop RT technique for testing a particular job.
- * Prepare test report for i. Accept ii. Reject iii. Rework

Training & Examination Entry Requirements: -

- * Mandatory Training has to be undergone for Level 1 (40 Hrs) & Level II (40 Hrs) combined total of 80 hrs.
- * Minimum Experience for attending Level -1 is 90 Hours and Level II is 170 Hours.
- * Candidate seeking admission into the particular course method shall duly fill in an application form and submit his ID proof with two (02) passport size photographs.
- * Candidate Educational Qualifications to be also submitted (10th Std, S.S.C, Inter, Diploma in Eng. or B.E / B.Tech/ B.Sc.).
- * Candidates shall submit his verifiable experience certificate from his present employer.
- * Minimum Passing is 70% and Overall Grading Pass is 80%.
- * Experience Minimum of 840 Hours in Total NDT Methods is required for Level 2 and 1600 Hours in RT Method

Career Enhancement:

After successful completion of Training & Examination candidates further seeking career in NDT can attend MPT, PT & Certified Welding Inspector (Level -II or Visual Welding Inspector (Level-1)

Validity of Certification:

- ☞ 5 years from the Date of Issue of Certification (renewal to be done by Re-examination or Continuous Satisfactory Performance only)

Course Outline

- History of Radiography
- Introduction
- Basic Radiation Physics
- Radiation - Units of Measurement
- Physical Principles of the Radiography
- Principles of Shadow Formation
- Geometric Un-sharpness
- Gamma Ray Sources
- Gamma Radiography Equipment
- Radiation Safety Equipment
- X- Ray Production
- Film
- Intensifying Screens
- Selection of Radiography Techniques
- Exposure Time Calculation
- Image Quality Indicators
- Film Processing
- Radiograph Interpretation - Welds
- Radiograph Interpretation - Castings
- Radiographic Testing Report Format
- Radiographic Standards & Acceptance Limits

Certification Scheme / Issued By:



Examination Module :

General Examination: 60 Minutes

40 Multi Choice Questions

Specific Examination: 30 Minutes

20 Multi Choice Questions

Practical Examination:

* Practicals

Viva Examination: 15 Minutes

15 Questions