

Radiography Testing Level II Training Course Outline

SCOPE

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

The course curriculum includes:

Review of Basic principles of radiation

Basic mathematics review

Geometrical unsharpness

Geometric exposure principle

Image quality indicators

Darkroom Facilities, Techniques and processing

- Safe light, processor, viewer lights
- Film loading
- Film storage
- Developer
- Stop bath
- Fixer
- Washing
- Prevention of water spots
- Drying
- Unsatisfactory radiographs
 - High or low film density
 - High or low contrast
 - Poor definition
 - Fog
 - Light leakage
 - Film artifacts
- Densitometers and step wedge film comparison

Multiple film techniques

Film latitude

Background lighting

Penetrameter placements

Classification of discontinuities:- inherent, process and service

Casting processes and associated discontinuities

Welding: Types of welding processes, different types of weld discontinuities

Safety

- Controlling personnel exposure
- Time, distance, shielding concepts
- ALARA concept
- Radiation detection equipment

Manufacturing Processes and Associated Discontinuities

- Casting
- Wrought Processes
- Welding

Application techniques

SPECIFIC TRAINING

Radiography Testing Procedures

Codes

- ASME Sec V, Sec VIII,
- API 1104
- AWS D1.1

Standards

- ASTM E 94

PRACTICAL TRAINING

Radiographic Interpretation

- Illuminator Requirements
- Penetrameter Placement
- Personnel Dark Adaptation
- Visual Acuity
- Film Identification
- Location Markers
- Film Density measurements

Film Artifacts

- Practice film viewing
- Reference radiographs
- Weld interpretation reference

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.

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