

# Radiography Testing – Film Interpretation

Level II Limited – 40 hours

Training Course Outline

## SCOPE

This course will prepare a candidate for performing Radiography Film Interpretation

## COURSE OUTLINE

### Module 1: RADIATION AND SAFETY

- Units
- Dosage and Health Effects
- Radiation detectors including Dosimeter, survey meter, film badge, TLD
- Types of Radiation
  - X-Ray
  - Gamma Rays
- Properties of Radiation
- Attenuation of Electromagnetic Radiation

### Module 2: RADIATION SOURCES

- X-rays
- Gamma rays

### Module 3: FILM RADIOGRAPHY

- Film Speed
- Selection of Film
- Radiographic Screens
- Intensifying Screens

### Module 4A: COMPUTED RADIOGRAPHY

- Phosphor Plates
- Film vs CR
- Limitations of CR

### Module 4B: DIGITAL RADIOGRAPHY

- Flat panel detectors
- Image enhancement tools

### Module 5: IMAGE QUALITY

- Geometric unsharpness and definition
- Radiographic Sensitivity
- Radiographic Density
- Radiographic Contrast

### Module 6: SHOOTING A RADIOGRAPH

- Establishing 2mR boundary

- Radiographic Techniques
- Exposure Time
- Setup and Geometrical Unsharpness
- IQI Selection and Placement
- Location markers

#### Module 7: VIEWING RADIOGRAPHS

- Equipment
- Acceptable Densities
- Film Viewing Considerations
- Indications: Relevant and Non-Relevant

#### Module 8: Weldments and Castings

- Welding Discontinuities
- Casting Discontinuities

#### Module 9: Unsatisfactory Radiographs

#### Module 10: ASME V, Article 2

- Sensitivity, Geometrical Unsharpness and Density requirements
- ASME V Table T-276

#### Module 11: ASTM E-94 Standard

#### Module 12: Application of RT to Pressure Vessels

- ASME VIII

### **PRACTICALS**

Film Viewing

Illuminator Requirements

Penetrameter Requirements

Location Markers

Film Density Measurements

Identification of Defects

Interpretation

Accept/Reject

### **TRAINING PROGRAM EXAMINATIONS**

- General
- Specific
- Practical



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