

Radiography Testing Level I

Level I - 40 hours

Training Course Outline

SCOPE

This course will prepare a candidate to perform Industrial Radiography

COURSE OUTLINE

Module 1: Principle, Shadow formation and unsharpness

- Shadow formation
- Sources of radiography
- Geometrical unsharpness

Module 2: Exposure Techniques

- Single Wall Exposure
- Double Wall Exposure
- Contact shot
- Panoramic

Module 3: Radiographic Sensitivity

- Image Quality Indicators – IQI
- Wire Type
- Hole Type
- IQI Placement

Module 4: Density and Contrast

- Brightness and film density
- Density Measurement
- Film Contrast and density

Module 5: Exposure Devices and Radiation Sources

- X-Ray Tube
- Gamma Ray Sources

Module 6 Units and Radiological Safety

- Roentgen
- Rad
- Rem and Seivert
- Safe Boundary
- Inverse square law
- Shielding and half value layer

Module 7: Type of Radiation

- Particulate Radiation – Alpha, Beta, neutron
- Electromagnetic radiation – X-Ray, gamma ray
- Energy Characteristics of common radioisotopes
- Energy Characteristics of X-Ray machines

Module 8 Scattering and Attenuation

- Ionization
- Radiation Interaction with matter
- Attenuation

Module 9: Shooting a Radiograph

- Film Type Selection
- Exposure Time
- Radiographic Technique setup
- Setup and Geometrical Unsharpness
- Establishing 2mR boundary
- Sensitivity: IQI Selection and Placement
- Location markers

TRAINING PROGRAM EXAMINATIONS

- General
- Specific
- Practical



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