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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