

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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