



Radiography Testing is one of the NDT method in which the test-part is placed between the radiation source and film (or detector). The material density and thickness differences of the test-part will attenuate (i.e. reduce) the penetrating radiation through interaction processes involving scattering and/or absorption. The differences in absorption are then recorded on film(s) or through an electronic means. In industrial radiography there are several imaging methods available, techniques to display the final image, i.e. Film Radiography, Real Time Radiography (RTR), Computed Tomography (CT), Digital Radiography (DR), and Computed Radiography (CR).

The Radiographic Interpretation course only covers the interpretation of the radiograph, therefore is suitable for personnel wishing to only interpret radiographs as opposed to creating radiographs via Radiographic testing.

About the course:

This course is designed to provide the participants, a better understanding about theory and application of radiographic testing in welds and how to interpret and report radiograph taken on dense metals and to train them and qualify them as PCN II in Radiographic Film Interpretation.

Experience requirements: Minimum work experience of 6 months involved in radiographic testing/interpretation is a mandatory requirement to appear for examination and certification.

Vision requirements: Vision requirements as per PSL-44 (<http://www.bindt.org/downloads/psl44.pdf>)

Last date for registration: One week prior to the commencement of the course (subject to availability)

Training Hours: 56 Hours

Course content:

- Introduction to NDT, Classification of methods
- History and Physics of radiography
- Sources of Radiation- X rays- X-ray equipments, High energy X rays
- Gamma ray, isotopes, camera, interaction of matter with Radiation
- Attenuation- HVL, TVL, control of scattering
- Lesson 5: image formation, Radiography Image quality, Sensitivity, contrast etc
- IQI- intensifying screens
- Exposure Calculations- Exposure Charts
- Film – film processing
- Interpretation- RT films
- Understanding of codes
- Welding technology- major weld process SMAW, SAW, TIG, MIG, FCAW etc



Learning outcomes:

- Understand the basic principles of the radiographic inspection procedure, understand the radiographic film processing, procedures, recognize limitations in exposure quality and understand potential causes of processing artifacts
- Assess radiographic quality and understand viewing condition requirements
- Interpret radiographic codes and specifications and write reports based on code requirements
- Understand origins of defects and locate and recognize radiographic images of defects with a high probability of detection

Examination and validity: Training program comprises of daily assessment after completion of each chapter and the participants are required to get above 70% marks. Based on daily assessment exams, candidate is awarded with successful completion of training. Then the participants are required to undergo examination which consists of specific and practical examination. Candidate has to obtain a minimum of 70% in each examination to get certified as PCN RI II (As appropriate). This certificate is valid for 5 years from the date of certification. The certificate has to be renewed as per PCN requirements.

Documents to be submitted for registration:

1. PSL 57-A Initial Examination application
2. PSL 30- Log of Experience
3. PSL 44-Vision Requirements (which has to be certified by a registered medical practitioner)
4. PCN Wallet card copy
5. PCN RT level I/ II Certificate copy(If applicable)

Note:

1. TIW reserves the right to disqualify the participants from certification program when the personnel is found that they he/she shall not meet the PCN requirements
2. Participants are not allowed to use their own equipment during the training and examination. TIW provides candidate with film viewer and other accessories needed for practical interpretation.