

## Who we are?

TIW is an NDT training & service provider organization located in Trichy, India providing complete solution for NDT training & inspection.

We conduct training for PCN Level 1, 2 & 3 in the following methods

- PCN - Phased Array Ultrasonic Testing (PAUT)
- PCN - Time of Flight Diffraction (ToFD)
- PCN - Ultrasonic Testing 3.1 & 3.2
- PCN - UT - 3.8 & 3.9 (Nozzles & Node)
- PCN - Magnetic Particle Testing
- PCN - Liquid/Dye Penetrant Testing
- PCN - Radiographic Film Interpretation (only Level 2)

## How to Book Your Training Course

To book a training course, simply call [+91 9043322221](tel:+919043322221) and we will be happy to discuss your requirements with you. If necessary, we can provide advice on which type of training and certification is appropriate for you or your company. Enquiries may also be made via email to [admin@tiw.co.in](mailto:admin@tiw.co.in) or by visiting us on the web at [www.tiw.co.in](http://www.tiw.co.in)

On confirmation of the booking, we will send to you an application form which must be completed and returned to us in order to confirm the booking process. Training courses will be conducted on a schedule basis at our Chennai Training and Examination Centre.

## Contact Us

### TRICHY INSTITUTE FOR WELDING

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**TRICHY INSTITUTE FOR WELDING**

A BINDT AUTHORIZED ATO & AQB



## Radiographic Film Interpretation Course Curriculum

# What is Radiographic Testing?

Radiography Testing is one of the NDT methods 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

### PCN Level 2

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 / light metals and to train them and qualify them as PCN Level 2 in Radiographic Film Interpretation.

# Qualification Requirements as per PCN24/GEN Requirements

## Training Days & Experience

| Type                     | Training Days | Experience |
|--------------------------|---------------|------------|
| Level-2 (Dense or Light) | 8 Days        | 90 Days    |
| Level-2 (Supplementary)  | 2 Days        | 23 Days    |

(see other essential information in the page 6)

Note-1: Industrial NDT experience in the appropriate sector may be acquired either prior to or following success in the qualification examination. (see other essential information in the page 6)

## Pre-Training Requirement

PCN candidate who do not currently hold, or who have never held PCN, or other BS EN ISO 9712 compliant NDT certification that they shall be required to demonstrate knowledge of materials and processes/product technology.

New PCN applicants (those without PCN certification or certified under ISO 9712) shall complete the Product Technology Learning Program prior to attending any training course.

**Link to attend the online product technology learning programme:** [Home | BINDT](#) (Press control and click the link)

# Course Content

## PCN Level 2

- ❖ Introduction to NDT, Classification of methods
- ❖ History and Physics of radiography
- ❖ Sources of Radiation - X rays, X-ray Equipment, High energy X-rays
- ❖ Gamma ray, isotopes, camera, interaction of matter with radiation
- ❖ Attenuation - HVL, TVL, control of scattering  
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

## PCN Level 2

Successful candidate will be able to

- ❖ 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

## What to bring?

- ❖ Scientific calculator
- ❖ Safety boots are mandatory in practical areas
- ❖ PCN Candidates: PCN wallet card or other form of photographic identification

## Special Note

- ❖ 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.
- ❖ Participants are not allowed to use their own equipment / laptop during the training and examination. TIW provides candidate with required equipment and other accessories needed for practical inspection.
- ❖ Follow professional dress code during the entire training and examination.
- ❖ Once when enrolled for course, TIW customer care people will send joining instructions through mail and enough information shall be communicated through telephonic call.

## Documents to be submitted for Examination

- PCN24/PSL 57A - Examination application
- PCN24/PSL 30 - Log of Experience
- PCN24/PSL 44 - Vision Requirements (which has to be certified by a registered medical practitioner)
- PCN24/CP-27 - Code of ethics
- Product Technology Certificate (If applicable)
- PCN E-certificate/ wallet card copy (If available)
- PCN level 1 Certificate copy (If applicable)
- One govt approved identity card (example: Passport / Voter ID /Aadhaar Card) & Two Photographs

## Other information about Training & Examination

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 level 2.

This certificate is valid for 5 years from the date of certification. The certificate has to be renewed as per PCN requirements.

Experience may be acquired either prior to (for Level 1 and 2 entries only) or following success in the qualification examination. However, the chances of success in a PCN examination may be significantly reduced if candidates have little or no current experience in the application of the NDT method in the sector concerned.

In the event that the PCN examination has been passed by a candidate lacking the experience required for certification, BINDT will issue a letter of attestation to the successful candidate indicating that they have passed the qualification examination and needs only to meet the experience requirement in order to be certificated.

Records of experience obtained post examination shall be presented on PCN form PCN24/PSL30 or PCN24/PSL57C as appropriate within the 2 years from the date of examination passed.