



## Liquid Penetrant Testing - Level-II

Course Duration: 12 Hours (Level 1 (04 hours) & level 2 (8 Hours))

Liquid Penetrant Testing is a surface NDT method where in those defects which are open to surface or near the surface can be detected, by applying a penetrant (Red Visible), allowing a penetration time (Dwell Time) and application of a developer after excess penetrant removal.

This course gives the basic principles of liquid penetrant testing, procedures and techniques for conducting penetrant testing on various products as per various codes and standards.

### Training Course Objective:

- To provide a basic knowledge of PT to enable a participant to carryout tests according to an established procedure under the supervision of a level II. The course is especially designed to provide a sound theoretical knowledge and practical skill for PT required for a Level II (2) technician.
- As per SNT-TC 1A 2016 Edition is the Recommended Practice for NDT Level II Personnel
- To perform and direct PT according to the established or recognized procedures
- Select test methods to be used, set up and calibrate equipment, interpret and evaluate result according to applicable standards.
- Develop PT techniques adopted to problems arising during testing, prepare written instructions, organize and report test results.
- Select proper test technique and regarding inks.
- Must be Aware of Procedure to Conduct the Test.
- Interpret the results as per applicable standards.
- Have knowledge of the scope and limitations of PT.
- Prepare test report for i. Accept ii. Reject iii. Rework.
- Responsible for care and maintenance of the NDT/PT equipment.

### Course Outline

- History of Penetrant Inspection
- Liquid Penetrant Testing
- Common uses of Liquid Penetrant inspection
- Basic processing steps of a Liquid Penetrant Inspection
- Basic Theory and Principle of Penetrant Testing
- Surface Preparation of Part
- Penetrant Materials
- Application of Penetrant
- Penetrant Properties & Characteristics
- Penetrant Dwell Time
- Excess Penetrant Removal
- Drying of Parts
- Developers
- UltraViolet (UV) Lamp
- Quality Control of Penetrant Inspection
- Penetrant Sensitivity System
- Indications Interpretation and Evaluation
- Identification of Discontinuities,
- Qualifications and Certifications of NDT
- Personnel & Liquid Penetrant Method Comparison.
- Acceptance Standards
- Post Cle Health, Safety Precautions & Standard Liquid

### Training & Examination Entry Requirements: -

- Mandatory Training has to be undergone for Level 1 (4 Hrs) & Level II (8 Hrs) combined total of 12 hrs.
- Minimum Experience for attending Level -1 is 90 Hours and Level II is 170 Hours.
- Candidate seeking admission into the particular course method shall duly fill in an application form and submit his ID proof with two (02) passport size photographs.
- Candidate Educational Qualifications to be submitted (10th Std, S.S.C, Inter, Diploma in Eng. or B.E / B.Tech/ B.Sc.).
- Candidates shall submit his verifiable experience certificate from his present employer.
- Minimum Passing is 70% and Overall Grading Pass is 80%.
- Experience Minimum of 400 Hours in Total NDT Methods is required for Level 2 and 210 Hours in LPT Method.

### Career Enhancement:

After successful completion of Training & Examination candidates further seeking career in NDT can attend ET, VT & Certified Welding Inspector (Level -II or Visual Welding Inspector (Level-1) and can also attend MPT Level III.

### Validity of Certification:

- 5 years from the Date of Issue of Certification (renewal to be done by Re-examination or Continuous Satisfactory Performance only)

### Certification Scheme / Issued By:



### Examination Module :

- General Examination: 60 Minutes**  
40 Multi Choice Questions
- Specific Examination: 30 Minutes**  
20 Multi Choice Questions
- Practical Examination: 120 Minutes**  
01 Weld Plate  
01 Weld Pipe  
01 Weld Tee Joint
- Viva Examination: 15 Minutes**  
15 Questions