



NDT- Dye (Liquid) Penetration (Level 2)

Introduction:

Non-Destructive Testing (NDT) is a branch of science and engineering which makes use of non-invasive techniques to determine the integrity of materials, components, structures. This course is designed to make an engineer fully-aware of what NDT is and how it should be managed in the design and the operations of a plan.

All certificates are approved in accordance with ASNT (American Society for Non-Destructive Testing)

Duration: Level 2: 5 training Days (General, Practical & Specific Examination)

Who Should Attend?

Engineers, inspectors and technicians aspiring to acquire the proficiency and Knowledge in liquid penetrant testing. This course will benefit NDT personnel, maintenance personnel, Quality Assurance / Quality Control Inspectors, engineers, surveyors, technicians, trainees in the aerospace, metal fabrication, oil refinery, petrochemical, offshore, shipbuilding, ship-repairing and building construction industries.

It is designed for manufacturers, NDT inspection companies, services companies, and overhaul facilities, who require their personnel to be trained in Penetrant Testing, used to locate inherent, processing or service discontinuities in nonporous materials

Objective:

- provides the knowledge required to understand the method, operate the equipment and perform testing.

Course Outlines:

Introduction

- Improving Detection
 - Visual Acuity
 - Contrast Sensitivity
 - Eye's response to Light

Principles

- Steps for Liquid PI
- Common Uses of PI
- Pros and Cons of PI

PT Material

- Penetrant Testing Materials
- Penetrants
 - Surface Energy
 - Specific Gravity
 - Viscosity
 - Colour and fluorescence
 - Why things fluoresce?
 - Dimensional Threshold
 - Stability of Penetrants
- Emulsifiers
- Developers

Methods and Techniques

- Preparation
 - Cleaning Method
 - Material Smear
- Technique Selection
- Application Technique
- Penetrant Removal
- Selecting Developer



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Quality and Process Control

- Part / Penetrant Temperature
- Penetrant
- Dwell
- Emulsifier
- Wash
- Drying
- Developer
- Lighting
- System Performance Check

Acceptance Criteria

- ASME V (Level 2)
- AWS D1.1 (Level 2)