


DOCUMENT NAME	Course Curriculum					
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ROYAL TECH TRAINING & CONSULTANCY

Method & level	Liquid Penetrant Testing- Multisector & Level 1
Course Duration - Days & Hours	2 DAYS - 16 HOURS
Revision & Updated on	Rev 1- Updated on 29-4-23

PCN Level 1 Dye Penetrant Inspection

Duration: 2 days (16 hours) Minimum

Course Overview:

This course provides theory and practical work on test pieces and industrial components, with emphasis on interpretation of defect indications, also comparing sensitivity of the visible and fluorescent methods. Using portable, stationary equipment as required. Dye Penetrant Inspection is a widely applied and method used to locate surface-breaking defects in all non-porous materials (i.e., metals, plastics, or ceramics) using dye. Candidates will gain an enhanced understanding of PT that will enable them to implement this NDT method competently.

Course Content:

1. Basics of NDT, classifications of NDT
2. History and principles of PT- Physical properties of penetrant materials-Viscosity, bleed out, Flash point, Emulsification of penetrant, Development, Coloured and fluorescent penetrant
3. Terminology -Product family, Penetrant, Developer, Remover, Reference block
4. Surface cleaning techniques
5. Penetrant Classification- Classification of Developers
6. Aerosol spray cans, Dip installations, brushing, light sources, measuring units and reference blocks
7. Product technology- welding, casting, forging, wrought and its associate defects
8. Inspection & reporting of welds, casting, wrought products using Visible, fluorescent penetrant of various types of products using various methods
9. Application of a written instruction
10. Practical exercise and Daily assessment

Course Objectives:

1. Understand the basic principles of Dye Penetrant Inspection
2. understanding Pre cleaning techniques, penetration inspection techniques
3. Understanding various equipment's and its applications
4. Carry out penetrant inspection of welds, casting, forgings using water washable, post emulsifiable, solvent removable processes
5. Follow and apply the instructions
6. Meet the syllabus requirements for PCN Level 1 as per PCN GEN Appendix Z1 & E2

Experience:

1 month experience required in order to gain full qualification.