


DOCUMENT NAME	Course Curriculum					
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ROYAL TECH TRAINING & CONSULTANCY

Method & level 2	Magnetic Particle Testing (welds)- Portable equipment – Level 2
Course Duration - Days & Hours	4 DAYS - 40 HOURS
Revision & updated on	Rev 3- Updated on 17-1-2022

PCN Level 2 Magnetic Particle Inspection

Duration: 4 days (40 Hours) min duration

Course Overview:

This course provides comprehensive knowledge of the theory and practice of magnetic particle testing for candidates to reach the Level 2 standard. You will learn to explain the basic principles of magnetic particle inspection methods, to carry out magnetic particle inspection and to write clear and concise inspection instructions and test reports.

Course Content:

1. Basics of NDT, classifications of NDT
2. History and Principles of magnetism, Classification of materials,
3. Electromagnetic induction, Magnetic Parameters, properties (Permeability and reluctance and many more)
4. Currents, Methods of Magnetization and field distribution
5. Demagnetization, techniques & field measurements, devices
6. Medium, properties and classification
7. Equipment's, accessories, and its applications
8. Quality control check
9. Inspection Techniques- Methods -Applications- -Magnetic field requirement (as per BS EN-9934-1)
10. Special techniques
11. Indication interpretation & recording techniques
12. Product technology- welding, casting, forging, wrought and its associate defects
13. Inspection & reporting of welds using MPI Yoke using visible, fluorescent particles of various types of weld joints
14. Practical exercise and Daily assessment

Course objectives:

1. Understand the basic principles of magnetic particle inspection
2. Understanding Electromagnetic induction, Magnetic Parameters, properties
3. Understanding the methods of magnetization, technique selections, chemicals, equipment's
4. Carry out Magnetic Particle Inspection on welds using a range of magnetizing methods
5. Demonstration of Magnetic Particle Inspection using bench unit and various techniques
6. Guidelines for written instruction, codes and test reports
7. Meet the syllabus requirements for PCN Level 2 as per PCN GEN Appendix E1

Experience:

4 months experience required in order to gain full qualification.