


DOCUMENT NAME	Course Curriculum					
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ROYAL TECH TRAINING & CONSULTANCY

Method & level 1	Magnetic Particle Testing (Multi sector) – Level 1
Course Duration - Days & Hours	2 DAYS - 16 HOURS
Revision & updated on	Rev 0- Updated on 29-4-23

PCN Level 1 Magnetic Particle Inspection

Duration: 2 days (16 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 1 standard. You will learn to explain the basic principles of magnetic particle inspection methods, to carry out magnetic particle inspection & 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, Magnetic properties of materials, Presentation of the MPI, Applicability and limits
3. Electric & magnetic circuits, typical values, units, Magnetic field created by electric circuits
4. Magnetic flux of a magnetic discontinuity, Influence of depth and orientation of a magnetic discontinuity on its detection
5. Nonmagnetic materials, Magnetic materials. Curie point.
6. Magnetization, detection media and test of detection media indication.
7. Magnetizing equipment, Viewing condition, Measurement and calibration, Demagnetization
8. Product technology- welding, casting, forging, wrought and its associate defects
9. Application of a written instruction
10. 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, detection media, equipment's
4. Carry out Magnetic Particle Inspection on welds, casting, wrought using a range of magnetizing methods
5. Follow and apply the instructions
6. Meet the syllabus requirements for PCN Level 1 as per PCN GEN Appendix Z1 & E1

Experience:

1 month experience required in order to gain full qualification.