**Magnetic Particle Level I**

**Course Objectives:**

* Principles of Magnets and Magnetic Fields, Theory of magnetism, Type of Materials & Terminology associated with magnetic particle testing.
* Characteristics of Magnetic Fields & Effect of Discontinuities of Materials.
* Magnetization by Means of Electric Current; Circular field & longitudinal fields.
* Advantages & Disadvantages of Circular field/longitudinal magnetization.
* Selecting the Proper Method of Magnetization; Inspection Materials.
* Principles of Demagnetization & Magnetic Particle Testing Equipment.
* Types of Discontinuities; Indications and Interpretations.
* Testing of many numbers of flawed specimens using magnetic particle tests.

**Course Outlines:**

* Hands-On Practical on weld specimens with Plate, Pipe, T, Nod and Nozzle configurations.
* Hands-On Practical on Flawed forged specimens.
* Reviews & Discussions.
* Mock Up Tests, Home Works, and Examinations.
* Test will be conducted in 3 methods:

1. General 2. Specific 3. Practical

* The candidate successfully completes the course if he gets a minimum score of 70% in each test (General, Specific and Practical) & a minimum of 80% for the average of 3 tests.

**Magnetic Particle Level I**

**Who Should Attend?**

* Should be High School graduate of science branch (minimum recommended level of education).
* Should have a minimum experience of 70 hours in method and 130 hours in NDT.
* Certificates: Near Vision acuity (Jaeger Number 2 or Ortho-Rater 8), and Color Contrast Differentiation has to be submitted at the time of registration.

**Duration:** 5 Days

**For more information:**

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