



MAGNETIC PARTICLE INSPECTION (MT)

This method involves the component under inspection being magnetized, this magnetization process is supplemented by the application of ferromagnetic particles to the already magnetized surface.

The magnetic particles are attracted to areas of flux leakage (escaping magnetism) and indications formed at that point. This method is used to test welds, castings, and forgings for surface or slightly subsurface defects.

However MT can only be used to inspect materials that can be magnetized, i.e. ferromagnetic materials.

We can provide Magnetic Particle training courses and examinations suitable for any of the following certification schemes

- PCN / EN 473 / ISO 9712 Level 1, 2, and 3
- SNT-TC-1A in accordance with your company written practice

We can also provide

- Preparation training for ASNT Level 3

An example of the syllabus that is used for magnetic particle training courses is shown below for Level 1 and Level 2.

SGS can tailor make the syllabus to satisfy the requirements of an individual's company specific written practice if requested.

MAGNETIC PARTICLE INSPECTION (MT)

LEVEL 1

GENERAL THEORY

- Safety Precautions
- Basic Principles of Magnetic Particle Inspection
- Methods of Magnetisation
- Inspection and Detection of Indications
- Checks and Calibrations
- Equipment
- Test Procedures
- Detectability of Defects
- Standards and Specifications

SPECIFIC THEORY

Application of the Method and use of Codes, Specifications and Procedures, applicable to the company, including the relevant control checks.

PRACTICAL EXAMINATION

Follow written instructions and process the inspection test pieces, record and report defects from known datum markers, carry out pre-test calibration checks and post-test procedures.

LEVEL 2

GENERAL THEORY

(in addition to the Level 1 Syllabus above)

- Safety Precautions
- Testing Procedures
- Detectability of Defects
- Interpretation and Reporting
- Post Test Procedures
- Calculations
- Selection of Appropriate Techniques

SPECIFIC THEORY

Application of the Method to the specific requirements of the company, in particular making reference to those Codes, Specifications and Procedures used by the Company, including the relevant control checks.

Product technology of the products for the relevant sector, i.e. welds, castings, forgings, this includes, manufacturing processes, defect formation and detection.

PRACTICAL EXAMINATION

Production of written instruction, determine the best inspection techniques for the individual parts, process the inspection test pieces, record and report defects from known datum markers, carry out pre test calibration checks, post test procedures.

CONTACT US

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