** NDT Training Institute**

**What is NDT?**

NDT stands for Non-destructive testing. In other words it is a way of testing without destroying. This means that the component- the casting, weld or forging, can continue to be used and that the non-destructive testing method has done no harm.

In today's world where new materials are being developed, older materials and bonding methods are being subjected to higher pressures and loads, NDT ensures that materials can continue to operate to their highest capacity with the assurance that they will not fail within predetermined time limits.

NDT can be used to ensure the quality right from raw material stage through fabrication and processing to pre-service and in-service inspection.

There are many NDT techniques/methods used, depending on four main criteria:

* Material Type
* Defect Type
* Defect Size
* Defect Location

**Common NDT Methods**

**Ultrasonic Testing -UT**

Ultrasonic inspection uses high frequency sound waves to detect imperfections or changes in properties within the materials. It can also be used to measure the thickness of a wide range of metallic and non-metallic materials where access from one side only is available.

**Radiography Testing -RT**

Radiography uses an x-ray device or radioactive isotope as a source of radiation which passes through the material and is captured on film or digital device. After processing the film an image of varying density is obtained. Possible imperfections are identified through density changes.

**Liquid Penetrant -PT**

In Liquid Penetrant the test object or material is coated with a visible or fluorescent dye solution. The excess dye is removed from the surface and a developer which acts like a blotter is applied drawing penetrant out of imperfections open to the surface. With visible dyes, the vivid colour contrast between the penetrant and the developer is used. With fluorescent dyes an ultraviolet lamp is used to make the 'bleed out' fluoresce brightly allowing the imperfection to be seen readily

**Magnetic Particle -MT**

Magnetic Particle inspection is used to identify surface and near surface discontinuities in ferromagnetic materials such as steel and iron. The technique uses the principle that magnetic lines of force (flux) will be distorted by the presence of a discontinuity. Discontinuities (for example, cracks) are located from the flux distortion following the application of fine magnetic particles to the area under test.

**Good Reasons to Consider a Career in NDT**

1. NDT is an exciting and challenging career field.
2. It is a growing career field.
3. It is a high technology field driven by computer technology.
4. The field of NDT is filled with opportunities for career growth and advancement.
5. The demand for qualified technicians is high.
6. The pay is good.
7. There are many different types of jobs.
8. There are NDT personnel working in all parts of the country.
9. The work can be very rewarding.
10. Careers can be in a variety of areas:

|  |  |
| --- | --- |
| * NDT Service Companies | * Engineering & Fabrication Companies |
| * Casting Foundries, Rolling & Forging Mills | * Power Plant & Fertilizer sector |
| * Petro Chemical & Refineries | * Research & Development Facilities |
| * Defence, Nuclear & Aerospace Industries | * Education & Training |
| * Automobile Manufacturing & Maintenance | * Equipment Manufacture & Sales |

**Why Quality Professionals?**

1. Internationally recognized certification at **affordable fee** with **regular training batches** throughout the calendar year.
2. Excellent study resource materials prepared by experienced **NDT experts** as per **ASNT requirements** and much useful for practicing engineers for immediately applying to on field NDT applications.
3. Training is given by experienced **ASNT Level-III** for best understanding of subject.
4. QP is one of the best institutes in India providing powerful interactive training sessions with **Audio/Visual Presentations**.
5. Practical sessions on latest **state of art equipments** with eminent trainers.
6. QP also provides free on job **training and placement** depending on your qualification, experience levels and proficiency after successful completion of the certification courses.
7. Personalized assistance and **career guidance** for participants.

