

# **“BRIEF OVERVIEW ON NON-DISTRICTIVE TESTING”**

**By**

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A talk on the topic “*BRIEF OVERVIEW ON NON-DISTRICTIVE TESTING*” was delivered by **Mr. GIREISH BABU** on 24<sup>th</sup> February 2020 as a Departmental Forum Activity.



Mechanical HOD florally welcoming the chief guest.

Since good basic knowledge is the foundation for great success, similarly the speaker started his technical talk by giving a brief introduction to Non-destructive testing (NDT) and information regarding their organization "V and G testing laboratory".



While talking about testing process there are mainly two types of process -

- Non-Distractive testing (NDT)
- Distractive testing

**Nondestructive Testing (NDT):** process of inspecting, testing, or evaluating materials, components or assemblies for discontinuities, or differences in characteristics without destroying the serviceability of the part or system. In other words, when the inspection or test is completed the part can still be used. Nondestructive Testing (NDT) are used in manufacturing, fabrication and in-service inspections to ensure product integrity and reliability, to control manufacturing processes, lower production costs and to maintain a uniform quality level.

**Destructive Tests:** determines the physical properties of materials such as impact resistance, ductility, yield and ultimate tensile strength, fracture toughness and fatigue strength.



The Speaker was mainly focused on informing the students about the different types of NDT processes, their advantages and disadvantages and places of application.

The widely used NDT processes are as follows

- Liquid Penetrant Testing (PT)
- Magnetic Particle Inspection (MPT)
- Ultrasonic testing
- Thickness Gauging
- Radiographic Testing
- X-ray Radiography

While talking about the Magnetic Particle Inspection, there are two methods to do it and also explained their advantages and places of application with the proper use for the right material.

• Two methods:-

### 1. Dry Magnetic Particle Testing (DMPT)



Dry Magnetic Particles

### 2. Wet Magnetic Particle Testing (WMPT)



Wet Magnetic Particles

## Methods of Magnetic Particle Inspection

While explaining about the different techniques, he also helps the students to understand those better with a real exposure of this chemicals and equipment's.



Ultrasonic testing machine



Thickness detector machine

At the end of the informative session there was a practical exposure for the students to the different types of reports and scanned examined results of some of the test specimen that were tested in their laboratory.





Memento given to the speakers as a token of gratitude

The talk was motivating and inspiring to all the students and faculty members of the department and gave a clear idea about the job opportunities of this NDT processes in the country and abroad, which provided a clear path to the students to chase their dreams in this field.