



## INTRODUCTION

Most engineering and automotive parts be it drive line or engine or structural members need to have adequate strength and durability to perform their respective functions. At the same time these parts need to be cost effective. To achieve these twin objective the components are subjected to surface strengthening treatments. Most commonly used surface strengthening treatments are case carburising & hardening and Induction hardening. For engineers the proper knowledge of these processes is essential so that they carry out their jobs effectively.

## FOCUS AREAS

- Basics metallurgy of heat treatment
- Hardenability and factor effecting hardenability
- Induction hardening processes with induction coil design
- Case carburising and hardening process and different types of furnaces used
- Quenching media selection
- Nitriding process
- Defects in heat treatment, causes and remedies

## KEY TAKE AWAYS

After undergoing the programme, the participants will be able to learn about -

- Basics metallurgy of heat treatment
- Hardenability and factor effecting hardenability
- Induction hardening processes with induction coil design
- Case carburising and hardening process and different types of furnaces used
- Quenching media selection
- Nitriding process
- Defects in heat treatment, causes and remedies

## FEE PER PARTICIPANT (PER LOGIN)

**Rs. 7500/-**

+18% GST

**IMTMA Members/ Micro Companies/ Individuals/  
Educational Institutions / Students/ IMTMA Non  
Members/ Others**

**USD 300/-**

**Overseas Participants**

**Group Concession : 10% for 3 to 5 and 30% for 6 and more delegates being nominated from the same company**

## PARTICIPANT PROFILE

This programme will benefit Managers, engineers and supervisors from Automotive and Engineering industries as well as from contract heat treatment plants, Managers and Engineers from any metallurgical plants, R&D, NPD, Students and teaching faculties, Foundry, forging and heat treatment MSMEs, Auto OEMs, Auto ancillaries, Pump manufacturers, Aerospace ancillaries, Defence & Railway Establishment

## FACULTY

This programme will be conducted by **Shri. S. C. Balawat**.

**Shri. S. C. Balawat**, is a Metallurgical Engineering graduate. He is a gold medallist . He has over 40 years of active Industrial Experience in Metallurgy and manufacturing. He has worked in Motor industries Co. Bangalore ( now BOSCH) manufacturers of Fuel Injection Pumps and Sparking plugs for 10 years, and for 17 years in Automotive Axles Limited Mysore , manufacturers of Rear Axles for LCV and HCVs. In addition he has worked for 13 years in John Fowler India Limited, Bangalore , a firm specializing in post-harvest Agricultural machinery and primary Tobacco processing machineries.

### For Registration Contact

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