



# Heat Treatment - Metallurgy and Processes

Date : 6 to 7 August, 2026  
Venue : IMTMA Technology Centre, Bengaluru

Last date for registration 30 July 2026

## INTRODUCTION

Heat Treatment is a core manufacturing process carried out under controlled application of temperature and atmosphere to optimize certain physical and mechanical properties of metals/alloys. Heat treatment is an enabling process that can improve product performance by increasing its strength or other desirable characteristics such as machinability, formability, ductility, etc. The process of heat treatment has a major bearing on the quality of the end product and finds a wide application in many industries such as Automobile & Auto Components, Dies & Mould, Machine Tools, Aerospace, General Engineering and so on.

Keeping this in view, Indian Machine Tool Manufacturers' Association (IMTMA) is organising a 2 day programme on "**Heat Treatment- Metallurgy and processes**"

## FOCUS AREAS

- Basics of Ferrous Metallurgy, Iron/Iron carbon equilibrium diagram and TTT diagrams
- Basic bulk Heat treatment processes Annealing, Normalising, Hardening, Quenching, Tempering,
- Surface hardening like, Case Carburising Nitriding, Induction Hardening
- Hardenability of steel and its importance
- Techniques of distortion control
- Common failures and remedies

## KEY TAKE AWAYS

**With a proper understanding of the standard, one can derive the following benefits in the entire product realisation cycle.**

- Understand Ferrous Metallurgy and its Importance in Heat Treatment
- Understand Metallurgical changes during Heat Treatment
- Learn about various bulk heat treatment, Surface Heat Treatments methods and specific applications of each process
- Understand common problems encountered in heat treatment and remedies

## PARTICIPATION FEE

**Rs. 4999/-**

+18% GST

**IMTMA Members/ Micro Companies/ Individuals/ IMTMA Non Members/ Others**

**Rs. 2500/-**

+18% GST

**Professors**

**Rs. 999/-**

+18% GST

**Student**

**USD 200/-**

**Overseas Participants**

**Group Concession : 10% for 3 to 5 and 20% for 6 and more delegates being nominated from the same company**

## PARTICIPANT PROFILE

This programme will benefit Designers, Production Engineers involved in Heat Treatment processes (In-house / Subcontracted), Quality & Inspection engineers from Automobile & Auto ancillaries, Die & Mould, Machine Tools, Aerospace, General Engg., Defense & Railway units and other related Manufacturing industries.

## FACULTY

This program will be conducted by **Mr. Ganapathi K N,**

**Mr. Ganapathi K. N.** is currently associated with IMTMA as a faculty member, following his retirement from his full-time role at the organisation. He brings with him over 32 years of rich experience, including 16 years in the industry and 16 years in academics and training.

A postgraduate in Metal Casting Science and Engineering from UVCE, Bengaluru, Mr. Ganapathi has held various positions in both ferrous and non-ferrous foundries prior to joining IMTMA. He possesses in-depth knowledge of foundry operations and has successfully provided practical solutions to a wide range of foundry-related challenges.

During his career, he has delivered specialized training programs in the metal casting domain to more than 300 engineers from various manufacturing organizations across India. In addition, he has also taught metal casting topics to postgraduate engineering students, contributing significantly to industry-oriented technical education.

### For Registration Contact

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**REGISTRATION** : Prior registration for participation is necessary. Number of participants is limited and will be accepted on 'First Come First Serve' basis. A Certificate of participation will be issued to participants.

**Important Information** : Participation fee includes, course material, working lunch and tea / coffee. Interested companies are requested to register online by clicking on 'REGISTER' button and by filling up the nomination authority and participant's details in specified form.