Manufacturing Technology Training
An IMTMA initiative

Basics of Metallurgy and Heat Treatments
Date : 8 to 9 December, 2025
Venue : IMTMA Technology Centre, Pune

INTRODUCTION

It is always said that “out of total revenue cost, material cost is 60% to 70% in any industry”. All industries revolve around material delta or material profitability.

If Metals and Material are so important, we must know some industry dynamics for material. Today’s world is very cost competitive, and knowledge about materials will lead to success of any individual. Understanding at the beginning of anyone’s career will shape his/her awareness and depth in this immensely competitive world. It is a journey and not a destination by itself. As such, we are going to understand much about basics of material science and some part of Heat Treatments. It covers some part of chemistry of steels, Physics of steels and processes carried out on steel material.

So, it’s time to step in the arena of Metals, and Steels in particular, with respect to Automobile Industry, Engineering Industry Process Industry, and Heavy Industry.

This training program strives to impart knowledge on the steels under the broad umbrella of Material Science.

FOCUS AREAS

- Basic Metallurgy – History and Overview.
- Roll Of Carbon – Importance of carbon in Iron/Steel.
- Types of Steels – Types wrt to carbon, alloying elements, application.
- Alloying elements – Importance, it’s impact on Engineering properties
- Hardenability – Definition, impact on properties, Jominy Test.
- Properties – Various properties of steels, Importance wrt application.
- Heat Treatment – Types, Controls, Quality Checks
- Microstructure – Various phases of steels.

Exercises:

- Classification of Steel wrt Carbon
- Classification of Steel wrt Application.

KEY TAKE AWAYS

- Material Science in industry.
- Types of steel, Application
- Properties of steels, Heat Treatment processes

PARTICIPATION FEE

Rs. 4999/-
+18% GST
IMTMA Members/ Micro Companies/ Individuals/ Educational Institutions / Students/ IMTMA Non Members/ Others

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

Freshers, GETs, First line engineers from Manufacturing functions – Production, Engineering, Quality, Maintenance, Purchase, PPC, Logistics, Etc.

FACULTY

This programme will be conducted by **Mr. Ajay Tare, is in the fields of Metals and Metallurgy, for the last 40 years.**

Mr. Ajay Tare, is retired as COO from a very large Commercial Heat Treaters and handled positions as VP Operations, Sr. Manager, Operations Managers, QA Head in various prestigious companies like Bajaj Auto ltd, Mahindra and Mahindra Ltd, Eicher Good Earth Ltd, Nagpur Tools and Avdhoot Technocrats. His experience in all the portfolios of Metallurgical Engineering; R & D, Operations, Quality, Manufacturing Engineering, NPD, Business Excellence.

He is a Metallurgical Engineer from Nagpur and also completed Post Graduate Diploma in Quality Management, PGDQM, from prestigious Mahindra Institute of Quality. He is Six-Sigma Green Belt professional. On management side, he has successfully completed Harvard Manage Mentor, HMM, by HB School. Since he is a Industrial Trainer he has passed “Train the Trainer” by Dale Carnegie Training Centre.

A very versatile experience of processing all types of ferrous materials like Case Hardening Steels, HSS, HDS, HCHCr, Stainless Steels, Bearing Steels, Spring steels, Tool steels, Boron steels and non-ferrous materials like Aluminium, Copper, Brass, Bronz, Magnesium alloys.

He is well conversant with Processing of parts of defence, mining, earth moving equipment, automobile, tractor, Industry and their requirements.

Currently, he is associated with prestigious organisation for Training and Teaching and working as a “Professional Consultant” for many companies, including MNCs.

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.