

Metal casting Technology-Processes, DFM, Quality and Cost considerations

Date: 24 to 25 July, 2025

Venue: IMTMA Technology Centre, Bengaluru

Last date for registration 17 July 2025

INTRODUCTION

Several different methods such as casting, powder metallurgy, forging and machining are available to shape metals into useful products. One of the oldest process is metal casting which basically involves pouring molten metal into a mould cavity, where upon solidification it takes the shape of the cavity. Beauty of this process is, any complicated shape in any metal can be casted.

Knowledge of metal casting is very important to design engineers and casting buyers. Design engineers have to decide on the type of casting process to be adopted to manufacture the part and also to incorporate DFM requirements of casting without compromising his design intent. Buyers have to identify right foundry and negotiate with them to get competitive price. Under these circumstance, knowledge of casting processes, capability and limitations of processes, cost estimation and casting inspection will come handy.

Keeping this in view, Indian Machine Tool Manufacturers' Association (IMTMA) is organizing a 2 day programme on "Metal Casting Technology for Designers and Buyers"

FOCUS AREAS

- Important casting processes
 - 1. Sand casting
 - 2. Shell moulded casting
 - 3. Investment casting
 - 4. GDC
 - 5. HPDC
 - 6. Centrifugal casting 7. Squeeze casting
- Capabilities and limitations of all casting processes
- DFM of casting
- Casting defects and remedies
- Casting cost estimation
- Importance of casting simulation
- Visit to Foundry

KEY TAKE AWAYS

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

- 1. Understand various casting processes
- 2. Incorporate DFM requirements of casting in part design
- 3. Carry out casting cost estimation
- 4. Understand importance of casting simulation in NPD
- 5. Understand casting defects and its remedies

PARTICIPATION FEE

Rs. 10450/-+18% GST

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

USD 415/-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 Managers, Engineers from OEMs, purchase, R&D, NPD, Auto OEMs (SIAM), Auto ancillaries (ACMA), Pump manufacturers (IPMA), Defence & Railway Establishment (PSUs / OFBs), Aerospace ancillaries, General Engineering (IEEMA / AIEMA), Foundry engineers and supervisors, Faculties & Students from academic institutes.

FACULTY

This Program will be conducted by Ganapathi K N. Ganapathi K N, is the Director Training of IMTMA Technology Centre having 17 years of industrial and 14 years of academic experience. He is a post graduate in metal casting science and engineering from UVCE Bengaluru. Prior to working at IMTMA, Mr. Ganapathi has worked at various capacity in both Ferrous and nonferrous foundries. He has thorough understanding of all foundry operations and has experience of providing solutions to the foundry problems. He has also imparted specialized training on metal casting domain to more than 300 engineers across manufacturing companies in India. He has also taught metal casting topics to post graduate engineering students. At IMTMA, his role is to develop and introduce new programs for enhancing competitiveness of industry.

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