

**Last date for registration 22 July 2024**

## INTRODUCTION

Injection moulded parts are widely used in automobiles, consumer goods, medical parts, aircraft interiors and across many more types of products. Parts that may vary in shape, size and complexity are manufactured using Injection moulding process in a moulding machine.

The process involves injection of plastic material into a cavity, where the material cools and hardens as per the configuration of the cavity. Injection moulding can be performed with a host of materials like elastomers, thermoplastic and thermosetting polymers. Moulds are made by a mould-maker (or toolmaker) from metal, usually either steel or aluminium, and precision-machined to form the features of the desired part.

Injection moulding process poses many challenges, which may lead to defects in the final parts. In order to successfully manufacture a moulded part, it is important to understand the possible defects, get an understanding of the parameters that control the moulding process, which could be incorporated at the mould design stage itself.

Keeping this in mind, IMTMA is organizing a two-day online training program on Defects analysis and Troubleshooting of Moulded parts.

## FOCUS AREAS

**The program shall focus upon:**

1. What is injection moulding?
2. Types of Injection moulding techniques
3. Types of moulds used in the Industry
4. DFMA in plastic moulding
5. What are the main factors causing defects?
  - The moulding machine
  - Injection mould
  - Operating conditions i.e., Pressure, Temperature, injection speed & time, etc,
  - Material
  - Design of product
  - Process management
6. Various defects, causes and solutions on:
  - Sink Marks
  - Weld lines
  - Streaks
  - Blistering
  - Gloss difference
  - Jetting
  - Short shots
  - Diesel effect
  - Over sprayed parts (Flashes)
  - Stress whitening / Cracking
  - Warpage
  - Hesitation
  - Over packing
  - Unbalanced flow
  - Ejector marks
  - Scratches on the parts
  - Dull spots
  - Deformations
  - Flaking
  - Cold slug
  - Drooling
7. Case studies from industries
8. Importance of analysis software before mould design

## KEY TAKE AWAYS

At the end of the program, the participant shall be able to:

- Identify & prevent injection mouldings defects
- Understand root causes & address with suitable remedies
- Control procedures to achieve zero defects in moulding
- Understanding the importance of mould / die design during product design
- Importance of process simulation during die design

## 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**

### For Registration Contact

**B.L Patil**  
**Programme Coordinator**  
+91 7899799296  
[blpatil@imtma.in](mailto:blpatil@imtma.in)  
**Back End Operations**  
9742626488  
[enquiry@imtmablr.com](mailto:enquiry@imtmablr.com)

### Contact Address

**INDIAN MACHINE TOOL MANUFACTURERS' ASSOCIATION**  
@ BIEC, 10th Mile, Tumkur Road, Madavara Post,  
Bangalore - 562 123  
Tel : 080-66246600  
Fax : 080-6624-6658



**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.