Manufacturing Technology Training
An IMTMA initiative

Defects Analysis and Troubleshooting of Injection Moulded Plastic Parts
Date : 12 to 13 January, 2026
Time : 1340 Hrs to 1730 Hrs (Online Mode)

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, Indian Machine Tool Manufacturers Association is organizing a two-day online training program on Defects analysis and Troubleshooting of Moulded parts.

FOCUS AREAS

- What is injection moulding?
- Types of Injection moulding techniques
- Types of moulds used in the Industry
- DFMA in plastic moulding
- 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
- 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
- Case studies from industries
- 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

FEE PER PARTICIPANT (PER LOGIN)

Rs. 2999/-
+18% GST
IMTMA Members/ Micro Companies/ Individuals/ Educational Institutions / Students/ IMTMA Non Members/ Others

USD 120/-
Overseas Participants

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

FACULTY

This program will be delivered by **Mr. Ramesh Srinivasa Rao**.
Mr. Ramesh Srinivasa Rao, a Mechanical engineer by profession, was associated with L&T Technology services for over 14 years, as part of the Mechanical design services responsible for Industrial Design, Product design, tool design manufacturing simulation, Packaging, and sustainable product design in Electronics Plant at Bangalore. He has managed multiple product development projects and trained 350 + Mechanical engineers across multiple locations. He has also generated many atentable designs for clients in medical devices, automotive, consumer products. And Holds 7 patents in medical devices and interconnects.
Prior to L&T, served in the tooling industry for 14 years in Singapore. And remaining years in various manufacturing companies.

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REGISTRATION : Prior registration with an online advance payment is must. Number of participants is limited and will be accepted on 'First Come First Serve' basis. A Certificate of participation will be issued to participants.