

INTRODUCTION

Diecast parts are used extensively in areas such as Automobile, Aviation, Telecommunication, Hydraulics, and pneumatics application, Electrical and so on. Key Die cast parts are Two-wheeler engine crank cases, cover kick starters, Cylinder head, cylinder barrel, four-wheeler Alloy wheels, ceiling fan covers, 2-wheeler front and rear wheel hub, 2-wheeler carburettor, earth moving equipment hydraulic valves, 4-wheeler air brake parts, to name a few.

Designing the diecast parts with the production process in mind is the key to seeing a return on investment. DFM ensures that the diecast parts perform to specification by removing any inefficiencies before the actual production begins. Reducing weight, optimizing wall thickness, maintaining achievable draft angles and tolerances are some key design aspects that can often help improve the design of the diecast parts. Hence it is important on how well the diecast parts are designed for manufacturability.

Keeping this in mind, IMTMA is conducting a two day program in Design and processing techniques for PDC parts with a DFM approach.

FOCUS AREAS

- Basic concepts of the die casting process.
- General guidelines for designing a diecast part suitable for high pressure diecasting process through DFM – Design For Manufacturability.
- Design of part drawing and / or 3D model and making explicitly clear about the product’s end-requirement.
- Converting the Fit, Function and Characteristics into the part-design.
- Defining the Geometrical tolerance requirement and Parting line geometry.
- Limitations and how can we overcome? How can we deploy the latest technical findings to our part-design geometry judiciously?
- Mechanical strength requirement and fulfilment in the part design.
- How to conceive the design-intent into manufacturable die-cast parts without sacrificing any of the end requirements.
- How to do Design FMEA (DFMEA – Design Failure Mode and Effect Analysis) and build the part-design anticipating the likelihood of defects in advance.
- Sharing the experience with case-study.

KEY TAKE AWAYS

At the end of the program, the participant shall understand:

1. How to design a die-cast part suitable for the die-casting process
2. How to decide the parting line?
3. How to build strength in die-cast parts?
4. How to address the end requirements without losing the other characteristics?
5. How to make sure that the design will work by deploying DFMEA and bringing the RPN number less than 100 for each effect?
6. How to ensure that the various processes parts fits with the design assembly?
7. How to address the die casting defects in the part-design stage itself and avoid?
8. Finally get self-confidence in designing the die-casting parts of your conceived thoughts.

FEE PER PARTICIPANT (PER LOGIN)

Rs. 4500/-

+18% GST

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

USD 135/-

Overseas Participants

Group Concession : 20% for 3 to 5 and 30% for 6 and more delegates being nominated from the same company

PARTICIPANT PROFILE

Diecast part design engineers from diecast part manufacturing units

Diecast part design engineers from engineering services companies

FACULTY

This programme will be conducted by **Mr Padmanarayanan**, a technology professional with over 5 decades of high quality experience in the areas of High pressure die-casting, gravity diecasting, Low pressure diecasting, SMED, Setting up tool rooms, productivity improvement and rejection reduction. During his professional career, he was associated with several companies such as Sundaram Clayton, Semoc Electric, Columbia Wheel manufacturing, Eqic Dies and moulds, Rapsri Engineering Industries, Dietech India, AR Die Casts, Hyderabad Engineering Industries, and Endurance Technologies.

He possesses over 60 certifications in areas such as Six sigma, Cost of quality, TQM tools, Understanding benchmarking methods, Time management, Quality management and several other areas.

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