

## INTRODUCTION

A sheet metal forming process is a combination of a press, a die, sheet metal blank and the feeding / loading method, all of which is combined together to produce a sheet metal stamped / formed part. Sheet metal formed and stamped parts are an integral part of automobiles, aerospace, consumer goods and several other types of parts used in our daily life.

In metal stamping / forming, everything from poor quality parts to accelerated die wear and damage is often attributed to poor press selection, die-setting and press maintenance. In order to achieve success in this activity, it requires the press operator to carry out a number of tasks in the correct manner. Choosing the right press, sizing the sheet metal blank, handling the sheet metal blank and choice of the right press tonnage become all important to get the stamping / forming process right. Further, with regard to maintenance, A responsible shop professional would ill afford to neglect machine tool lubrication, alignment and repair.

This program shall focus on the good practices to be followed for successful operation of a press shop and provide details of warnings about improper practices.

Keeping this in mind, IMTMA is conducting a classroom training program on '**Selection & maintenance of Sheet forming presses**'.

## FOCUS AREAS

- **Overview of various Metal-Forming Processes:**
  - Forging, Sheet Cold Stamping, Hot Stamping, Sheet & Tube Hydro-forming,
  - Fine Blanking & Coining,
  - Problems of AHSS & Forming of Composites
- **Stamping Tools & Equipment:**
  - Press Tools , Progressive Dies / Presses,
  - Requirements of SMED,
- **Classification & Type of Presses; Specification of Presses, Press applications with specific process requirements and Automation;**
  - Press Lines
- **Mechanical Presses:**
  - Types, Anatomy, Features, Aggregates, Subsystems,
  - Advantages – Limitations
- **Hydraulic & Servo Presses:**
  - Types, Anatomy, Features, Aggregates, Subsystems,
  - Advantages – Limitations
- **Tips for Maintenance of Presses:**
  - Diagnosis through PLC-HMI , Electric / Pneumatic / Hydraulic and Lubrication Circuits and Assembly Drawings
  - Typical Problems at various type of Presses &
  - Tricks of Trade to identify and resolve them
- **Maintenance Management:**
  - Maintenance Tools & Equipment for Press,
  - Safety Issues,
  - PM & Alignment Checklist & standards;
  - Press Quality Audit
- **Installing a Press:**
  - Press Procurement & Site Preparation; Types of Foundations & Floor Plan
  - Care for Transportation and Unloading
  - Sequence of Assembly & Proving

## KEY TAKE AWAYS

**At the end of the program, a participant shall learn**

- Overview of the different sheet metal stamping / forming operations
- Types of sheet metal dies and their uses
- Different types of presses used for sheet metal forming and stamping
- Tips on selection of presses according to the type of part to be formed / stamped
- Tips for observing die wear and die damages
- Expert demos on loading & unloading of dies, die setting and production methods
- Detailed explanation of the various parts of a sheet metal forming die
- Effective press maintenance tips and press maintenance management steps

## PARTICIPATION FEE

**Rs. 9500/-**  
+18% GST  
**IMTMA Members/ Micro Companies/ Individuals/  
Educational Institutions / Students/ IMTMA Non  
Members/ Others**

**USD 380/-**  
**Overseas Participants**

**Group Concession : 10% for 3 to 5 and 20% for 6 and more delegates being nominated from the same company**

## FACULTY

This program will be conducted by **Mr. Avinash Khare**.

**Mr. Avinash Khare** is presently working as a Consultant Head for IMTMA Pune Technology Centre for last 5 years ; he has been designing, developing content and delivering wide range of Training Courses as a Faculty. He is Electrical Engineer by Qualification and he has worked for over 33 years at Tata Motors Pune in various capacities ranging from R&D in Industrial Electronics, Machine Maintenance, Technology Procurement, Head of Machine Shops, Tool Room Shop Head, Head of Die Design and Champion in Business Excellence. He has taught Instrumentation and Bio Medical Instrumentation at Pune University as part time faculty.

### For Registration Contact

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