

## INTRODUCTION

Almost 40% of manufacturing activity involves Sheet Metal Work. This includes forming, cutting, and bending operations to make individual parts and joining operations to make assemblies. There are demanding and increasingly difficult Quality expectations from sheet parts and assemblies in terms of:

- Form / profile / edge / flange matching
- Gap and flushness.
- Mounting hole cluster locations
- Geometrical accuracy despite irritants like spring back
- Aesthetics and quality of surface finish and how they reflect light.
- Absence of cracks, thinning, wrinkles, waviness, and caving in
- Tool marks, scoring marks, shock line
- Burrs
- Strength

Inspecting Sheet Parts and Assemblies has in fact become a rare expertise area and this one day course from IMTMA at Pune, seeks to address the need to enlighten, educate, update about the equipment, procedures, inspection metrology and metrics, inspection tools as well as acceptance standards in industry.

Program will also discuss the root causes and remedial actions for typical defects.

## FOCUS AREAS

- Basics of Cutting, Bending and Forming Operations for part manufacturing; Defects they could produce with possible root causes and solutions
- Basics Joining Techniques for assembly; Defects they could produce with possible root causes and solutions
- GD&T for sheet parts, assemblies and Inspection Reports
- Prevailing acceptance standards
- Manual Inspection, use of Fixtures and using CMMs
- Advanced Technologies for Inspection
- Inspection of Surface Finish & Paint Quality

## KEY TAKE AWAYS

After undergoing the programme, the participants will be able to lay the foundation for significant improvements by way of acquiring capability to -

- Choose between various inspection technologies / equipment
- Inspect parts and assemblies
- Know the prevailing standards of acceptance
- Make and analyze inspection reports
- Connect the inspection outcome with likely root cause and suggest solutions

## PARTICIPATION FEE

**Rs. 5000/-**  
+18% GST

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

**USD 200/-**  
**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 Supervisors, Engineers and Managers from Sheet Metal Manufacturing, Tool rooms, Press Shops, Vendor Management and Quality Functions in the Automotive, Defence, Railway and General Manufacturing industries involved in sheet metal components and assemblies.

## FACULTY

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

**Mr. Avinash Khare**, Advisor IMTMA 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

**Nishant Singh**  
**Programme Coordinator**  
9823174010  
[nishant@imtma.in](mailto:nishant@imtma.in)

### Contact Address

**INDIAN MACHINE TOOL MANUFACTURERS' ASSOCIATION**  
12/5, D-1 Block, MIDC, Chinchwad,  
Pune-411019  
Board Line : +91 7066030531 / 532



imtmatraining.67038796@hdfcbank

**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.