Manufacturing Technology Training
An IMTMA initiative

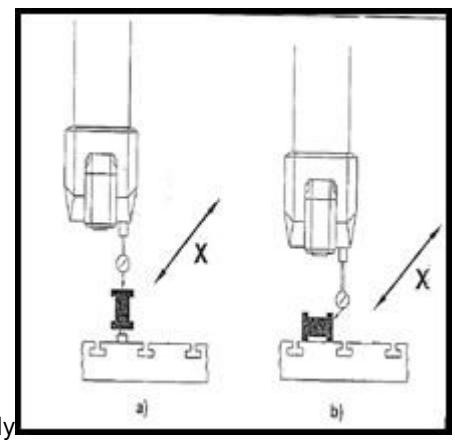
Assembly, Welding & Inspection Fixtures in Sheet Metal - Design and Manufacturing
Date : 2 to 3 August, 2023
Venue : IMTMA Technology Centre, Pune

INTRODUCTION

Fixtures are used in almost all the segments of the engineering industry and are considered to be critical for achieving optimum quality and productivity of various products. Any shortcomings in the design and manufacture of these fixtures have a direct negative impact on the assemblies manufactured.

A well designed and manufactured fixture is the result of a systematic approach which takes into consideration the respective processes and the various design and manufacturing challenges.

FOCUS AREAS



- Introduction to Process Engineering for a BIW assembly
- Basic Design Process of the Assembly, Welding and Inspection Fixtures
- Solutions to common challenges faced in designing the fixtures
- Solutions to common challenges faced in manufacturing the fixtures
- Solutions to common challenges faced in using the fixtures
- Modular concepts to minimise costs
- Use of standard elements
- Inspection of the fixtures
- Exercise in designing a welding fixture for a simple assembly
- Proving & maintenance of the fixtures
- Case study of a welding fixture for a component of medium complexity: Design - Manufacture - Production
- Plant visit to a modern Fixture Manufacturing Toolroom and Welding Shop *

*Note: Factory visit of participants will be subject to the approval of the hosting industry

KEY TAKE AWAYS

After undergoing the programme, the participants will be able to understand and implement the following aspects of Fixture design.
1. Correct Joineries and their importance
2. Right Process Definition
3. Control Points Definition
4. Inputs needed for fixture Design
5. Importance of fixtures to attain the desired BIW quality
6. Fundamentals of fixture design
7. Decision on type of tooling based on:
- Economics of tooling development
- Socio-economic impact on fixture design
- Safety considerations
8. Maintenance of fixtures
9. Acceptance and Buyoff of tools

PARTICIPATION FEE

Rs. 10000/-
+18% GST
IMTMA Members/ Micro Companies/ Individuals/ Educational Institutions / Students/ IMTMA Non Members/ Others

USD 400/-
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 Managers, Engineers and Middle Management personnel involved in the functions of Design, Manufacturing and use of fixtures in Automotive, Aerospace, Defence, Railway and General Manufacturing industries. However major focus in the programme will be sheet metal fixtures for automotive body.
As this is an advanced level workshop, it is desirable that the participants have an industry experience of at least five years.

FACULTY

The programme will be conducted by Industry Experts from Tata Motors and Tata Technologies Ltd.
Mr. Abhay Kulkarni, AGM – Design, Sheet Metal Fixtures with 23 years experience in Design, Manufacturing & Project Management. He has wide experience in Product Development and Process Engineering activities. He has successfully executed complete BIW projects like Xenon, Grande & Ultra models.

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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.