Manufacturing Technology Training
An IMTMA initiative

Design of Gauges
Date : 9 to 10 April, 2026
Venue : IMTMA Technology Centre, Pune

INTRODUCTION

When a part is manufactured, it must be measured to ascertain that it is of the right dimensions for fulfilling the purpose for which it is intended. Gauges are one of the commonly used inspection tools in production shops for quick checking and validation of the dimensions of manufactured parts. Thus, Gaging has become an integral part of any machining process and gauges help in ensuring required degree of interchangeability among the millions of parts manufactured worldwide. The type and the design of gauges depend on the application, volume of production and precision levels required.

In addition to simple plug and ring gauges, functional gauges or receiver gauges are being used to check location of different features with respect to the datum reference frame, as required. Functional gages are a very effective way to gage products during or after manufacturing and they ensure smooth assembly and operation. In all the cases, Design of gauges is of prime importance because, if the gage is designed incorrectly, it will be built, but never get used. The prime considerations for gage design include part tolerances, Gage material, simplicity of use, manufacturability, etc.,

This programme will provide an in depth understanding of Types of gauges, Principles of gauge design, Design of plug and ring gauges, design of functional gauges, Selection of materials and manufacturing of gauges.

FOCUS AREAS

- Overview of Attribute gauging system
- Types of Gauges
- Gauge design Criteria-Taylor's principle; Gauge maker's tolerances
- Guidelines for fixing tolerances for design of gauges
- Selection of gauge materials
- Design of limit plug and gap gauges
- Design of functional gauges for checking the positional tolerances with M modifier
- Design of gauges to check angular features
- Introduction to design of thread gauges and gauge calibration
- Exercises in design of different types of gauges

KEY TAKE AWAYS

After undergoing the programme, the participants will be able to -

- Gauge Tolerance Standards
- Design and develop of gauges for machined parts including Limit Plug Gauges, Limit Snap Gauges, Taper Plug Gauges, Taper Ring
- Gauges, Functional gauges, etc.,

PARTICIPATION FEE

Rs. 4999/-
+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 Managers, Engineers, Supervisors, Fixture & Gauge Designers and other personnel in the functions of Production, Process Planning, Inspection, Service, Engineering & Manufacturing from Machine Tool, Auto & Auto components, consumer durables, aerospace, Defense & Railway units, Pumps manufacturers, General Engineering industries

This will be an advanced level training programme. Knowledge of Engineering Drawing, Limits/Fits/Tolerances and GD&T principles will be a pre requisite for participants to learn the gauge design techniques

FACULTY

This programme will be addressed by **Mr. S K Gupta**,

Mr. S K Gupta, is a Former Asst. General Manager, Machine Design & Business Development, Tata Motors Machine tools division, Pune. Mr. Gupta is an industry expert with over 37 years of rich experience in Design & Development of General purpose Machine & SPMs.

The programme will be highly interactive where participants can solicit feedback on specific technical issues from the expert faculty.

For Registration Contact

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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.