

## INTRODUCTION

Engineering design and Engineering drawing are incomplete without assigning tolerances. Tolerancing is an important and essential element in product manufacturing for both functional and interchangeability. Tolerances facilitates to balance the life of a product and the cost. Non-scientific method of tolerancing surely result in parts that do not function in the way they were intended or parts produced with dimensions that are more precise than necessary, adding unwanted cost to production.

Keeping this in view, Indian Machine Tool Manufacturers' Association (IMTMA) is organizing an online training on Limits, Fits & Tolerances – A Practical Approach.

## FOCUS AREAS

- Why Tolerance in Manufacturing
- How Tolerance play a role in product design from cost and reliability perspective
- ISO system of Limits, Fits and tolerances
- Designation – Holes and shafts
- Fundamental deviations A to ZC
- Fundamental deviation charts for holes and shafts
- IT tolerance grade – IT 01 to IT 18
- Practical significance of fundamental deviation and tolerance grade
- Types of Fits with examples; Clearance Fit, Interference Fit, Transition Fit
- Calculating allowance – Minimum and Maximum clearance
- Demo of typical high precision drawings on tolerancing methods
- Hole basis vs shaft basis system

## KEY TAKE AWAYS

- Thorough knowledge on fundamentals of Tolerances in engineering design
- Represent and interpret tolerances given in drawings
- Significance of fundamental deviation and tolerance grade
- Procedure for calculating limits for a given tolerance class
- Significances of tolerance values in product cost and reliability

## FEE PER PARTICIPANT (PER LOGIN)

**Rs. 3500/-**  
+18% GST  
**IMTMA Members/ Micro Companies/ Individuals/  
Educational Institutions / Students/ IMTMA Non  
Members/ Others**

**USD 140/-**  
**Overseas Participants**

**Group Concession : 10% for 3 to 5 and 30% for 6 and more delegates being nominated from the same company**

## PARTICIPANT PROFILE

- This programme will benefit practicing Design Engineers from industry of all segment.
- Entry level or <2 years’ experience in Diploma and graduate engineers from industry.

## FACULTY

This Program will be conducted by **Mr. Rajashekara HV**, Advisor IMTMA. He has 28 years’ experience on Design and Development of Metal cutting machines from various industry like M/s HMT Machine Tools, M/s Johnson Electric International Limited, HongKong and 7 years as Senior Director, IMTMA Design Institute. He has overall experience of 35 Years from both shop floor and training.

### For Registration Contact

**Santosh Singh**  
**Programme Coordinator**  
9021442692  
[santosh@imtma.in](mailto:santosh@imtma.in)

### Contact Address

**INDIAN MACHINE TOOL MANUFACTURERS' ASSOCIATION**  
Plot 249F, Phase IV, Udyog vihar, Sector - 18,  
Gurgaon - 122015  
Tata no- +91-124-6463101  
Tel : 0124 4014101 - 04  
Fax : +91-124-4014108

