





Workshop on
Tolerance Stack-Up Analysis

12 - 13 December 2012, IMTMA Technology Centre, BIEC, Bangalore

Organised by



IMTMA Technology Centre

Indian Machine Tool Manufacturers' Association

www.imtma.in

BACKGROUND

Manufacturing process, productivity and cost are often determined by component tolerances. If components are incorrectly toleranced, it leads to assembly problems. Too tight a tolerance leads to higher cost. Designers are expected to tolerance components optimally.

Dimensional variations in production parts accumulate or stack up statistically and propagate through an assembly kinematically, causing critical features of the finished product to vary. Such variations can cause costly problems, requiring extensive rework or scrapped parts. One of the effective tools for managing variations is Tolerance Analysis. Tolerance Analysis is a quantitative tool for predicting the accumulation of variation in an assembly by performing a stack-up analysis, reduces manufacturing costs by improving producibility and also enables design engineers to determine, how robust a design is at the drawing phase.

Indian Machine Tool Manufacturers' Association (IMTMA) is organizing a two-day workshop on *“Tolerance Stack-up Analysis”* on 12 - 13 December 2012 at Bangalore. This programme will focus on how to establish part tolerances, perform 2-D analysis of designs, use geometric tolerances in stack ups etc.

OBJECTIVES

- Reduce tolerance stack-up inproducts
- Perform and develop a tolerance stack-up analysis
- Decrease excess tolerance requirements and increase part fit and function.

PROGRAMME SCHEDULE

<u>Day 1</u>	
0900 – 1030	Pretest on Tolerance Stack Up- Prerequisites, Introduction to Tolerance Stack Up Analysis
1030 – 1045	Tea / Coffee
1045 – 1245	Part Stacks Using Coordinate Dimensions, Assembly Stacks Using Co-ordinate Dimensions
1245 – 1345	Lunch
1345 – 1545	Part Tolerance Stacks Using Run Out
1545 – 1600	Tea / Coffee
1600 – 1730	Assembly Stacks Using Run Out

<u>Day 2</u>	
0900 – 1030	Part and Assembly Stacks Using Profile
1030 – 1045	Tea / Coffee
1045 – 1245	Part Stacks Using Positional Tolerance(RFS & MMC)
1245 – 1345	Lunch
1345 – 1545	Part Stacks Positional Tolerance Using Bonus & Datum shift
1545 – 1600	Tea / Coffee
1600 – 1730	Open Session, Post Test and Feedback

FACULTY

The training programme will be addressed by Dr. N. Ramani & Mr. V. Srinivasan from NTTF, Bangalore. Dr. Ramani is the Principal at School of Postgraduate Studies, NTTF. He has 35 years of industrial experience and 12 years of experience in teaching. Mr. V Srinivasan is a Faculty Member at School of Postgraduate Studies, NTTF, for the past 6 years. Earlier he worked for a period of 23 years at Foremen Training Institute (Indo-German Joint Venture).

PARTICIPANTS PROFILE

Designers / product design engineers responsible for specifying, interpreting and analyzing tolerances. Knowledge of GD&T principles will be a pre requisite for participants to learn the techniques of tolerance stack-up analysis.

PARTICIPATION FEES (Non - Residential)

Types of Organization	Fees per participant	Service tax (12.36%)	Total Participation Fees
IMTMA MEMBERS & SSI COMPANIES	8000/-	989/-	8989/-
NON MEMBERS COMPANIES (Large & Medium)	8500/-	1050/-	9550/-

Company nominating 3 or more delegates will get a concession of 10% per delegate.

Fees includes participation, course material, working Lunch & Tea/Coffee. Companies interested in participation are requested to return the attached ‘Reply form’ duly filled along with Demand Draft/ at par cheque in favour of ‘Indian Machine Tool Manufacturers’ Association payable at Bangalore to the address mentioned in the reply form.

REGISTRATION

Prior registration for participation is necessary.

Number of participants is limited to 25 only and will be accepted on ‘First come First’ basis.

A Certificate of participation will be issued to participants.

For More Details Please Contact :

Mr. Saeesh Nayak
E-mail : nayak@imtma.in

INDIAN MACHINE TOOL MANUFACTURERS' ASSOCIATION
@ Bangalore International Exhibition Center (BIEC)
10th Mile, Tumkur Road, Madavara Post, Bangalore – 562 123
Tel : 080-6624 6761 / 6600 Fax : 080-6624 6658
www.imtma.in

IMTMA TECHNOLOGY CENTRE PARTNERED BY



