Manufacturing Technology Training
An IMTMA initiative

# Hands-on Training in Spindle Assembly and Maintenance: Turning and Milling applications
**Date : 12 to 16 June, 2023**
**Venue : IMTMA Technology Centre, Bengaluru**

## INTRODUCTION

A CNC machine has several sub-systems that make up for the entire machine tool. Among the several sub-systems, the spindle is the heart of the machine tool, which allows the machine to function. Maintenance of spindles in metal cutting or industrial machinery is a critical function of a maintenance engineer. Any potential spindle failures can be costly to repair, cause unwanted downtime and stall production. Technicians maintaining them typically require special diagnostic tools and intense technical training to keep the spindle in great working condition. Spindle maintenance requires a thorough knowledge of bearing application, lubrication, assembly tools and techniques. To the maintenance routine, adding small checks and scheduling of preventive spindle maintenance can ensure long spindle life and increase productivity.

Keeping this in mind, IMTMA is conducting a detailed **'Classroom / Hands-on training on "Spindle Assembly and Maintenance: Turning and Milling applications".**

## FOCUS AREAS

- Bearing types & their application in metal working and industrial machinery
- Bearing lubrication systems
- Spindle failure & reconditioning
- Tools, tackles & assembly techniques
- Testing of assembled spindle units
- Bearing failure
- Bearing nomenclature & equivalent selection
- Spindle Bearing preloading
- Preventive maintenance of spindles
- Why do spindles fail - Case studies and examples
- Plant tour for live Demo of Spindle assembly and Maintenance*

*Note: Plant tour of participants will be subject to the approval of the hosting industry.

## KEY TAKE AWAYS

**After undergoing the program, participants will be able to:**

- Understand types of spindles, and their construction/ selection
- Learn the step by step procedure for spindle assembly/ maintenance
- Understanding preloading of bearings, fits, and tolerances for housing and spindles
- Learn about spindle testing using proper methods
- Learn configuration of different types of bearing mountings

## PARTICIPATION FEE

**Rs. 15000/-**
+18% GST
**IMTMA Members/ Micro Companies/ Individuals/ Educational Institutions / Students/ IMTMA Non Members/ Others**

**USD 600/-**
**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 program will benefit **Maintenance Managers and Engineers, Production Engineers & Design Engineers from Automobile & auto ancillaries, Aerospace, Machine tool, Defense & Railway units, General Engg. and other manufacturing industries.**

The session will be delivered in English for convenience and a better understanding of the attendees. The program will be highly interactive where participants can solicit feedback on specific technical issues from the expert faculty.

## FACULTY

This program will be conducted by **Mr. M Khallaq, Mr. Hanumanth Kulkarni, Mr. Rajesh Mandlik, and Mr. Rajendra M.**

**Mr. M Khallaq**, MD, M/s Excel CNC machines. Mr. Khallaq has 40+ years of high quality experience in Machine tool design, spindle design, assembly & maintenance from HMT. He currently runs a design unit for machine tools and accessories.

**Mr. Hanumanth Kulkarni** comes with over 34 years of rich experience in the bearing industry. Having associated with SKF, Timken, FAG, and NBC. Mr. Hanumanth Kulkarni brings expertise in the areas of Design & Development, Manufacturing, Application Engineering, and Technical training.Presently he is running his own company in training and consultancy services

**Mr. Rajesh Mandlik** is Managing Director of Setco Spindles India, having 30 plus years of experience in spindle manufacturing, testing, and reconditioning. He is instrumental in setting up greenfield projects at Pune, Chennai, and Manesar (Gurgaon) for undertaking spindle testing and reconditioning services.

**Mr. Rajendra M** has served in ITC Ltd. as a maintenance engineer for 5 years and in HMT Machine Tools Division, Bangalore as a maintenance engineer for 33 years and retired in the year 2019 as a Deputy General Manager. After retirement doing servicing metal cutting M/Cs, Metal forming machines throughout India as a freelancer. He did service in abroad also.


## For Registration Contact
**Shruthi GS**
**Programme Coordinator**
9886331231
shruthi@imtma.in
**Digvijay Nath Pandey**
7349067391
digvijay@imtma.in

## Contact Address
**INDIAN MACHINE TOOL MANUFACTURERS' ASSOCIATION**
@ BIEC, 10th Mile, Tumkur Road, Madavara Post,
Bangalore - 562 123
Tel : 080-66246600
Fax : 080-6624-6658


imtmatrainning.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.