Manufacturing Technology Training
An IMTMA initiative

LM Guideways and Ball Screws - Types Applications Selection Assembly and Troubleshooting
Date : 28 to 29 April, 2025
Venue : IMTMA Technology Centre, Bengaluru

INTRODUCTION

Linear Motion Guideways and Ball screws form one of the critical elements of precision industrial machinery and in latest CNC machines, the speed and accuracy of axis movements required for high speed machining is realized by adopting LM guide technology. Recirculating Ball screws are available in different configurations and accuracy grades. Proper selection and mounting of these elements is crucial for achieving the desired levels of accuracy on modern machine tools.

This programme will address all the relevant aspects of **LM guideways & ball screws right from types, selection criteria, mounting procedure supported with case studies.**

FOCUS AREAS

- Types and accuracy standards of LM guides
- Selection criteria for LM guides - Design parameters
- Design Fundamentals of LM guides with calculation examples – Load, service life, etc.,
- Procedure for proper mounting of LM rails and LM Blocks
- Ball screws – Types and pre loading methods
- Selection criteria for Ball screws
- Design Fundamentals of ball screws with calculation examples – Load and Speed limitation
- Participants can bring their issues on the topic to have discussion in the forum
- Case studies will be discussed during the programme by faculty

KEY TAKE AWAYS

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

- Understand the accuracy standards of LM guides / Ball screws and their selection for various applications.
- Learn the design fundas of LM guides / Ball screws and relevant calculations
- Go through the correct procedure for mounting and assembly of LM guides / ball screws
- Understand what is pre loading and pre loading methods for ball screws
- Know about preventive maintenance aspects of LM guides / Ball screws

PARTICIPATION FEE

Rs. 10450/-
+18% GST
IMTMA Members/ Micro Companies/ Individuals/ Educational Institutions / Students/ IMTMA Non Members/ Others

USD 415/-
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 engaged in Design, Production, Manufacturing, Maintenance, Machine Tool assembly and other related functions from Automobile & auto ancillaries, Material Handling, Packaging Industry, Machine Tools, Automation and Industrial Machinery where such transmission motion elements are used.

FACULTY

This programme will be conducted by **Mr. Shivakumar,** Former Joint General Manager, HMT (R&D), Bangalore. Mr. Shivakumar is an industry expert with over 25 years of rich experience in Design & Development of CNC Machines & Large size Flexible Manufacturing Systems. Presently Mr. Shivakumar is Technical Consultant to THK India Pvt Ltd for the past 15 years.
The course will be highly interactive where participants can solicit feedback on specific technical issues from the expert faculty.

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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.