Manufacturing Technology Training
An IMTMA initiative

Design of Servo Axis For CNC Machine and Automation
Date : 17 to 20 February, 2025
Venue : IMTMA Technology Centre, Bengaluru

INTRODUCTION

Programme is focused on Introduction to CNC machines, Basics of CNC Servo Axis skill, Basics of Ball screw & LM guideways, Calculations of Ball screw length, Diameter, buckling, stiffness, torque & inertia, Basics of Linear Motion (LM) guideways, Calculations of LM for length, size, life and accuracy, Design of ball screw drive and LM guide, Design of guides and slide structures, servo motors &Drives-Types, Characteristic and selection and demo of critical drawings. It will be highly interactive training session and covers entire 360° view on Design of CNC Servo Axis.

FOCUS AREAS

- Introduction to CNC
- Basics of CNC
- Design objectives of CNC
- Axis Design Conceptualization
- Basics of Ball
- Calculations of Ball screw length, diameter, buckling, stiffness, torque, inertia
- Basics of LM
- Calculations of LM for length, size, life and accuracy
- Design of ball screw drive and LM
- Design of guides and slide structures, GD&T r.t LM and Ball screws and demo of critical drawings.\
- Servo Motors, Drives-Types, Characteristic & Selection

KEY TAKE AWAYS

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

- Knowledge in CNC Servo Axis Design
- Knowledge in Selection of Ball Screw & LM guideways
- Knowledge in systematic design approach
- Develops full confidence for Axis design task
- Selection of Motor and Drives

PARTICIPATION FEE

Rs. 14850/-
+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 programme will benefit practicing Design Engineers from industry of all segment. Entry level or <5 years experience in Diploma and graduate engineers from

FACULTY

This programme will be conducted by **Mr. Ramdas Nambi**, **Mr. Shivkumar & Mr. M A Khallaq.**

Mr. Ramdas Nambi, is an industry expert with over 30 years of experience in the area of CNC control systems, CNC machines, Industrial robots & Unmanned operations. Presentations will be accompanied by practical demonstrations and case studies. The workshop will be highly interactive where participants will be able to discuss specific problems in maintenance and solicit feedback from the expert faculty.

Mr. Shivkumar, Industrial expert with over 25 years of rich experience in Design & Development of CNC Machines & Large size Flexible Manufacturing Systems. Presently a technical Consultant to THK India Pvt Ltd.

Mr. M A Khallaq, Industrial expert With over 3 decades of expertise in Machine Design and fixturing. An ex-HMT as Dy Genral Manager, servered the R & D dept. He now runs his own Industry "XL CNC Machine" at Peenya. Manufactures of GPMs and SPMs

PARTICIPANTS FEEDBACK

IMTMA Design Institute: Doing an excellent job. Excellent selection of consultants (Faculty). **- Justus Munyao Kithuka, Kenya Industrial Research And Development Institute**

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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.