



Last date for registration 10 February 2020

INTRODUCTION

Vibration is one of the most pervasive problems in engineering industry. Time dependent motion related to vibrations is not only a cause for fatigue failures but also lead to undesirable deflection of structures. The latter is of high concern for many machine tools as it directly affects the quality of the output of the machine. In addition, in many situations, excessive vibrations also lead to noise problem in work area. Hence, a good understanding of the phenomenon - its characteristics and means of its control, is essential.

Keeping this in view, Indian Machine Tool Manufacturers' Association (IMTMA) is organizing a 2 day programme on **"Noise, Vibration and Harshness consideration in design and Maintenance"** on **17 - 18 February 2020** at **Bangalore**.

FOCUS AREAS

- Phenomena of Vibration and Noise and their characteristics and key physical parameters involved
- Models of dynamic systems, response of Single Degree of Freedom dynamic system - free and forced undamped, free and forced damped
- Extract design information (design parameters and their influence on system response) from response equations and curves
- Time domain and Frequency domain response
- Extension of vibration characteristics of simple models to real life structures, Multi-degree of freedom systems and structural dynamics
- Response of dynamic systems to typical forces, response curves
- Locating sources of vibrations and noise
- Means of controlling vibrations - source modification, isolation, absorption
- Physics of sound and hearing, Physical parameters related to sound, perception of sound, measurement of sound
- Origin of sound and identification of potential sources of sound
- Characteristics of sound, approach to identifying the source and means of controlling sound signals
- Vibration testing methodology and its use for various aspects of dynamic systems - Description and Demonstration

KEY TAKE AWAYS

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

- Identify potential sources of vibration and noise in machinery
- Utilise testing and analysis resources for isolating the source of problem
- Use different controlling techniques, based on the characteristics of the vibration problem and noise, to control it
- Understand the testing methodology and how to utilise it for solving problem involving vibration and noise

PARTICIPATION FEE

Rs. 8500/-
IMTMA Members / Micro Companies

Rs. 9500/-
IMTMA Non Members/ Others

+ 18% GST

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

**Special concession available for Faculty & Students from engineering colleges
(subject to availability of seats)**

PARTICIPANT PROFILE

- Managers, Engineers from R&D, NPD etc.
- Managers, Engineers from OEMs
- Faculties from academic institutes

FACULTY

This Program will be conducted by **Dr. Vinod Banthia**

Dr. Vinod Banthia is free-lance technical trainer and consultants. He completed his B.Tech (Mech. Engg.) and M.Tech. (Machine Design) from IIT, Kharagpur and Ph.D. in Applied Mechanics from Cornell University. He has over 35 years of experience in industry (R&D) and academia in India and the USA. His areas of expertise and Interest are Design Analysis and Problem Solving.

For Registration Contact

Mary George
Programme Co-ordinator
9880569034
mary@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

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.