Manufacturing Technology Training
An IMTMA initiative

Design of Gear Box
Date : 23 to 25 February, 2026
Venue : IMTMA Technology Centre, Bengaluru

INTRODUCTION

The course is structured with an introduction to Design of Essential parts of Gear box and more focused on Industrial gear box design. Introduction to types of gears, gear profiles, gear calculations, gear standards being a part of the curriculum. A complete design of Industrial Gear box will be carried out from concept to finish. Design input, conceptualization, sizing, Design of gears, Sizing of shaft, bearing selection, seals, keys and standard parts used in gear box shall be covered. Design for Accuracy, Design for Manufacturing (DFM) and Design for Assembly (DFMA) will be addressed during the course. It will be highly interactive and hands on training session and covers entire 360° view on Gear box design aspects.

Keeping this in view, Indian Machine Tool Manufacturers' Association (IMTMA) is organising a 3-day offline programme on **"Design of Gearbox for Industrial Machinery",** at IMTMA Technology Centre, BIEC, Bangalore.

FOCUS AREAS

- Introduction to Gear box and their Advantages and disadvantages over other drives.
- Types of Gear boxes and Applications.
- Classification of Gears and general features of each type of gear.
- Gear tooth profiles.
- Spur and helical gears and their Terminology/ Nomenclature
- Design of Gear Box- Project.
- Selection of type of gear box.
- Type of gears and no. of stages of reduction.
- Electric Motor selection.
- Making gear box layout.
- Gear sizing and strength calculations.
- Estimation of Gear forces.
- Shaft and shaft strength calculation/sizing.
- Estimation of Bearing loads, Bearing selection and life calculations.
- Gear box layout and overall size fixing.
- Gear Correction, calculation of correction and its effects.

KEY TAKE AWAYS

- Complete knowledge on gearbox design
- Selection of motor for gear box
- Understanding various parameters of Gears
- Gear design
- Shaft design and sizing
- Bearing selection and life calculations.
- Keys, spline selection and design.
- Systematic design approach

PARTICIPATION FEE

Rs. 6999/-
+18% GST
IMTMA Members/ Micro Companies/ Individuals/ Educational Institutions / Students/ IMTMA Non Members/ Others

USD 280/-
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 Fresh Mechanical Engineers, Diploma Mechanical engineers, and industry fresh hires.
- It helps Engineers working in Industries manufacturing Gear boxes. Automobile & Auto ancillaries, Rolling mills.
- General Engineering and other Capital goods manufacturing industries also can participate.

FACULTY

The programme will be conducted by **Mr P. Aruna Kumar.**

Mr. P. Aruna Kumar, a Post graduate in Mechanical Engineer in Machine tool specialisation. With over 36 years of domain expertise in Machine tool design, Assembly, Inspection and Testing. A former DGM, Designs and development, HMT Machine tool division, Bangalore. With rich experience in Gear design,Gear cutting machine design, Gear metrology and also other Machine tool Design.

For Registration Contact

B.L Patil
Programme Coordinator
+91 7899799296
blpatil@imtma.in
Back End Operations
9742626488
enquiry@imtmablr.com

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.