



Gear Boxes: Operation, Inspection, Maintenance, Troubleshooting & Repair

Date	Venues	(\$)Fees	Book your seat
14 Dec -18 Dec 2025	Cairo	2900	Register Now

Course Overview

Gears and gear boxes are widely used for power transmission in various equipment and machines (hand watch, machine tools, automobiles, heavy cranes, ships, cement plants. Their size, geometry, loading conditions and performance requirements, etc change in a wide range. This course is designed to help, train and update practicing engineers in the specification, installation and operation of gears and gearboxes in modern systems. It will cover an introduction to gear operation, current design standards and manufacturing methods, but also consider on how to specify and how to use a gearbox. It will review installation, lubrication, health monitoring, and failure interpretation issues pertaining to gear and gearbox technology.

Course Objective

- Explain the fundamentals of gear contacts, geometry and of the materials employed.
- Review the major types of gears and their diverse operational properties.
- Discuss the main factors affecting gear design
- Describe how to select a gearbox for a given application and the factors that need to be considered.
- Show the methods of manufacturing gears.
- Discuss the vibration problem in gears.
- Learn what the common gear failures are and how to avoid them.

Who Should Attend?

Maintenance, Operation, and Production Engineers & Senior Technicians whose works are connected with power transmission systems including gears and gear boxes in addition to those who wish to be familiar with these systems. Senior staff can update and refresh their knowledge by attending this course.

Course Outline

- Introduction To Gears
- Classification Of Gears
- Design Of Gears
- Manufacturing Of Gears
- Gear Failure
- Heat Treatment Of Gear Material
- Gear Boxes
- Vibration Analysis Of Gears
- Gear Case Study

Training Methodology

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities

- Case Studies
- Workshops
- Simulation



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