

Gearboxes Troubleshooting, Inspection and Maintenance

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info@energymilestones.com



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Gearboxes Troubleshooting, Inspection and Maintenance



Overview

This interactive course covers the specification, installation and operation of gears and gearboxes in modern plants. It reviews current design standards and discusses how to specify and use a gearbox. Gearbox installation, lubrication, health monitoring and failure interpretation. Practice exercises, videos, and case studies for an engaging and memorable learning experience

Course Objectives

- Have an excellent background in gearing, including the types of gears, their arrangement & geometry, gear ratings, and quality
- Apply safe working practices and understand the principles of preventive and first-line maintenance.
- Understand the configurations and operating characteristics of bearings and become familiar with gearbox lubrication, including its various system types, key lubricant characteristics, and modes of lubrication failure.e
- Familiarise yourself with the gear instrumentation measurements and identify the various analytical tools used in gearboxes.
- Perform gearbox testing, including spin testing, partial & complete load testing, and full torque testing, and be able to determine the different gear element failure modes.
- Learn the bearing failure modes and be able to emphasise the gearbox selection requirements



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Course Content



- Gearing Fundamentals
- Bearings
- Gearbox Lubrication and Principles
- Gear Instrumentation and Measurements
- Gearbox Applications
- Maintenance Principles
- Gearbox Testing
- Gear Element Failure Modes
- Bearing Failure Modes
- Gearbox Selection Requirements
- Analytical Tools

Targeted Audience

This course is designed for mechanical and maintenance engineers, technicians, operators, and managers who work with gearboxes and rotary equipment.

Course Methodology

Facilitated by an experienced professional trainer, this training course will be conducted as a highly interactive workshop session. A variety of training methodologies and facilitation techniques will be employed before and during the course, as applicable. These methods are aimed at enhancing individual and group interaction while maximising learning. Some of these methods are:

- Online Pre-post Test
- Colourful Visual Aids
- Gamification
- Self-Assessment Instruments
- Simulations
- Case Studies
- Videos
- Group Exercises & Discussions
- Role-plays
- Indoor & Outdoor games

