

Gears and Gearboxes

Technical Proposal Scope

This technical scope outlines the comprehensive coverage of the "Gears and Gearboxes" training course, providing participants with a solid foundation in gear design, manufacturing, analysis, and maintenance practices. The course combines theoretical knowledge with practical hands-on sessions to ensure participants gain a thorough understanding of gear systems and their applications in various industries.

Terms To Understand

1- Gears

- Types of Gears
- Spur Gears
- Helical Gears
- Bevel Gears
- Worm Gears
- Elements of the gear structure

Mustafa Mahmoud
Maintenance & Management Consultant
+20100557398

Gears and Gearboxes

- Gears Kinematics
- Backlash
- Gear accuracy testing and inspection.
- Material and heat treatment
- 2- Shaft & Hub Connections
 - Shaft and associated components.
 - Keys
 - Pins
 - Retaining rings
 - Splines
 - Set Screws
 - Shrink Discs.
 - Cone Clamping Elements
 - Star Discs
 - Clamping systems for torque motors
 - Star Spring Washers
- 3- Maintenance and Troubleshooting
 - Gearbox Lubrication Systems
 - Maintenance Practices for Gears and Gearboxes
 - Tooth Contact Checking
 - Gear Wear and Failure Modes

Technical Proposal

Outline

- Gears
- Shaft & Hub Connections
- Maintenance and Troubleshooting
- Case Studies

Financial Proposal

- Total number of course days are 5 days --4 Hours / Day
- Total course hours are 20 hours
- The course includes 30 minutes break each session

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