

# **Courses list of Lecturer**

## **Eng. Mohammed Mowafi**

### **I. Technical Courses**

- Borescope Inspection for GE Frame 5 Gas Turbine
- Valves Technology: Design, Function, Operation and Maintenance
- Power Plant Equipment Preservation Best Practices
- Heat Exchangers: Design, Operation, Cleaning and Maintenance
- Machinery Failure Analysis and Troubleshooting, Practical Machinery Management for Process Plants
- Steam turbine operations and maintenance
- Gas Turbine Operation and Maintenance
- Bearings and bearing failure analysis
- Basics of vibration analysis
- Introduction to gas turbines
- Principles and constructional features of gas turbines
- Combined cycle gas turbine performance
- Vibration measurement and analysis
- Combined cycle gas turbine performance
- Mechanical maintenance of rotating equipment
- Root cause failure analysis
- Condition monitoring and vibration control of machines
- Maintenance planning and scheduling
- Rotating equipment – intro to gas turbines, pumps & compressors operation & maintenance
- Introduction to steam, boilers & thermodynamics
- Steam generators and HRSGs (boilers)
- Design of firefighting systems
- Gas Turbine Operation, Controlling and Analysis of Operation Data
- Fundamentals of thermodynamics and its applications
- Fundamentals of diesel engines and its applications
- Fundamentals of valves and its applications
- Fundamentals of pumps and its applications
- Fundamentals of compressors and its applications
- Solar energy engineering for future
- Pipe work system

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- Codes and standards
- Gas turbine unit malfunctions
- Separators and separation principles
- Heat exchangers and reboilers
- Shaft alignment and Soft Foot
- Centrifugal Pumps according to API 610
- Mechanical Engineering in Oil & Gas
- Gears and Gear Boxes
- Vibration and Balancing
- Centrifugal Compressors
- Bearing and Lubrication
- Positive Displacement Pumps
- Packing and Seals
- Inspection, Maintenance and Troubleshooting of Rotating Equipment
- Power System Analysis Using ETA Pro® Software
- Building Management Systems and Automation
- Plant Management System Based Operational Utilization Activities
- Design and Integrity Stress Analysis of Piping Systems
- The best strategies in reliability-centered maintenance planning involve documenting the methods, implementing recommendations, and addressing challenges.
- Advanced Techniques in Maintenance Management.

## **II. Specialists Courses**

- Commissioning Specialist of Combined Cycle Power Plant
- Boilers Major Overhaul Specialist
- HRSGs Major Overhaul Specialist
- Boilers Feed Water Pumps Major Overhaul Specialist
- Gas Turbines Major Overhaul Specialist

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## **Eng. Mohammed Mowafi**

- Steam Turbines Major Overhaul Specialist
- Condensers Major Overhaul Specialist
- Reciprocating Compressors Major Overhaul Specialist
- Axial Compressors Major Overhaul Specialist
- Plate Type Heat Exchangers Major Overhaul Specialist
- Shell and Tube Heat Exchangers Major Overhaul Specialist
- Main Steam Valves Major Overhaul Specialist
- Control Valves Major Overhaul Specialist
- Stop Valves Major Overhaul Specialist
- BOP Major Overhaul Specialist