



شركة ميرك العربية السعودية
MEIRC Saudi Arabia

Control & Operation of Industrial Gas Turbines

Duration 5 Days

Introduction

This course will provide a comprehensive understanding of heavy duty gas turbines operation and maintenance. Gas Turbines operating principles, its components and auxiliary systems will be covered. Performance and maintenance of gas turbines will also be explained.

Who Should Attend ?

Operators , technicians, senior technicians, engineers and senior staff who are directly and indirectly involved in the operation, inspection and maintenance and they requiring knowledge of gas turbines.

Course Objectives

Upon completion this program Participants will be able to:

- **Gain a basic understanding of the main components and subsystems of gas turbine systems**
- **Learn about various auxiliary systems including instrumentation, controls and monitoring systems, deaerators, and feedwater heater systems**
- **Learn some basics about transformers and generators**
- **Discover the basics required in minimizing operating cost and optimizing efficiency, reliability, and component longevity for gas turbine**
- **Learn about the monitoring and control of environmental emissions**
- **Gain some insight into predictive and preventive maintenance, reliability, and testing**
- **Discover some of the latest technology in all of the above**

Identify methods for self-improvement

Course Outlines:

Gas Turbine Overview

Gas Turbine Applications

Gas Turbine Cycles

Gas Turbine Power Augmentation Techniques

Gas Turbine Emission Reduction

Gas Turbine Configurations

Gas Turbine Operation Envelop

Gas Turbine Mechanical Components

Axial-Flow Turbo-compressors

Combustors

Gas Turbines

Auxiliary Systems

Loop oil System

Bearings

Seals

Fuel Systems

Gas Turbine Control Systems

Normal Operation

Load and Frequency Fluctuations

Start-up Sequencing

Shutdown Sequencing

Gas Turbine Protection System



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Gas Turbine Monitoring System

Instrumentation and Measurements

Scheduled Inspection

Bore scope Inspection

Maintenance Strategies

Gas Turbine Troubleshooting

Performance Deterioration

High Temperature Effects

Fouling Problems

Fatigue Problem

Vibration Problems