



*Training Course:
Advanced Performance Analysis and
Troubleshooting for Power Plants*

*28 February - 4 March 2027
Sharm El-Sheikh (Egypt)
Sheraton Sharm Hotel*

Training Course: Advanced Performance Analysis and Troubleshooting for Power Plants

Training Course code: EN6064 From: 28 February - 4 March 2027 Venue: Sharm El-Sheikh (Egypt) - Sheraton Sharm Hotel Training Course Fees: 5100 € Euro

Introduction

Power plants operate under complex thermodynamic and operational conditions where performance optimization and rapid troubleshooting are critical to ensuring efficiency, reliability, and profitability. Advanced performance analysis enables engineers to identify inefficiencies, diagnose faults, and implement corrective actions to maintain optimal plant operation.

This program, designed by Global Horizon Training Center, equips participants with advanced analytical tools and practical techniques to evaluate power plant performance, identify operational issues, and apply effective troubleshooting strategies across generation systems.

Course Objectives

By the end of this program, participants will be able to:

- Analyze power plant performance using key thermodynamic principles
- Evaluate efficiency of turbines, boilers, and auxiliary systems
- Identify performance losses and operational deviations
- Apply advanced troubleshooting techniques
- Interpret plant data and performance indicators
- Optimize plant operation for improved efficiency and reliability
- Diagnose faults in mechanical, electrical, and control systems
- Implement corrective and preventive measures

Target Audience

This program is designed for:

- Power Plant Engineers and Operators
- Mechanical and Electrical Engineers
- Maintenance and Reliability Engineers
- Energy and Utility Professionals
- Control and Instrumentation Engineers
- Technical staff involved in plant performance analysis

Outline

Day 1: Fundamentals of Power Plant Performance Analysis

- Overview of power generation systems
- Thermodynamic principles and efficiency
- Performance parameters and KPIs
- Heat rate and energy balance analysis
- Data collection and monitoring

Day 2: Performance Analysis of Key Systems

- Boiler performance and efficiency
- Steam and gas turbine performance analysis
- Condenser and cooling system evaluation
- Auxiliary systems performance
- Identifying performance losses

Day 3: Advanced Diagnostic Techniques

- Root cause analysis RCA methodologies
- Fault detection and diagnostic tools
- Data-driven analysis and trend evaluation
- Condition monitoring techniques
- Performance benchmarking

Day 4: Troubleshooting and Problem Solving

- Common operational problems and solutions
- Mechanical and electrical fault diagnosis
- Control system troubleshooting
- Emergency response strategies
- Case-based problem solving

Day 5: Optimization and Continuous Improvement

- Performance optimization strategies
- Energy efficiency improvement techniques
- Maintenance and reliability enhancement
- Best practices in plant operation
- Case studies and real-world applications

Registration form on the Training Course: Advanced Performance Analysis and Troubleshooting for Power Plants

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