

GAS TURBINE OPERATIONS MANAGEMENT

Course Objectives

To understand the management of Operations of a Gas Turbine.

Course Description

The use of Gas Turbines in the areas of Power Generation, Petrochemical and Pipeline Industries has increased considerably in the last few years. The development, in particular, of Combined Cycle and Combined Heat and Power applications has accelerated the use of Industrial Gas Turbines. This course will cover the operations of the various types of Gas Turbine and Gas Turbine applications. The focus of this course will involve the monitoring of the performance of these machines, analysing their operation, cost management and cost reduction. This session will be presented at our training facility allowing the delegates to benefit from the extensive operational experience and knowledge of the engineers based at this site.

Who Should Attend

An essential course for those managers/engineers involved in the operations of Gas Turbines. This course will also be of considerable value to those shift leaders/engineers seeking to gain a better understanding of operational concepts and management. Maintenance engineers seeking to further their career in Operations Management will also benefit from attending this course.

Pre-Requisites

All Attendees should have a sound power generation background.

Course Outcome

At the end of this course you will be able to manage the operations of a Gas Turbine.

Course Outline

Day 1

Introduction

Types of Gas Turbine and Gas Turbine Applications

Heavy Duty Gas Turbines
Aero-Derivative Gas Turbines
Two-shaft Gas Turbines
Simple Cycle/Combined Cycle/ Combined Heat and Power Applications

Day 2

Gas Turbine Operations

Operating Philosophies
Performance/Efficiency Calculations
Performance Improvement Techniques
Performance Monitoring
Environmental Control Techniques
Environmental Control Monitoring (Nox)

Day 3

Gas Turbine Operations

Retrofitting/Installation of Environmental Control Systems
Washing Operations
On-Line Washing
Off Line Washing
Recording Operational Data

Control System Interfaces

Vibration/Pressure/Temperature Monitoring
Diagnostic Systems

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Day 4

Gas Turbine Maintenance

Breakdown/Preventative Maintenance
Maintenance Management Systems
Calculating Inspection Intervals
Inspection Planning (Major, Hot Gas Path, Combustion)
Maintenance Documentation and Reports
Evaluating Maintenance Effectiveness

Day 5

Operations Management

Cost Management
Cost Reductions
Shift Operations
Maintenance Implications of Efficient Operations

Course Review and Feedback