

# GAS TURBINE OPERATIONS WITH MK IV SPEEDTRONIC CONTROL SYSTEM (REF:OTSMKIV001)

## Course Objectives

To obtain an understanding of the operations of a MK IV Control System.

## Course Description

This course covers the operations of a Gas Turbine as controlled by a MK IV Control System. The course will introduce the student to the Major Components of a Gas Turbine and associated systems. Operational sequences will be discussed for the major varieties of GE Gas Turbines and Gas Turbine applications.

## Who Should Attend

This is an excellent course for plant operators/technicians responsible for the day-to-day operations of a Gas Turbine. The course will also benefit maintenance personnel who are involved in the troubleshooting of operational problems. Shift supervisors and Team Leaders will also find the course beneficial.

## Pre-Requisites

All Attendees should have a sound power generation background and have used a MK IV Control system.

## Course Outcome

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

## Course Outline

### Day 1

#### *Introduction*

Introduction to Gas Turbines  
Gas Turbine Thermodynamics  
Major Components of a Gas Turbine  
Accessory Components of a Gas Turbine

### Day 2

#### *Gas Turbine Systems*

Lube Oil System  
Hydraulic Oil System  
Fuel Systems  
Cooling and Sealing Air System  
Starting Systems  
Additional Systems

### Day 3

#### *Gas Turbine Operations*

Starting/Shutdown Operations  
Loading/Unloading Operations  
Special Operations (Water washing, cranking etc)

### Day 4

#### *MK IV Control System*

Overview of MK IV Control System  
Operation Screens and Parameters  
MK IV Control System Theory



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## Day 5

*Troubleshooting/Fault Finding (Using Simulator)*

Alarm Handling (Process and Diagnostic)  
Function and usage of Trip History  
Basic Ladder Logic Troubleshooting

## Course Review and Feedback

