MK V SPEEDTRONIC CONTROL SYSTEM MAINTENANCE

Course Objectives

To enable an engineer to be fully conversant with all aspects of the MK V Control System and would have significantly increased confidence/experience in the areas of troubleshooting/fault finding.

Course Description

The MK V Speedtronic Control System is a complex and multi-faceted system. This course provides a detailed examination of all the main aspects of the MK V Control System. This will include MK V Speedtronic Hardware, Software and a detailed evaluation of Control System Theory/Sequencing. The student will also benefit from a detailed description of troubleshooting techniques and will be allowed to practice these skills with a variety of simulated faults on a Speedtronic Gas Turbine Simulator.

Who Should Attend

This is an essential course for those engineers/technicians involved with the troubleshooting of Gas Turbine faults using a MK V Speedtronic Control System. Gas Turbine operators who are looking to advance their career potential would find the course useful and would those Team Leader/Shift Supervisors wishing to increase their knowledge of the MK V Speedtronic Control system.

Pre-Requisites

All Attendees should have a sound power generation background and experience on MK V.

Course Outcome

At the end of this course you will be able to maintain a gas turbine using a MK V Control System.

Course Outline

Day 1

Introduction
Gas Turbine Overview
MK V Control System Hardware Overview

Day 2

MK V Control System Hardware continued
Hardware Jumpers
I/O Capability
I/O Report Schedule

Day 3

MK V Control System Principles

MK V Sequencing

Rungs, Primitives, Big Blocks
Start up Sequence
Speed Control
Temperature Control
Using Dynamic Rung Display

Day 4

Creating Sequencing

Adding new I/O Point
Adding Control Signals
Writing / editing rungs

MK V Software (<I>)

Password Administration
IDOS Operating System
Directory Structure
Types of Files

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Day 5

MK V Displays (<I>)
Modifying an Operator Display
Creating a new Display
Configuring the Main Menu

Day 6

Calibration
Creating a User Defined Display
MK V Servo Regulators
Calibration Procedure
Use of Diagnostic Counters Software
Autocalibrate

Day 7

Calibration continued
I/O Configurator
EEPROM Downloader
Troubleshooting
Hardware troubleshooting
Use of LLC Display
Terminal Interface Monitor

Day 8

Troubleshooting continued
Trip History Display
Configuring Trip History Display
Real Time Plots
Triggered Plots
Trending

Day 9

Troubleshooting continued
View Programs

Additional Topics

Using the Backup Operator Interface
Configuring the Backup Operator Interface
Logic Forcing

Day 10

Additional Topics continued

Backing up software
Configuring an <I> Processor
Installing an Arcnet Card

Course Review and Feedback