

# ROXBY



Training Solutions

## Speedtronic Mark V Maintenance

## Course Content

### Aim

The Mark V Maintenance Course offers a curriculum that emphasises a hands-on approach to learning the process of monitoring, maintaining, improving the availability of the Mark V Control System. Upon the successful completion of the course, the candidates will be able to:

- Have a good knowledge of the Mark V Control System components.
- Carry out troubleshooting and maintenance using the operator interface.
- Have a good knowledge of the Mark V documentation.
- Understand the flow of control signals in and out of the Mark V
- Carry out calibration and maintenance of servo valve regulators and feedback devices.
- Use the control sequence program to understand the control system.
- Understand the synchronizing system for generator drive turbines.
- Manage alarms and customise alarm messages.
- Understand the operator interface displays, edit and create displays.

### Pre-Requisites

Control and Instrumentation Technicians and Engineers with a basic knowledge of turbine technology and personal computers.

### Course Duration

This course is of 10 days in duration

### Optimum Numbers

Maximum of 6 candidates is recommended.

### Training Aids

PowerPoint Presentation, course notes, hand-outs and discussion.

### Course Syllabus

#### Gas Turbine Control Fundamentals Revision

Gas Turbine Principles of Operation

Governing System Requirements

#### Mark V Panel Hardware

Panel Layout

Cores, I/O Card, Terminal Boards

Troubleshooting

## **Course Syllabus Continued**

Wiring Diagram

### **Gas Turbine Control**

Startup, Speed, Temperature and Other Controls  
Protection

### **Control Displays**

User's Manual

### **Control System Software**

IDOS

File Descriptions

### **Software Tools**

Modifying and Downloading Control Configuration

Data Acquisition on Mark V Interface

Software Backup

CSP and Big Block Language

### **Troubleshooting**

Gas Turbine Process Alarms

Mark V Panel Diagnostic Alarms

Rung Display

### **Calibration Procedures (Manual and Auto)**

GCV, SRV and IGV