

## **CLASS #104 – 505/50E Digital Steam Turbine Speed Control**



### **Description**

This class will provide you the opportunity to learn more about the 505 steam turbine control. Ideal for those who need the understanding of how the 505 control, actuators, and their associated accessories allow their turbines to operate together, either on or off the infinite bus (utility) or operating a mechanical drive. During the course the hardware and software configuration / monitoring will be explained.

### **CLASS OBJECTIVES**

*Upon successful completion of this course, the student will be able to:*

- Demonstrate a strong foundation on governor control theory pertaining to the 505 steam turbine controls.
- Field program and tune the controls and stroke the actuators.
- Demonstrate an understanding of the different modes of operation such as; manual start, semi-automatic start, automatic start.
- Describe the different types of control such as speed/load, cascade, auxiliary, remote and extraction/admission control.
- Demonstrate an understanding of the operation and reason for a steam map.

### **CLASS OUTLINE**

#### **A. Overview of the 505/505E hardware**

- Review of the two-line display and keyboard.
- Review of the inputs and outputs including correct customer wiring.

#### **B. Control Functionality (Hardware and Software)**

- Description of the possible functions of the control system.
- Detailed review of the operation of each of the different functions and how they relate to each other
- Discussion of the configuration procedure.
- Hands on operation of the control system.

#### **C. Basic Power Management**

- Description of the different power modes of operation such as; droop, isochronous and isochronous load sharing as well as grid Import and Export Power.

#### **D. Test**

- Test to gauge the understanding of the participants

### **Course Duration**

The course runs for three (3) days and is conducted at No.8 Joo Koon Crescent, Singapore. We can offer this course as part of an on-site training program (details available on request). Class size is limited to a maximum of eight (8) students.



## **Attainment**

A "Certificate of Attainment" is awarded to students who successfully pass a written examination.

*The instructor reserves the right to modify the class content to best suit the needs of the class*