

# Powergen Training Ltd. Technical Training Consultants

Training and Consulting Services for the Power Generation Industry

### Gas Turbine Control Course 3days (or 5 if required)

#### **Course Objectives:**

The course goal is to teach participants the function of the gas turbine control system. The course will enable the participants to:

- Explain and trouble-shoot the gas turbine control cabinet hardware
  - Control system hardware
  - Cabinet power supply and breakers
  - Marshalling rack
  - P&F signal converters and relays
  - Overview of sub-systems
- Understand the control and protection concept
  - Open and closed loop control functions
  - Machine protection using 3 channel concept (incl. protection matrix)
- Explain and trouble-shoot the gas turbine application software
  - Sequencer programs and release criteria
  - Analyze and simulate conditions in software

#### **Course Contents:**

- Control system specific KKS endings
- Cabinet and rack layout
- Signal flow and conditioning
- Process function plans PFUP
- Protection concept and relevant function blocks
- Open and closed loop control functions
- Gas turbine operation concept including sequencers

#### Location:

• Onsite at your location of choice

#### Prerequisites:

- Plant Overview and Introduction Course (or similar experience)
- Operator Station Training (or similar experience)
- Advant Control System Course (or similar experience)

#### **Course Format:**

- Classroom
- Group Exercises
- Q&A
- Site visits to electronic and control room
- Work on the actual equipment and/or training rack



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#### Remark:

- It would be an advantage if you had your own training rack (typically built from spares, we can assist with the setup and identification of components required)
- At least one spare computer is required per 2 students to allow for installation of the engineering software already available.