



Gas Turbines Operation, Inspection & Maintenance, Troubleshooting

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COURSE CONTENT

Aim

To introduce operators and maintenance personnel to the routine operation, inspection & maintenance and troubleshooting procedures required to attain high levels of availability and reliability of the gas turbine.

Pre-requisites

Personnel with some working knowledge of Gas Turbine operation and maintenance.

Course Duration

The course is of 5 days in duration.

Optimum Number

The maximum number of participants is 20.

Training Aids

Each delegate will receive a hand out of the course notes plus a course cd.

Assessment

Participants will receive an end of course assessment if required by the client. If required this process will be agreed with the client in advance of the course delivery.

Course Objectives

At the end of the course, the delegates will be able to:

- Describe the principles of thermodynamics of gas turbine.
- Identify the types of gas turbines based on its technology.
- Describe the Gas Turbine Performance.
- Describe gas turbine principles of operation.
- Identify major components/assembly and their function.
- Differentiate between single-shaft and two-shaft gas turbines.

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- Describe key parameters affecting gas turbine performance.
- Describe basic controls used in gas turbines.

COURSE CONTENT

- Gas turbine general overview, operating principles, installation layout
- Description of Gas Turbine Components - Air compressor, Combustion chamber and principles of emission reduction, Journal and thrust bearings and Oil, air sealing systems, cooling and sealing air systems.
- Main Gas Turbine Auxiliary Systems-Lube oil system, Control and hydraulic oil system, Starting system, Gas fuel system, Liquid fuel system, Atomizing air system, Gas detection system, Fire fighting system, Ventilation system & Turbine inlet & exhaust air system
- Gas Turbine Control System - Control and protection systems and Description of gas turbine start-up and shut-down sequences.
- Key Parameters during Gas Turbine Start-up and Operation - Operating parameter monitoring and operating parameter evaluation.
- Turbine Performance Curves.
- Gas Turbine Assembly.
- Maintenance Overview - Operating factors affecting maintenance intervals.
- Scheduled Maintenance - Scheduled inspection, Bore-scope inspection, Disassembling and reassembling procedures and Component acceptability criteria.
- Emergency Maintenance.
- Spare Parts Required for Inspections.
- Troubleshooting

Dates available on request