

Course Name: Gas Turbine Technology

Code:

DATE:

Course Objective:

- Principles of operation of gas turbines
- Design of modern gas turbines
- Control and protection system of gas turbines
- Different stages involved in the operation of a gas turbine cycle
- Problems of gas turbines and recommended solutions
- Identify different technologies and applications of gas turbines
- Recognize different parameters affecting the performance of a gas turbine
- Identify the requirements and the procedures for safe start up and shutdown of the turbine
- Understand the importance of TMR control system of the reliability of gas turbine
- Understand how to detect and solve the problems of gas turbines

Who Should attend?

- All employees involved in the gas turbines technology design, operation, control and troubleshooting
- Mechanical Engineers
- Operators
- Foremen
- Supervisors
- Control Engineers

Course Outline:

Kingdom of Saudi Arabia

Building number: 8992 Abu Ali Road .

P: +966133615552

Al Waha district.

P: +966133611134

Unit number: 3 - Jubail: 35514 – 2302

M: +966 505907654

DAY 1

Basics of Gas Turbines

- Introduction to Gas Turbine
- Simple Gas Turbine Cycle
- Heavy Duty Gas Turbine
- Industrial Gas Turbine
- Aero derivative Gas Turbine
- Advanced Gas Turbine
- Pressure Ratio and Firing Temperature

DAY 2

Design of a Gas Turbine

- Single, Spool and Split Shaft Gas Turbines
- Principle of Operation of Axial Compressors
- Design of IGV, Stators and Rotors
- Can, Annular and Can-annular combustors
- Fuel Nozzles
- Principle of Operation of an Axial Turbine
- Impulse and Reaction Turbine Blades
- Techniques of Internal Cooling of the Blades

DAY 3

Auxiliaries, Protection and Control Systems

- Lubrication System
- Gas Fuel System

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- Oil Fuel System
- Hydraulic System
- Starting System
- TMR and Simplex Control System
- Critical Redundant Sensors
- Protection System

DAY 4

Performance and Operation of a Gas Turbines

- Operating Parameters
- Factors Affecting the Performance of a Gas Turbine
- Pre- start check out list
- Start Up and Shutdown Procedures
- Synchronizing procedure
- Normal Loading
- Speed Control and Temperature Control
- Trip Oil system

DAY 5

Monitoring System and Troubleshooting

- Vibration Monitoring and Analysis
- Abnormal Conditions of a Gas Turbine
- Axial Compressors Problems
- Combustors Problems
- Axial Turbine Problems

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In Association with
AVT Academy



Course Duration: (5) Day

Venue:

Time: Numbers of hours: Hours

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