Course Name: **Gas Turbines: technology and Inspection**

Code:

DATE:

Course Objective:

- Identify and learn about technology and relative merits of gas turbine power plants.
- Analyze thermodynamically the gas power plant cycles.
- Learn and make performance analysis for the gas turbine main components.
- Analyze the variables, which affect the performance parameters such as power, efficiency, and heat rate.
- Learn about different maintenance activities on gas turbine.
- Learn about testing, operation, monitoring, and troubleshooting of gas turbines.
- Learn about new technologies gas turbine inspection and monitoring.
- Apply troubleshooting techniques to gas turbine.

Who Should attend?

This course is targeted at technicians and engineers involved in operation and maintenance of Gas Turbines. Experienced engineers and maintenance specialists will also benefit from attending this course, as will those managers concerned with the maintenance scheduling and repair aspects of Gas Turbines.

Course Outline:

DAY 1

- Introduction to Gas Turbines
- Gas Turbine Terminology (Power Output, Heat Rate, Efficiency)
- Gas Turbine Manufacturers: Siemens, GE, Alstom etc
- Types and Applications of Gas Turbines: Heavy Duty, Aero-derivative, Generator Drive, Compressor Drive, Simple Cycle, Combined Cycle
- Fundamental Thermodynamics of Gas Turbines: Thermodynamic cycles
- Gas turbine performance calculations

DAY 2

- Gas Turbine Components
- Major Accessory Components of a Gas Turbine: Compressor, Combustor, Turbine.
- Accessory Components of a Gas Turbine: Load Gearbox, Accessory Gear Box, Generator, Compressor, Bearing and Seals

DAY 3

- Gas Turbine Systems: Fuels and Fuel Supply Systems (Gas, Liquid), Lube Oil System, Hydraulic Oil System, Starting Systems, Cooling and Sealing system, Control System and Instrumentation, DLN/DLE and WLN systems and components
- Gas Turbine Operating Philosophies
- Gas Turbine Operation: Startup, Shutdown and Normal operation, Recording Operational Data

DAY 4

- Routine Inspections and Inspection Scheduling
- Gas Turbine Inspection and monitoring
- NDT Techniques as applied to gas tubine.
- Inspection of Bearings/Seals and Journals and Alignment Checks.
- Gas Turbine Maintenance Approaches: Preventive, predictive and corrective.

DAY 5

- Gas Turbine Commissioning
- Root cause analysis
- Introduction to Machinery Troubleshooting
- Gas Turbine Troubleshooting
- General Discussion and Case Studies

Course Duration: (5) Day

Venue:

Time: Numbers of hours: Hours

Kingdom of Saudi Arabia

Building number: 8992 Abu Ali Road .

Al Waha district.

Unit number: 3 - Jubail: 35514 – 2302

P: +966133615552

P: +966133611134

M: +966 505907654

info@anmartraining.com www.anmartraining.com