

EXPERT & PROFESSIONAL EXCELLENCE FOR TRAINING & CONSULTATIONS

Maintain Compressors and Engine Drivers

Course Outline:

Module (1) Introduction to Maintenance

- Basics of Maintenance
- Oil & Gas equipment maintenance standards
- Preventive maintenance
- Corrective's maintenance
- Maintenance software and benefits
- International procedures and guidelines
- Best practices & troubleshooting techniques

Module (2) Compressors

- Compressor types: positive displacement (reciprocating and rotary), and dynamic (centrifugal and rotary), compressor operation, gas laws
- Compressor performance measurement, inlet conditions, compressor performance, energy available for recovery
- Positive displacement compressors, reciprocating compressors, reciprocating compressors, diaphragm compressors.
- Rotary compressors, rotary screw compressor, lobe type air compressor, sliding vane compressors, liquid ring compressors
- Dynamic compressors, centrifugal compressors, axial compressors
- Air receivers, compressor control, compressor unloading system
- Intercoolers and after coolers, filters and air intake screens

Module (3) Motors & Drives

• Introduction to AC induction motors and their construction, rotor slip and principles of operation, equivalent circuit, torque-speed characteristics, motoring and regenerative region of operation

شركة الخبرة والتميز المهنى للتدريب والإستشارات



- Starting of induction motors and associated techniques
- Speed control methods of induction motors
- Characteristics of motors, enclosures and cooling methods, application data, design characteristics, insulation of AC motors
- Failures in three-phase stator windings, predictive maintenance, motor troubleshooting, diagnostic testing for motors
- Basic principles of AC Variable-Speed Drives (VSD's)

Module (4) Engines

- Basic functions of the internal combustion engine
- Introduction to Engines (Construction, classifications, Design features, operational cycles, number of cylinders & arrangement, ignition type & cooling system)
- Petrol and diesel engines
- How two-stroke engine works
- The working procedure of four-stroke engine
- The differences between petrol and diesel engines
- The main components of any engine
- Engines ancillary system and what they do

Module (5) Review and Implementation

- Engine Maintenance system (EMS)
- Vibration Analysis & Predictive Maintenance
- A brief review of the important topics
- Case studies.

Location	Cairo
Start Date	13 July 2025
End Date	17 July 2025