



Gas Compressors Maintenance, Overhauling & Repair

Training Program



Introduction:

This course will present the key activities involved in operation, control, maintenance and troubleshooting of gas compressors. These activities are vitally important for the efficient and safe operation of the plant.

This course is intended to familiarize engineers, technicians and operators with compressor condition monitoring techniques which are used as a technical approach to failure prevention.

The course will also discuss vibration measurements and guidelines for preventive, predictive and corrective maintenance. Keeping compressor vibration under control makes a big impact on the long life of bearings, seals and other elements which improve compressor reliability and safety. The course will provide the best practices for various maintenance techniques including overhauling and repair. Problem solving and troubleshooting techniques as well as the methods for extending the lifetime of equipment will be discussed and explained. The course will feature:

- Guidelines of how to diagnose the level of deterioration of bearings
- Safe operation of compressors and driving machines
- Best practices for preventive, predictive and corrective maintenance
- Root cause analysis of compressor vibration
- Techniques for problem solving and troubleshooting

Who should attend?

Mechanical Engineers, General Supervisors, Consulting Engineers, Design Engineers, Foremen, Supervisors, Technicians, Maintenance Personnel, Engineers of all disciplines, Supervisors, Team Leaders and Professionals in Maintenance, Engineering and Production Managers, Maintenance Personnel, Heads of Maintenance and Operation, Chemical Engineers, Equipment Specialists, Technical Engineers, Operation Engineers, Planning Engineers, Process Engineers, Reliability Specialists, Boiler Plant Construction Managers, Consulting Engineers, Design Engineers, Insurance Company Inspectors, Operation, Maintenance, Inspection and Repair Managers, Supervisors and Engineers, Plant Engineers, Senior Boiler Plant Operators, Repairers and Installers

Course Objectives:

By the end of this course, delegates will be able to:

- Interpret results of compressor vibration
- Better understand bearing failures
- Implement the correct preventive and predictive maintenance method
- Apply elements of condition monitoring
- Use methodologies for problem solving and troubleshooting

Course Outline:

- Overview of operational characteristics of process gas compressors
- Monitoring of compressor operation and performance parameters
- Typical problems in operation of centrifugal and axial compressors
- Methods for surge prevention
- Typical problems in operation of screw compressors
- Compressors control systems and instrumentation
- Compressor protection and safety system
- Compressor condition monitoring system

- Vibration monitoring and control measurements
- Vibration root cause analysis
- Bearing failures and lubricant oil analysis
- Mechanical seal and dry seal maintenance
- Preventive, predictive and corrective maintenance: scope & procedure
- Inspection of most critical parts
- Leak control and prevention
- Problem detection and diagnostics: root cause analysis
- Troubleshooting procedures in normal and abnormal conditions
- Overhaul and repair options