

MAINTENANCE OF GAS COMPRESSORS

MCE055

COURSE DESCRIPTION

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

COURSE GOAL

To enhance the participants' knowledge, skills and abilities necessary to understand the best practices for preventive, predictive and corrective maintenance; apply root cause analysis of compressor vibration; how to diagnose the level of deterioration of bearings; safely operate of compressors and driving machines; and problem solving and troubleshooting techniques.

COURSE OBJECTIVES

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

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

WHO SHOULD ATTEND

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

COURSE DURATION

5 Working Days

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COURSE OUTLINES

- 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.
- Workshop: Problem solutions.
- 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.
- Workshop: Problem solutions.
- 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.
- Conclusions and summary.

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