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| **Course Details** |
| **Course Title:** | **PUMPS & COMPRESSORS: PREDICTIVE MAINTENANCE & DIAGNOSTICS** |
| **Language:** | English |
| **Course Type:** | Public |
| **Location** | Dubai  |
| **Date:** | **18-22 September 2016** |
| **Duration:** | **5 Days** |
| **Fees:** | **$ 4,000** |
| **Discount:** | **10%**discount if your nomination for **3** Participants**15%**discount if your nomination for **4** Participants |
| **URL** | **http://www.astdubai.co/programs/details/7652\_** |

PUMPS & COMPRESSORS: PREDICTIVE MAINTENANCE & DIAGNOSTICS

# Course Description:

Pumps and compressors are generally critical machines in any production process, and hence it is vital that maintenance is most effective for these units.

This course aims to provide delegates with a comprehensive understanding of how to use a combined predictive and preventive maintenance approach to achieve maximum reliability and greatest understanding of any deterioration that may occur.

Course Objective

The programme assumes familiarity with the design and construction of pumps and compressors. From this starting point it adopts an analytical approach to understanding the failure of all types of pumps and compressors.

From a component-by-component perspective, the programme investigates the root causes of failure, and relates these to operating conditions and process parameters. Design, installation, lubrication and wear related failure mechanisms are identified and a detailed understanding of the troubleshooting and diagnostic methods needed to detect and identify these is developed.

The programme provides participants with the knowledge needed to be effective in the inspection, monitoring and diagnostics of pumps and compressors, with emphasis placed upon the importance of a combined condition monitoring and strip-down inspection approach to maintenance.

# Who Should attend?

Engineers, supervisory and technical staff involved in the monitoring, predictive maintenance and diagnostics of pumps and compressors.

# Course Outline

## DAY 1

Friction, lubrication and wear mechanisms.

Adhesive wear, abrasive wear, fatigue and fretting

Machinery life cycles

Mechanical issues, balancing and alignment

Statistical reliability analysis

## DAY 2

Reliability models

Root cause of, symptoms and detection mechanisms for imbalance

looseness

misalignment

gear problems

bearing problems

Cavitation, causes and prevention

## DAY 3

Anti-friction bearings: types, lifetime, mounting, applications, related problems

Plain and pad bearings, thrust bearings: operation, maintenance, incidents

Mechanical seals, types, operation, related problems

Other seals for positive displacement pumps and reciprocating compressors

Performing a balance

## DAY 4

Vibration monitoring

Overall and spectral measurements

Vibration limits

Introduction to spectrum analysis

Lubricant monitoring

Shape, size, amount, chemical composition of debris

Analytical techniques

## DAY 5

· The role of condition monitoring in pump and compressor maintenance Diagnostic methods

· Capabilities and limitations of condition monitoring, and the need for a combined approach

· The importance of plant inspection

· Measurement devices, and what to monitor and where

# Training Methodology:

* Lecture
* Exercises
* Case Studies
* Video Presentation
* Question and Answer Session
* Live Audit

We trust the above price meets your requirements and we look forward to hear from you soon. Please do not hesitate to contact us should you require any further information.