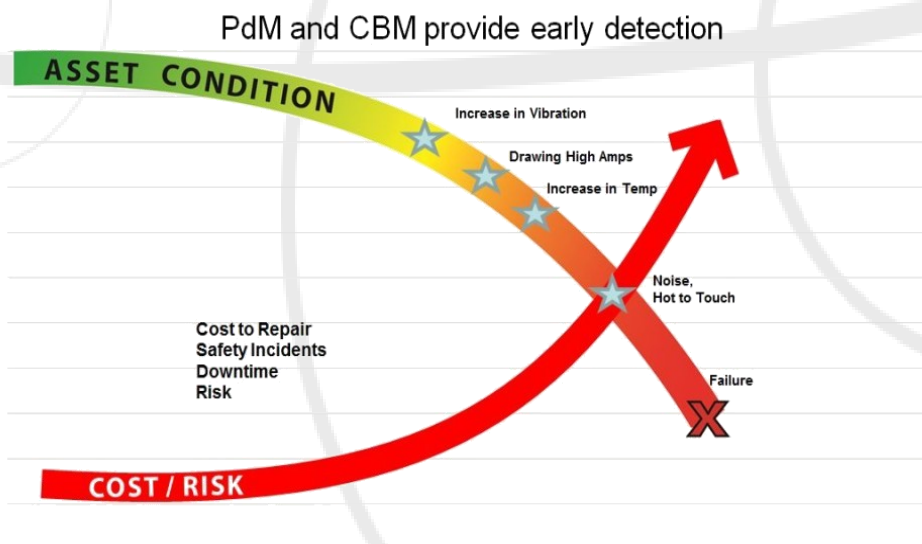


MAINTENANCE TECHNOLOGIES MONITORING, INSPECTION & ANALYSIS

Oct. 13 - 17, 2019
Manama, Bahrain



PdM and CBM strategies reduce cost and mitigate risk

Early Bird Discount & Registration

Register and pay 25 days prior to the event date and get 15% discount.
Registrations will close 15 days prior to the start of the Course.

Course Overview:

Modern Maintenance Technologies provides all the delegates great opportunities to optimise the performance of their systems and equipment to achieve maximum return on investment (ROI). By reducing costs and downtime, while achieving high levels of safety and quality. However, with the rapid pace of change in maintenance, and the emergence of many new concepts, methods and technologies, it is often difficult for managers with maintenance responsibilities to judge which of these new technologies are most appropriate to their specific needs, and which will provide them with the greatest benefits in practice.

The very basic maintenance philosophy one cannot deny: clean, tight and lubricate and how to implement these correctly in almost all industries (an old maintenance approach to even ultra modern assets). A good maintenance is a simple maintenance, an old good maintenance view even in the modern maintenance approach. This seminar provides an overview of a number of Modern Maintenance Technologies associated with equipment, systems, people and management. It describes both the background to each technology, and its practical application to achieve the best bottom-line results.

The seminar looks at which areas of the maintenance manager's responsibilities will benefit from individual technologies. It also shows how they can be integrated to support each other, how to choose an appropriate selection of technologies, and how to develop an action plan for their implementation.

Course Objectives:

After completing this course, participants will be able to:

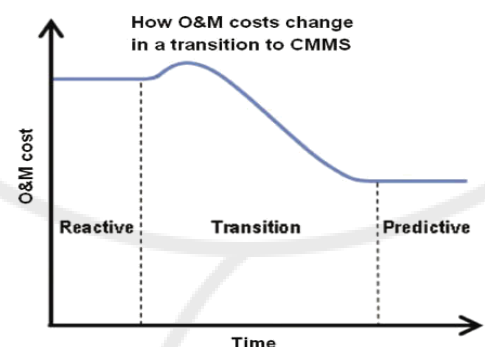
- ◆ Apply the appropriate Modern Maintenance Technologies which each of these Technologies contributes to Maintenance Efficiency and Performance.
- ◆ Develop an action plan to utilize these technologies in their own areas of responsibility, fitting them into the overall maintenance strategy, and measuring benefits
- ◆ Identify the Maintenance Optimization Best Practice Techniques and Identify the equipment failures and its implications to the operational organization.
- ◆ Design a Maintenance Plan for the upkeep and Maintenance Inspections of Static and Rotating Plant.
- ◆ Develop an action Plan to utilize these Technologies in their own areas of responsibility, fitting them into the overall Maintenance Strategy, and Measuring Benefits.
- ◆ Identify the world class maintenance standards and how to apply them and describe the importance of the maintenance strategy for plant maintenance activities.
- ◆ Develop and Implement KPI's and benefits tracking tools and develop Organizational Competency related to Maintenance.

Who Should Attend:

The course is designed for Supervisors, Team Leaders and Professionals in Maintenance, Engineering and Planning. Also for anyone who wishes to update themselves on Modern Maintenance Technologies.

Course Language:

The Presentation, supplied documents, and workshop exercises of the course are in **English** however, based on the trainees' desires, oral presentation or discussion can



Course Contents:

Module (01) Challenging the Traditional Approaches

- 1.1 The Road to Asset Management
- 1.2 Cost/Benefit Decision
- 1.3 Right Amount of Maintenance
- 1.4 Using Decision Support Tools
- 1.5 Interruption Problems
- 1.6 Symptoms of Harmonic Problems
- 1.7 Symptoms of Transient Problems
- 1.8 General Approach

Module (02) Risk Based Maintenance (RBM)

- 2.1 Understanding Risk
- 2.2 The SEVEN Stage of RBM
- 2.3 Failure mode Effect & Criticality Analysis (FMECA)
- 2.4 Problem - Local Area Networks
- 2.5 Problem - High Neutral-Ground Voltages

Module (03) Statistical Failure Analysis

- 3.1 Importance of History Records
- 3.2 Pareto Effects
- 3.3 Elementary Statistics
- 3.4 Collection, Analysis and Interpretation
- 3.5 Reliability Models
- 3.6 Maintenance Cost Optimization

Module (04) Vibration Analysis

- 4.1 Overall and Spectral Representation
- 4.2 The Big FIVE Machine Faults
- 4.3 Detecting Faults using Vibration
- 4.4 Diagnosing Faults using Vibration
- 4.5 Essentials of Vibration Monitoring

Module (05) Condition Based Maintenance

- 5.1 What to Monitor and Where?
- 5.2 Condition Monitoring Systems
- 5.3 Trending of Monitored Data
- 5.4 Frequency of Measurement
- 5.5 Parameter Symptom Limits
- 5.6 Remaining life Prediction

Module (06) Machinery Condition Monitoring

- 6.1 Purpose Condition Monitoring
- 6.2 Thermal Monitoring
- 6.3 Lubrication Monitoring
- 6.4 Essential of Vibration Monitoring
- 6.5 Operation Parameters Monitoring
- 6.6 Physical and Visual Monitoring

Module (07) Maintenance Logistics & Cost Control

- 7.1 Managing Maintenance Spare Parts & Logistics
- 7.2 Optimizing Spare Parts Inventory Levels
- 7.3 Maintenance Budgeting
- 7.4 Controlling Maintenance Cost
- 7.5 Life Cycle Cost Concepts
- 7.6 Utilization Resources

Module (08) Applying RBM and RCA

- 8.1 Failure Patterns
- 8.2 Choosing the Appropriate Maintenance Task
- 8.3 The Role of Operators, Autonomous Maintenance
- 8.4 Finding Root Causes to improve Maintenance
- 8.5 Root Cause Analysis (RCA)
- 8.6 Implement Effective Solutions

Module (09) Maintenance Assessment & Benchmarking

- 9.1 Process Audits
- 9.2 Benchmarking & Assessments
- 9.3 What to improve & Goal Setting
- 9.4 Developing an Improvement Action
- 9.5 Monitoring and Communicating Results

Module (10) Performance Management Aspects

- 10.1 Continuous Improvement
- 10.2 Performance Management
- 10.3 Implementation Aspects
- 10.4 The Key Elements of Asset Management
- 10.5 Investment in People and Technology
- 10.6 Reliability and Operational Uptime of Process

Course Summary & Conclusion

Registration Form:

Please fill the information below:

Nominee Name:			
Company Name:			
Position Title:		Department:	
Phone:		Mobile:	
Email:			
Company Address:			
Do you want to request this to be conducted as an In-House Course? <input type="checkbox"/> NO <input type="checkbox"/> YES <i>Please fill the required additional information below</i>			
Date Required:		No. of Participants:	
Preferred Venue:		Other Requirements:	

Course Fees:

The amount of **3500 USD** will be charged for the course fee and Full Payment is required prior to commencement of the course.

Payment Methods:

A confirmation will be sent upon your registration. Note that full payment must be made prior to the event. Only those delegates who have paid in full will be admitted to the event. All payments should be to APEX Account:

Bank Name : Emirates NBD

Branch : Jebel Ali Branch, Dubai, UAE

IBAN No : AE260260001024622899402

Swift Code : EBILAEADJAZ

Cancellation:

If you are unable to attend the course you may send a substitute delegate.

Cancellation should be made 15 days prior to the course conduction. Failure to cancel within 10 days will be to pay the course fee in full amount.

Registration Methods:

Email : info@apex-dubai.com

Fax : +971 4 454 2910

Website : www.apex-dubai.com

General Information:

- ◆ Closing of Registration will be two (2) weeks prior to the course date.
- ◆ APEX can assist and provide corporate rates for the hotel accommodation.
- ◆ Course fees will cover Course Materials, Certificate of Participation, Coffee Breaks and Lunch.
- ◆ In-House course is also available upon request and can be customized as per client's needs.

Contact us:

Tel : +971 4 445 8567

Fax : +971 4 454 2910

Email : info@apex-dubai.com

Website : www.apex-dubai.com