

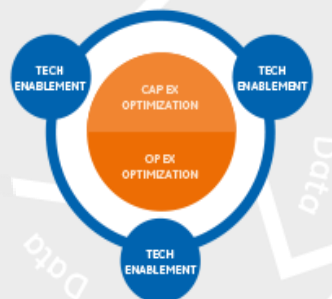
OPTIMIZING EQUIPMENT MAINTENANCE & REPLACEMENT DECISIONS

Optimizing Equipment Life – Cycle Decisions

Oct 20 - 25, 2019

Dubai, UAE

Service Model
Optimization



Asset
Management

Lifecycle
Management

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:

Many Companies have equipment used in Production and Testing that needs to be regularly maintained or replaced. A large defense contractor, Company X, has many advanced pieces of Production Equipment that support its Operations. These pieces of Production Equipment operate in conjunction with support equipment. Breakdowns can cause a variety of issues. In some cases, they occur in support equipment when the production equipment is not in use.

These can have severe impacts in the short term for lost award money from current contracts, and in the long-term will reduce the number of contracts and programs. Company X has requested a review and recommendations on the current support equipment maintenance and replacement processes to prevent excess work or costly breakdowns. Bad maintenance is responsible for equipment failures, disrupted production schedules, delays in deliveries, and poor product quality.

In this course we will focus on the techniques of optimization – the single most important thrust of this learning program. Whether the decision is about workcrew sizes, or the replacement of component parts or entire equipment units, the concept of making the very best, most optimal, decision will be the principal concern of the training program. This will also to equip the participating maintenance managers, planners and schedulers and engineers with the knowhow to select the most appropriate analytical tools for their maintenance decision-making.

Course Objectives:

After completing this course, participants will be able to:

- ◆ Understand the importance of Physical Asset Management and Identify the nature of failures, failure classifications, failure patterns.
- ◆ Know the differences among the various maintenance methods and the appropriate application of each.
- ◆ Understand the benefits and cost-effectiveness of implementing an effective PPM program.
- ◆ Know the guidelines for developing a World Class PPM program by using a 12-step process.
- ◆ Learn Advanced Preventive/Predictive Maintenance strategies and reflecting the growing focus of industrial safety & show how safety objectives relate to the optimization Models.
- ◆ Learn the Techniques to ensure PM Program impacts equipment Reliability and explain how operating dynamics analysis manages Machinery that can't be monitored by the Five Traditional Predictive Maintenance Technologies.

Who Should Attend?

The course is designed for Reliability & Maintenance Engineers and Supervisors. Also Planning and Performance Engineers are recommended to attend this course.

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 be **Bilingual** (English and Arabic).



Course Contents:

Module (01) Introduction to Equipment Maintenance

- 1.1 Importance of Physical Asset Management
- 1.2 Data and Measurement Requirements
- 1.3 Planning and Set-Up Maintenance Program
- 1.4 Monitoring and Follow up Maintenance Program
- 1.5 Showing and Discussion Results
- 1.6 Operating Dynamics Analysis Always
- 1.7 Traditional Predictive Maintenance
- 1.8 Safety & Health Considerations during Maintenance

Module (02) Nature of Equipment Failure

- 2.1 Understand the Nature of Failures
- 2.2 Failure Classification and Patterns
- 2.3 Failure Modes & Effect Analysis
- 2.4 Cascading / Vital Failure
- 2.5 Sporadic / Chronic Problems

Module (03) Related Maintenance Methods

- 3.1 Breakdown Maintenance
- 3.2 Preventive Maintenance
- 3.3 Cost of Poor Lubrication
- 3.4 Fundamentals- Oil & Grease
- 3.5 Storage & Handling Methods

Module (04) Maintenance Excellence Framework

- 4.1 Maintenance Management Concepts
- 4.2 Managing Equipment Reliability
- 4.3 Optimizing Maintenance Decisions
- 4.4 Achieving Maintenance Excellence

Module (05) Measuring Maintenance Performance

- 5.1 Overall Maintenance Performance
- 5.2 Collecting the Data
- 5.3 Maintenance Productivity
- 5.4 Maintenance Organization
- 5.5 Efficiency of Maintenance Work
- 5.6 Maintenance Costs
- 5.7 Maintenance Quality
- 5.8 Applying for Individual Equipment

Module (06) Proactive Maintenance

- 6.1 Life Cycle Costing
- 6.2 Maintenance Prevention Design
- 6.3 Purchase Specifications
- 6.4 Acceptance Testing
- 6.5 Additional Maintenance Cost

Module (07) Maintenance Economic & Cost Effective

- 7.1 Total Cost Visibility/ Life Cycle Cost
- 7.2 Maintenance Costs breakdown Structure
- 7.3 Maintenance Methods and Cost Centers
- 7.4 Area of Reducing Maintenance Cost
- 7.5 Increase Equipment Up Time
- 7.7 Improve Product Quality
- 7.8 Cut Inventory Cost

Module (08) Weibull Analysis

- 8.1 Weibull Analysis Steps
- 8.2 Advantages
- 8.3 Median Ranks
- 8.4 Censored Data or Suspensions
- 8.5 The Three-Parameter Weibull
- 8.6 The Five-parameter Bi-Weibull
- 8.7 Confidence Intervals
- 8.8 Goodness of Fit

Module (09) Enhancing Reliability through Replacement

- 9.1 Economic Life of Capital Equipment
- 9.2 Before and After Calculations
- 9.3 The Repair versus Replacement Decision
- 9.4 Technological Improvement
- 9.5 Life Cycle Costing

Module (10) Optimizing Maintenance Decisions

- 10.1 Basic Statistics and Economics
- 10.2 Maintenance Optimization Models
- 10.3 Optimizing Maintenance Activities
- 10.4 A Maintenance Assessment Case Study

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

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