



A 2-day intensive program on

Predictive Maintenance & Trouble Shooting - *PUMPS & COMPRESSORS*

20-21 May 2009 | Crowne Plaza Mutiara Hotel, Kuala Lumpur

FOCUSING ON

- Preventive Maintenance
- Predictive Maintenance
 - Tools And Equipments
 - Oil Analysis
 - Vibration Analysis
 - Thermography
 - Ultrasonics
 - Best Approaches Towards Predictive Monitoring
 - Continuous Improvement Programs
- Designing A Proper Maintenance Mix
- Reliability Centered Maintenance
- Failures
 - Failure Mechanism
 - Types Of Failures
 - Failure Analysis
 - Failure Mitigation Measures

COURSE INTRODUCTION

Pumps and Compressors are the most common equipment found in any operating plant. New advances in maintenance techniques enhance the operability and increases plant uptime. Predictive maintenance practices combined with preventive maintenance best practice solutions offer the course participants a comprehensive and systematic approach to help achieve profit goals and higher reliability.

WHO SHOULD ATTEND

- Consulting Engineers
- Maintenance Engineers
- Project Engineers
- Maintenance Superintendents
- Maintenance Personnel
- Service Engineers
- Operators
- M & E Foremen
- Technical Assistants
- Technical Coordinators
- Purchasing and Materials Control Personnel
- Operation & Maintenance Personnel
- Technicians
- New/Trainee Engineers
- Contractors

METHODOLOGY

Participants learn through lectures with interactive presentation (Questions & Answers). As the subject progresses, active audience participation is encouraged along the entire course.

Day 1

Wednesday, **20th May 2009**

9:00

COURSE INTRODUCTION

- The Role Of Condition Monitoring In Pumps And Compressors
- Capabilities And Limitations Of Condition Monitoring
- Combined Approaches Of Condition Monitoring

10.00

UNDERSTANDING PREVENTIVE MAINTENANCE COMPONENTS

- Friction
- Understanding Wear
- Mechanical Issues - Alignment, Looseness, Vibration, Imbalance
- Root Cause Analysis Of Failures - Bearings, Seals, Impeller

10.30

Morning Coffee

10.45

cont. **UNDERSTANDING PREVENTIVE MAINTENANCE COMPONENTS**

1.00

Lunch and Zohor

Program topics, speakers and schedules published herein are confirmed as at printing time. Please refer to the event's timetable page at www.cmtevents.com for the most up-to-date information.

2:00 **PREDICTIVE MAINTENANCE COMPONENTS**

- Lubrication
 - Types Of Lubricants
 - Oil Analysis
- Vibration Analysis
- Thermography
- Ultrasonics

3.30 Afternoon Tea

3.45 cont. **PREDICTIVE MAINTENANCE COMPONENTS**

5.00 End of Day 1

Day 2
Thursday, **21st May 2009**

9.00 **DESIGN THE PROPER MAINTENANCE MIX**

10:30 Morning Coffee

10:45 **RELIABILITY CENTERED MAINTENANCE**

- Selected RCM
- Seven Questions In RCM
- Role Of A Facilitator
- Forming The RCM Group

1:00 Lunch and Zohor

2:00 **FAILURES**

- Types Of Failures
- Failure Mechanism
- Failure Analysis
- Failure Mitigation

3:30 Afternoon Tea

3:45 **Case Studies**

5.00 End of Program

AFTER ATTENDING THIS COURSE, YOU WILL RETURN TO YOUR JOB...

- Understanding clearly the key aspects of piping systems including design, operation, maintenance, failure prevention, and troubleshooting, including the applicable codes, standards and industry practices.
- Obtaining practical and effective methods and guidelines to assist in achieving, cost-effective operation and maintenance of piping systems with high technical integrity.
- Developing skills in troubleshooting and improving existing piping systems.

Name	_____
Position	_____
Email	_____
Name	_____
Position	_____
Email	_____
Tel	_____
Fax	_____

Company	_____
Address	_____
City/Postcode	Country
Approving Manager's Name	_____
Position	_____
E-mail	_____

Fees: The full Registration Fee includes cost of all sessions, luncheon, coffee/tea & documentation.

	1 Person	Group fee for 3 or more* (from the same company)
Regular Fee	RM2695	RM2395 (MIN SAVINGS OF RM900)

* Terms and conditions apply.

Cancellations, Refunds & Transfers: A full refund will be promptly made for all written cancellations 3 weeks before the meeting. Thereafter, cancellations are not refundable. A substitute may be made at any time.

Cheques : Crossed & payable to
"Centre for Management Technology Sdn Bhd"

Photocopy Registration Form to Preserve Brochure Copy. May 2009

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TO REGISTER

Online : www.cmtevents.com
 Email : adminkl@cmtsp.com.sg
 Fax : (603) 2162 6393
 Tel : (603) 2162 7322
 Post to : Lot 7.03, 7th Floor, North Block, The Ampwalk,
 218 Jalan Ampang, 50450 Kuala Lumpur

CERTIFICATE OF COMPLETION

A Certificate of Completion will be awarded upon successful completion of each program. This serves as evidence of your personal and professional commitment to you career.

PROGRAM TIMING

*Registration: 8.30 am, Program Begins: 9.00 am,
 Morning Coffee: 10.30 am, Lunch: 1.00 pm to 2.00 pm,
 Tea Break: 3:30 pm, Program Ends: 5.00 pm*

TELEGRAPHIC TRANSFER

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LEARN FROM THE BEST

ROBERTO MARAVILLA, BS in Mech Eng., was acting Consultant to Petronas Plants & Qatar Petroleum on the following subjects; Pipelines & Piping System and Mechanical Equipment Management.

Prior to that, Roberto was a Corporate Assessor attached to a Multinational Oil and Gas company, where he evaluated the competency of engineers, operators and technicians. He was also responsible for identifying, analysing, developing and delivering of courses/training programmes for the staff. Roberto has also customised courses for other clients, notably ESSO Production Malaysia, SUDAN Petroleum and PETRO-VIETNAM oil refinery.

He has taken the lead in the development and delivery of the multinational company initiative on "World Class Plants" with subjects like Reliability Centered Maintenance – A New Approach, Pipelines and Piping Systems, Mechanical Equipment Management, Operations and Maintenance of Boilers, he has also developed and delivered a host of other generic courses like Pumps, Compressors, Furnace, Distilling Columns, Separators, Heat Exchangers, Internal Combustion Engines, Gas Turbines, Storage Tanks.

Roberto also was a Deputy Project Manager responsible for a project implementation, which totalled a contract value of USD 40 million and has also served as a Project Manager in a Nuclear Power Plant overseas.

With his vast experience, he is able to provide hands-on and practical training sessions, which have received excellent feedback from past clients from both the local and international markets.