

**22-23 APRIL 2010**

JW MARRIOTT HOTEL  
KUALA LUMPUR

*A 2- day intensive program on*

# **BOILERS**

- Design, Construction,  
Commissioning,  
Operations, Maintenance  
& Repair

## **FOCUSING ON**

- Boiler Types, Classification, Components And Application
- Boiler Systems
  - Combustion System
  - Air System
  - Water System
  - Fuel System
  - Steam System
- Interlocks And Trips
- Boiler Operations
  - Make – Up Feedwater Supply
  - Blowdown System
  - Start Up And Shutdown Procedures
- Boiler Performance And Efficiency
- Maintenance & Repair
  - Corrosion
  - Welding
  - Relief Valves
- Best Practice – Condensate System

## OBJECTIVES

This course is a two day intensive course concentrating on the following main topics:

1. Design, Construction and Commissioning
2. Operations
  - a. Losses due to Incorrect Operations
  - b. Losses due to Fuel & Inefficient Heat Management
  - c. Losses due to poor operational practices
3. Maintenance and Repair
  - a. Leak Testing and Repair
  - b. Boiler Tube Replacement
  - c. Boiler Drum Leak Test and Repair
  - d. Water Demineralization System

The course will discuss the new technology that is now available on a commercial basis to practically ELIMINATE water treatment chemicals costs associated to make –up water, thus further enhancing operational efficiency of the system.

## METHODOLOGY

Participants learn through lectures with interactive presentation (Questions & Answers). The program is designed with case studies, review and discussion. As the subject progresses, active audience participation is encouraged along the entire course with open forums and Question & Answers.

## Day One

Thursday, 22nd April 2010

- 9:00 Program Opening and Course Introduction
- 9:30 **BOILER TYPES, CLASSIFICATION, COMPONENTS AND APPLICATION**
- 10:30 Morning Coffee
- 10.45 **BOILER SYSTEMS**
- Combustion System
  - Air System
  - Water System
  - Fuel System
  - Steam System
- 1:00 Lunch & Zohor
- 2:00 **BOILER SYSTEMS .cont**
- 3:30 Afternoon Tea
- 3:45 **INTERLOCKS AND TRIPS**
- Boiler Limits, Control Strategies and Control Logics
- 5.00 End of Day 1

## Day Two

Friday, 23rd April 2010

- 9:00 **BOILER OPERATIONS**
- Make – up Feedwater Supply
    - Water Solids Impurities Control
    - Chemical Treatment
    - Alternative Source
    - Water Analysis Schedule
  - Blowdown System
    - Regular blowdown
    - Emergency Blowdown
    - Continuous Blowdown
    - Supplementary Blowdown
- 10:30 Morning Coffee
- 10.45 **BOILER OPERATIONS .cont**
- Start up and Shutdown Procedures
    - Cold Startup
    - Normal Shutdown
    - Emergency Shutdown
    - Long Term Shutdown
- BOILER PERFORMANCE AND EFFICIENCY**
- 1:00 Lunch & Zohor
- 2:00 **MAINTENANCE & REPAIR**

## A. CORROSION

- Tube Problems
  - Scale
  - Tube Rupture
  - Buckling
  - Leaking Tubes
- Drum Concerns
  - Level
  - Pitting
  - Drum Internals
  - Elongation

## B. WELDING

- Patch Welds
- Weld quality

## C. RELIEF VALVES

3:30 Afternoon Tea

### 3:45 **BEST PRACTICE – CONDENSATE SYSTEM**

- Materials
- Piping Connections

4:30 Q & A

5:00 End Of Course

## LEARNING PARTNER

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

Prior to that, Roberto was a Corporate Assessor with a Multinational Oil and Gas company, where he evaluated the competency of engineers, operators and technicians. He was responsible for identifying, analyzing, developing and delivering of courses/training programs. Roberto has also customized courses for Esso Production Malaysia, Sudan Petroleum and PetroVietnam 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, Pipelines and Piping Systems, Distillation Columns, Storage Tanks & Maintenance of Boilers.

Roberto was a Deputy Project Manager responsible for a project implementation valued at USD 40 million. He 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.

## WHO SHOULD ATTEND

- Managers
- Boiler Engineers
- Steam Production Operators and Maintenance Personnel
- Design Engineers
- Maintenance Engineers, Superintendents and Personnel
- Service Engineers
- Project Engineers
- Newly hired Engineers
- Consultants
- Contractors
- Chemical Treatment Specialists
- M &E Foremen
- Technical Assistants
- Technicians

# BOILERS – DESIGN, CONSTRUCTION, COMMISSIONING, OPERATIONS, MAINTENANCE & REPAIR

22-23 APRIL 2010 | KUALA LUMPUR

BAYARAN POS JELAS  
POSTAGE PAID  
PEJABAT POS BESAR  
KUALA LUMPUR  
MALAYSIA  
NO. WP 0722

Please fax us the completed registration form

Name (Dr/Mr/Mrs/Ms)

Company Name

Designation

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(Office)

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If undeliverable, please return to:

46A-6, Mentari Business Park, Jalan PJS 8/2, Bandar Sunway 46150 Petaling Jaya Selangor, Malaysia

Update your details at [www.cmtevents.com](http://www.cmtevents.com)

Photocopy Registration Form to Preserve Brochure Copy, April 2010

## CMT'S 2010 KL EVENTS

- **Financial Strategies For Managing Costs, Growing Revenues & Increasing Cash Flows**  
23-24 February 2010 | Kuala Lumpur
- **Rekabentuk Sistem Bekalan Elektrik**  
24-25 February 2010 | Kuala Lumpur
- **Advanced Excel Spreadsheet Skills**  
8-9 March 2010 | Kuala Lumpur
- **Practical Project Management For Mechanical, Electrical And Instrumentation Engineers**  
22-23 March 2010 | Kuala Lumpur
- **Best Practices In Presentation Of Financial Statements And Annual Reports**  
22-23 March 2010 | Kuala Lumpur
- **Predictive Maintenance & Trouble Shooting – Pumps & Compressors**  
29-30 March 2010 | Kuala Lumpur

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## HOW TO REGISTER

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POST TO: Lot 7.03, 7th Floor, North Block,  
The Ampwalk, 218 Jalan Ampang,  
50450 Kuala Lumpur

## FEES

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

1 Person	Group fee per person for 3 or more* (from the same company)
RM1995	RM1695 (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.

## PAYMENT

### By Telegraphic Transfer

ACCOUNT NAME:

**Centre for Management Technology Sdn Bhd**

A/C No: **3 - 0903390 - 12**

BANK: Public Bank Berhad

BRANCH: Grd Floor, Menara Public Bank  
Jalan Ampang

swift code: PBBEMYKL

*TT must include additional RM75 for Beneficiary's Bank charges. Delegates must bear all bank charges and local taxes (if applicable). Fees must be NETT of ALL charges.*

CHEQUES:

Crossed & payable to

**"Centre for Management Technology Sdn Bhd"**

## CERTIFICATE OF COMPLETION

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

## COURSE TIMING

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