

# 5 - 6 December 2007 | Hotel Mulia Senayan, Jakarta, Indonesia Design Considerations Construction, Erection & Commissioning inspection & Maintenance sting and Repairs

#### **COURSE HIGHLIGHTS:**

- Basic Design Concepts
- Types of storage tanks
- Construction and Erection of typical aboveground storage tank
- Operations
  - Operating Principles
  - · Operating Problems
    - Foaming
    - Leaks and repairs
    - Corrosion
- Maintenance, Repair and Troubleshooting
  - Bottom plate thickness inspection and analysis
  - · Tank verticality
  - · Leak test
  - Sludge removal and tank cleaning
  - · Sludge treatment and disposal
- LPG Tanks
  - · Introduction to LPG Tanks
    - Basic design
    - Features
    - Applications
  - Safety
    - Major incidents
    - LPG Safety
    - Governing Codes
    - Best Practices

# Day 1 Tuesday, 5th December

- 8:30 Welcome address & Course Introduction
- 9:00 BASIC DESIGN CONCEPTS
  TYPES OF STORAGE TANKS
  - Floating Roof
  - Fixed Roof
  - Bullet Tanks
  - Spherical Gas Tanks
- 10:30 Discussion followed by Coffee
- 11.00 CONSTRUCTION AND ERECTION
  - Floating Roof Tank
  - Fixed Roof Tank
  - Bullet Type Gas Tanks
  - Spherical Gas Tanks
  - Welding procedures
  - Plate pre-forming
  - · Bund provision
- 1:00 Discussion followed by Lunch
- 2.00 TANK OPERATIONS
  - Operating pressures
  - Vaporization and its effect on operating pressures
  - Operating tanks with higher fluid density
  - · Wind load effects on verticality
  - Inspection of vents and other safety features
  - Leak Test
- 3:30 Tea Break

- 4.00 **OPERATING PROBLEMS** 
  - Water formation due to vaporization
  - Product contamination
  - Sludge deposits at tank bottom
- 5:00 Discussion followed by End of Day One

## Day 2 Wednesday, 6th December

- 8:30 MAINTENANCE AND REPAIR PART 1
  - · Corrosion inhibition
  - Tank painting and coating
- 10:30 Discussion followed by Coffee
- 11:00 MAINTENANCE AND REPAIR PART 2
  - · Painting inspection and repair
  - Sludge removal and tank cleaning
  - Sludge treatment disposal
  - · Tank leak repair
    - Hot tapping
    - Leak plugs
  - :00 Discussion followed by Lunch
- 2:00 INTRODUCTION TO LPG TANKS
  - · Basic design
  - Safety incidents and safety concerns
  - Governing Codes
  - Best Practices

# 3:45 (CONTINUED) INTRODUCTION TO LPG TANKS

5:00 Discussion followed by Close of Day Two

#### Who Should Attend

- Consulting Engineers
- Maintenance Engineers
- Project Engineers
- Maintenance Superintendents
- Maintenance Personnel Service Engineers
  - Operations, Maintenance and Instrumentation Leadmen
  - Plant Operators Chargemen
- Technical Assistants
   Technical Co-ordinators
  - Operation & Maintenance Personnel
  - Technicians New/Trainee Engineers
    - Contractors

#### **COURSE TIMING**

Registration: 8.00 am, Course Begins: 8.30 am, Morning Coffee: 10.30 am, Lunch: 1.00 pm to 2.00 pm, Break: 3:30 pm, Course Ends: 5.00 pm

#### **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 you career.

Program topics, speakers and schedules published herein are confirmed as at printing time. Please refer to the event's timetable page at <a href="https://www.cmtevents.com">www.cmtevents.com</a> for the most up-to-date information.

#### **LEARN FROM THE BEST**

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, analysing, developing and delivering of courses/training programmes. Roberto has also customised 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.

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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. Roberto conducted in September 2007, two inhouse training courses on Storage Tanks for Fluor Daniel inc.

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# REGISTRATION

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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	USD1,095	USD795 (MIN SAVINGS OF USD900)

<sup>\*</sup> 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.

Photocopy Registration Form to Preserve Brochure Copy. Dec 2007

### **TO REGISTER**

Online: www.cmtevents.com Email: sasha@cmtsp.com.sq Fax: (65) 6345 5928 (65) 6346 9124 80 Marine Parade Rd

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Singapore 449269

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If undeliverable, please return to: 80 Marine Parade Road # 13-02 Parkway Parade Singapore 449269

Update your details at www.cmtevents.com

#### **COURSE VENUE**

CMT has arranged special discounted room rate at USD 125++ / USD 135++ (Mulia Signature Single/Double) per room per night for delegates at Hotel Mulia Senayan inclusive of 1 / 2 breakfast (subject to room & rates availability). Please reserve your room with the hotel directly, providing full credit card number and expiry date to: Valerina Anasthasia, Group Executive Hotel Mulia Senavan, Jl. Asia Afrika, Senavan

> Jakarta 10270, Indonesia Tel: 62 21 5753285 Fax: 62 21 2511858 Email: valerina.anasthasia@hotelmulia.com Cut off Date for Room Booking: 23 November 2007

# TELEGRAPHIC TRANSFER

Centre for Management Account Name:

Technology

A/C No: 251 - 004487 - 178 Bank: **HSBC** Singapore Branch: Marine Parade, Singapore Swift Code: **HSBC SGSG** 

Tmustinclude additional USD 21 for Beneficiary's Bank charges. Delegates must bear all bank charges and local taxes (if applicable). Fees

must be NETT of ALL charges.

#### ~ CMT'S UPCOMING EVENTS ~

# 10th Vietnam/Mekong **OGP Summit**

27-28 November 2007 • Hanoi

"10 Reasons to attend CMT's 10th VOGP 2007"

# Global Coal Methane **Energy Summit**

28-29 January 2008 • Singapore

"Investing in CBM Projects & Mitigating Risks" "Recent Advances in Coal Methane Capture & Carbon Trading Opportunities"

# Asia Oil Trade & Supply

28 - 29 February • Singapore

"Key drivers in crude and oil products prices and market balance"