

# **ASME Section VIII Division 1** Pressure Vessel Series

Discover the latest updates on ASME codes and practical session from the ASME guru

10th - 12th June 2020 at Kuala Lumpur, Malaysia





# Petrosync Distinguished Instructor **Mandar Mulay**

- 20 years hands on experience in design and integrity assessment of Piping Systems, Reactors & Storage Tanks, and Pressure Vessels Codes, Power Boilers, Heat Exchanger.
- Well conversant with the major industry codes & standards such as ASME PCC-2, ASME Sec. I, ASME B 31.1, B31.3, B31.4 and B31.8, ASME Sec VIII, BS-5500, TEMA, API-650, IS 803, API 579, etc.
- He has conducted Training Courses (ASME Sec. I, ASME B 31.3 Piping Codes, ASME Sec. VIII, API 579, ASME PCC-2 Repair practices, and Heat Exchanger Design Operations & Maintenance) in Saudi Arabia, Qatar, Bahrain and UAE for engineers from companies like Saudi Aramco, SABIC group of Companies, Qatar Petroleum, ADNOC, BAPCO, Gulf Petrochemicals

# **Petrosync Quality**

## **Limited Attendees**

The course has limited seats to ensure maximum learning and experience for all delegates.

You will receive a Certificate of Attendance bearing the signatures of the Trainer upon successful completion of the course. This certificate is proof of your continuing professional development.

#### Interactive Training

You will be attending training designed to share both the latest knowledge and practical experience through interactive sessions. This will provide you with a deeper and more long-term understanding of your current issues.

# **High Quality Course Materials**

Printed course manual will provide you with working materials throughout the course and will be an invaluable source of reference for you and your colleagues afterward. You can follow course progress on your laptop with soft copies provided.















# **Masterclass Overview**

This Three-day program offers detailed insight and thorough understanding of the most common ASME codes, pertaining to design/ engineering and testing of new pressure vessels namely Section VIII Div. 1 and it's relevant referencing codes. This course emphasizes understanding of 'stated' and 'implied' requirements (i.e. content and intent) of the codes. The participants would be explained in detail the mechanics of adopting and applying the code rules and design formulas for different Design conditions and Services.

ASME VIII Div. 1 is a very commonly adopted code which is comparatively easier to use, in comparison to ASME Section VIII Division-2.

This course is intended to give the participants the confidence and practice for carrying out design, fabrication and testing for new vessels and also will help to carrying out basic strength calculations. How to adopt code rules for different types of vessels and with various service conditions will be illustrated with case studies. Important code stipulation will be reviewed and discussed collectively with participants so as to address the difficulties and ambiguities they might have encountered during their working. This course will help the design engineers to assess the work of the suppliers/vendors as regards to drawing and calculation review/approval.

Over and all the course will make the attendees comfortable with the use of ASME codes and understand the basic concepts with better clarity. This will give the candidates a firm background for further studying in-service codes such as ASME PCC-2 or API-510.

# Masterclass Objectives

- Familiarize participants with the concepts and technical terms of the codes
- Know the basic concepts of the codes and their design fundamentals
- Understand salient features and differences between Div 1 and Div 2
- Know the design of Shell, Heads, and other pressure parts
- Learn design of nozzles and nozzle reinforcements
- Design for external pressure and Jacketed vessels
- Design requirements for low temperature operation
- Discover the fabrication requirements, assembly and welding requirements.
- NDT and Inspection procedures
- How to carry out pressure testing, certification and stamping of Pressure Vessels.
- General introduction to Integrity assessment of in-service vessels

# Specially Designed for

The course is designed for, but not limited to, mechincal, maintenance, and inspection / QAQC professionals who are involved in pressure vessel equipment.

- Design Engineers / Managers
- Mechanical Engineers / Managers
- Maintenance Engineers / Managers

- QAQC Engineers / Managers
- Inspection Engineers / Managers
- Reliability Engineers / Managers

Each attendee must bring a Laptop computer with Microsoft operating system and Scientific Calculator

# IN-HOUSE SOLUTIONS

# SAVE COST • IMPROVE PERFORMANCE • REDUCE RISK

PetroSync understands that in current economic climate, getting an excellent return on your training investment is critical for all our clients. This excellent training can be conducted exclusively for your organization. The training can be tailored to meet your specific needs at your preferred location and time. We will meet you anywhere around the globe.

If you like to know more about this excellent program, please contact on +65 3159 0800 or email general@petrosync.com

# ASME VIII DIVISION 1 - PRESSURE VESSEL SERIES

10<sup>th</sup> - 12<sup>th</sup> June 2020 at Kuala Lumpur, Malaysia

# Course Agenda

# Day 1

- Introduction to ASME codes
- Structure of ASME Sec. VIII Div. 1
- ASME Code system : Code revisions, Editions
- Pressure vessels included in ASME Codes
- Pressure vessels excluded in ASME codes
- Design principles adopted in ASME codes
- Concept of working pressure, design pressure, MAWP
- Allowable stress in ASME design
- Weld joint categories
- Weld joint types
- Concept of weld joint efficiency
- Design of cylindrical and spherical shells under internal pressure
- Static head calculations
- Types of dished heads.
- Design of Ellipsoidal heads
- Design of Torispherical heads
- Design of Hemispherical heads
- Design of Conical heads
- Case Studies and examples

# Day 2

- Nozzles and openings, reinforcement of openings
- Adequacy of weld joints for shells and nozzles
- Methods of design optimization, economical compliance.
- Quality Assurance System as per ASME codes
- Materials for pressure parts
- Materials for non-pressure parts
- Requirement of low temperature service
- Deciding impact test requirement
- Impact test acceptance criteria
- Fabrication requirements
- Tolerance on weld reinforcement / mis-align ments / fit-ups
- Weld joints in shells and nozzle attachments

# Day 3

- Deciding PWHT requirement
- PWHT methods and procedures
- Deciding nozzle orientations / man-ways/ inspection openings
- NDT of pressure vessels and selection
- Code requirement for radiography
- Acceptance criteria for elongated and rounded indications
- PT and MT requirements
- Acceptance criteria for PT and MT
- Hydrostatic and Pneumatic Tests
- Calculating test pressures, Inspection pressures, pressurization stages
- Vessel stamping and Name plate
- Introduction to Integrity assessment of in-service vessels
- Doubts and discussions/ Ouiz and feedback

# HYBRID TRAINING SOLUTIONS

# FOCUS TRAINING • REDUCE COST • ENHANCED RESULTS

Over the years, there has been a growing demand for hybrid training programs. It is an excellant option to maximize your training dollar for your specific training needs. We make it possible to run a training program that is customized totally to your training needs at a fraction of an in-house budget!

If you like to know more about this excellent program, please contact us on +65 3159 0800 or email general@petrosync.com

# ASME VIII DIVISION 1 - PRESSURE VESSEL SERIES

10<sup>th</sup> - 12<sup>th</sup> June 2020 at Kuala Lumpur, Malaysia



# Petrosync Distinguished Instructor Mandar Mulay

Major projects closely associated with, in his professional career so far are, **Qatar Chemicals, Shell, Castrol India, Reliance Industries, Cargill Foods USA**, etc.

His proficiency in **Piping Systems, Reactors & Storage Tanks, and Pressure Vessel Codes, Power Boiler, and Heat Exchanger** enables him to trace the similarities and differences of these codes. He also actively involved as Instructor for programs on the subjects of **API/ASME/TEMA codes, Integrity Assessment, Fitness for Service,** etc.

Along with his career in Engineering and Design Department in a multinational company at a very senior post for the last 20 years, he is also visiting faculty to a well known Engineering College in India for their P.G. Courses in Piping Design and Engineering.

Apart from being visiting faculty, He has also conducted several Training Courses ( **ASME Sec. I, ASME Sec. VIII, ASME B 31.3 Piping Codes**, **API 579 FFS code, ASME PCC-2 Repair practices, and Heat Exchanger Design Operations & Maintenance**) in Saudi Arabia, Qatar, Bahrain and UAE for engineers from companies like Saudi Aramco, SABIC group of Companies, Qatar Petroleum, ADNOC, BAPCO, DEWA, Gulf Petrochemicals etc. He has already conducted many times the training courses in API 579, where the participants rated him "Excellent" for these courses.

PROGRAM SCHEDULE		
08:10	Registration (Day1)	
08:10 - 10:00	Session I	
10:00 – 10:15	Refreshment & Networking Session I	
10:15 – 12:30	Session II	
12:30 – 13:30	Lunch	
13:30 – 15:00	Session III	
15:00 – 15:15	Refreshment & Networking Session II	
15:15 – 16:00	Session IV	
16:00	End of Day	

<sup>\*</sup>Schedule may vary for each training

# **COURSE DETAILS**

Title : ASME Section VIII Division 1 - Pressure Vessel Series

: 10<sup>th</sup> - 12<sup>th</sup> June 2020 Date Location: Kuala Lumpur, Malaysia

# **INVESTMENT PACKAGES**

Please checklist the package that you are attending!

	ASME VIII Division 1 Schedule	Price
⊐	10 <sup>th</sup> June - 12 <sup>th</sup> June 2020 at Kuala Lumpur, Malaysia	USD 2,295

	rials.
DELEGA	TE DETAILS
1st Delegate Name	Mr Mrs Ms Dr Others
Direct Line Number:	Email:
Mobile Number:	Job Title:
Department:	— Head of Department: ————————————————————————————————————
	Mr Mrs Ms Dr Others
Direct Line Number:	
Mobile Number:	Job Title:
Department:	— Head of Department: ————————————————————————————————————
	Mr  Mrs  Mrs  Dr  Others
Direct Line Number:	
Mobile Number:	Job Title:
Department:	Head of Department:
*Please fill all the details including mobile number. This hel is any urgent update (through whatsapp/call)	p us to contact participant if they are late in class or if there
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- If you have not received an acknowledgement before the training,  PAYMEN  ■ By Credit Card :  Please debit my credit card: □ Visa □ MasterCard	please call us to confirm your booking. T METHODS

### PROGRAMME CONSULTANT

Contact : Cay Aagen

: registration@petrosync.com Email

Phone : +65 3159 0800 Fax : +65 6826 4322

# TERMS AND CONDITIONS

#### DISCLAIMER

Please note that trainers and topics were confirmed at the time of publishing; however, PetroSync may necessitate substitutions, alterations or cancellations of the trainers or topics. As such, PetroSync reserves the right to change or cancel any part of its published programme due to unforeseen circumstances. Any substitutions or alterations will be updated on our web page as soon as possible.

#### **DATA PROTECTION**

The information you provide will be safeguarded by PetroSync that may be used to keep you informed of relevant products and services. As an international group we may transfer your data on a global basis for the purpose indicated above. If you do not want us to share your information with other reputable companies, please thick this box <a> □</a>

#### **CANCELLATION POLICY**

Delegates who cancel after the training is officially confirmed run by email, are liable to pay the full course fee and no refunds will be granted. You may substitute delegates at any time as long as reasonable advance notice is given to Petrosync.

In the event that PetroSync cancels or postpones an event for any reason and that the delegate is unable or unwilling to attend in on the rescheduled date, you will receive a credit voucher for 100% of the contract fee paid. You may use this credit voucher for another PetroSync to be mutually agreed with PetroSync, which must occur within a year from the date of postponement.

PetroSync is not responsible for any loss or damage as a result of the cancellation policy. PetroSync will assume no liability whatsoever in the event this event is cancelled, rescheduled or postponed due to any Act of God, fire, act of government or state, war, civil commotion, insurrection, embargo, industrial action, or any other reason beyond management control.

#### **CERTIFICATE OF ATTENDANCE**

80% attendance is required for PetroSync's Certificate of Attendance.

# **DETAILS**

Please accept our apologies for mail or email that is incorrectly addressed.

Please email us at registration@petrosync.com and inform us of any incorrect details. We will amend them accordingly

Find us on Social Media:

- PetroSync Global Pte Ltd
- PetroSync
- PetroSync

#### CHARGES & FEE(s)

- For Payment by Direct TelegraphicTransfer, client has to bear both local and oversea bank charges.
- For credit card payment, there is additional 4% credit card processsing fee.

# Confirmation

I agree to PetroSync's terms & conditions, payment terms and cancellation policy.

DAVMENT TERMS	Decimant is due in full at the time of registration. Full recomment is mondately for example
Date	:
Authorized Signature	:

: Payment is due in full at the time of registration. Full payment is mandatory for event attendance. PAYMENT TERMS

<sup>\*</sup> Price is nett excluding Withholding Tax if any and will be quoted separately. Please send us the withholding tax payment