

Enhance Your Repair of Pressure Equipment Knowledge and Skill by Learning Practical Things From The Expert!

10th - 12th December 2018 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

Course Objectives

- Familiarize participants with the concepts and technical terms of the standard
- Know the basic concepts of the standard and their design fundamentals
- Troubleshoot to resolve various in-service issues.
- Know the design philosophy of pressure parts
- Understand the in-service problems in pressure equipment and piping
- Learn the maintenance aspects in these equipment.
- Get introduced to all the repair techniques. (temporary and permanent)
- Discover the fabrication requirements, assembly and welding requirements.
- NDT and testing procedures for repaired equipment and piping

💸 Petrosync Quality

I imited Attendees

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

Certificate of Attendance

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.























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Course Overview

ASME PCC-2, being a relatively new standard and fairly popular, has proved to be useful worldwide for repair of pressure equipment and piping. Many large companies have adopted these procedures and incorporated them in their company specifications.

The intent behind this 3 day training program is to introduce this standard to all attendees and understand all the basic concepts and philosophy, as well as the various procedures for repair of pressure equipment and piping. We also will discuss the limitations and advantages/ disadvantages of all the procedures mentioned in the standard.

The correlation of this standard with other in-service codes and standards such as API-510/570/579/580 will also be understood and clarified to all attendees.

This course will not only be useful to maintenance engineers, but equally for all supporting disciplines such as design, operations and inspection engineers. It will help all engineers to collectively troubleshoot and resolve problems/ issues at site related to temporary/ permanent repairs of equipment and piping.

Specially Designed For

The course is designed for, but not limited to maintenance engineers, and design, operations and inspection professionals who are involved in equipment such as pressure vessels, heat exchangers, process columns, drums, piping, etc.

- Design Engineers / Managers
- Mechanical Engineers / Managers
- Maintenance Engineers / Managers
- QAQC Engineers / Managers
- Inspection Engineers / Managers
- Reliability Engineers / Managers

PROGRAM SCHEDULE

08:00 – 09:00	Registration (Day1)
09:00 – 11:00	Session I
11:00 – 11:15	Refreshment & Networking Session I
11:15 – 13:00	Session II
13:00 – 14:00	Lunch
14:00 – 15:30	Session III
15:30 – 15:45	Refreshment & Networking Session II
15:45 – 17:00	Session IV
17:00	End of Day

WHY YOU SHOULD ATTEND PETROSYNC'S EVENTS

- To ensure that all objectives of the course matches yours, all PetroSync programs are developed after intensive and extensive research within the industry
- PetroSync programs focus on your immediate working issues to ensure that you are able to apply and deliver immediate results in real
 work situations
- Application and implementation of industry knowledge and experience are the drivers for our course design, not theoretical academic lectures
- PetroSync training focuses on practical interactive learning tools and techniques including case studies, group discussions, scenarios, simulations, practical exercises and knowledge assessments during the course. Invest a small amount of your time to prepare before attending the course to ensure maximum learning
- PetroSync follows a rigorous selection process to ensure that all expert trainers have first-hand, up-to-date and practical knowledge and are leaders of their respective industrial discipline

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Course Agenda

Day 1:

- Introduction and Overview of ASME PCC-2
- Scope, Organization, and Intent
- Applicability and limitations of repair methods covered by ASME PCC-2
- Choosing correct repair technique for given defects
- Detailed Repair methods and Inspection techniques
- Welded Repairs
- Butt-Welded Insert Plates in Pressure Components
- Repair procedure and NDT of insert plate repair
- Weld Overlay to Repair Internal Thinning
- Pre-qualified repairs
- Burst testing method
- Welded Leak Box Repair
- Fabrication of Welded box
- Examination and testing

Day 2:

- Full Encirclement Steel Reinforcing Sleeves for Piping
- Type A and Type B sleeves and their applicability
- Weld Buildup, Weld Overlay, and Clad Restoration
- Examination and Testing
- Fillet Welded Patches
- Alternatives to Postweld Heat Treatment
- Alternatives to Traditional Welding Preheat
- Threaded or Welded Plug Repairs
- Flaw Excavation and Weld Repair
- Mechanical Repairs (Non-welding repairs)
- Mechanical Clamp Repair
- Freeze Plugs
- Damaged Threads in Tapped Holes

Day 3:

- Inspection and Repair of Shell and Tube Heat Exchangers
- Inspection Tube count
- Tube plugging
- Mechanical Plug
- Friction Plugs
- Examination and Testing
- Hot bolting
- Half Bolting
- Flange Repair and Conversion
- Pipe Straightening or Alignment Bending
- Pressure and Tightness Testing of Piping and Equipment
- Pneumatic Testing-Do's and Don'ts
- Nondestructive Examination in Lieu of Pressure Testing for Repairs and Alterations
- Relevance of ASME PCC-2 Standard with API 510 and API 570 Codes
- 8 Nos of case studies/ exercise demonstrating use of every importanttopic from the standard. (relevant case study will be taken up after completion of the chapter daily)

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Petrosync Distinguished Instructor Mandar Mulay

Mandar Mulay has about **20 years** hands on experience in design and integrity assessment of **Piping Systems**, **Reactors & Storage Tanks**, **and Pressure Vessels**, **Power Boiler**, **and Heat Exchanger**. He is well conversant with the major industry codes & standards such as **ASME Sec. 1**, **ASME B 31.1**, **B31.3**, **B31.4 and B31.8**, **ASME Sec VIII**, **ASME PCC-2**, **BS-5500**, **TEMA**, **API -650**, **IS 803**, **API 579 etc**.

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. 1**, **ASME Sec. VIII, ASME B 31.3 Piping Codes , API 579 FFS code and 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.

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 us on +65 3159 0800 or email general@petrosync.com

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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

COURSE DETAILS

Title : ASME PCC-2 (Repair of Pressure Equipment)

Date : 10th - 12th December 2018 at Kuala Lumpur, Malaysia

INVESTMENT PACKAGES

Please checklist the package that you are attending!

ASME PCC-2 Schedule	Standard Price	Group Discount □
10 th - 12 th December 2018 at Kuala Lumpur, Malaysia	SGD 2, 750	10% discount for groups of 3 registering from the same organization at the same time

- * Group discount is based on standard price
- * For 6 or more delegates, please contact us for more attractive package.

Authorized Signature:

- * To enjoy promotional offer, full payment must be made before the deadline.
- * Prices include lunches, refreshments and training materials. Discounts cannot be combined with other promotional offers.
- * Important: Please note that registration without payment will incur a SGD 200 administration fee.

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All bank charges to be borne by payer.	Please ensure that PetroSync Globa	l Pte Ltd receives the full i	nvoiced amount.	

PROGRAMME CONSULTANT

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Phone : +65 6415 4500 : +65 6826 4322 Fax

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 above. If you do not want us to with other reputable companies,

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el less than fifteen (15) working course or after the training is n by email, or who do not attend to pay the full course fee and no d. You may substitute delegates at asonable advance notice is given

roSync cancels or postpones an and that the delegate is unable or on the rescheduled date, you will ner for 100% of the contract fee this credit voucher for another ally agreed with PetroSync, which ar from the date of postponement.

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FNDANCE

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- Direct TelegraphicTransfer, oth local and oversea bank
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COURSE CONFIRMATION

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

PAYMENT TERMS : I	Payment is	due in full a	t the time of	registration.	Full paym	nent is mandat	ory for even	t attendance.