

600COURSE OVERVIEW PE0635
Merox Treating System Design

Course Title

Merox Treating System Design

Course Date/Venue

Session 1: June 16-20, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Session 2: October 05-09, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE



Course Reference

PE0635

Course Duration/Credits

Five Days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.



Merox Treating System Design in the oil and gas industry is a refining process used to remove mercaptans from petroleum products such as jet fuel, LPG, kerosene, and gasoline. The Merox (Mercaptan Oxidation) system converts odorous and corrosive mercaptans into disulfides, which are less harmful and do not affect fuel quality. This process involves the use of a proprietary Merox catalyst and caustic solution in either a liquid-liquid or fixed-bed configuration, depending on the feedstock and treatment requirements. Proper system design ensures efficient mercaptan removal, compliance with product specifications, and minimal environmental impact while optimizing operational costs and reliability.



This course is designed to provide participants with a detailed and intermediate overview of UOP Meroxa process technology. It covers the Merox^a processes, process flow during normal operating conditions and description; the process chemistry, process variables and mechanical equipment as well as employ analytical methods; the proper catalytic handling; Implement operating procedures and carryout correct troubleshooting; and the Merox^a reagents and catalysts and employ the safety all the time.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain a good working knowledge on UOP Merox^a process technology
- Discuss the Merox^a processes, process flow during normal operating conditions and description
- Determine the process chemistry, process variables and mechanical equipment as well as employ analytical methods
- Perform proper catalytic handling
- Implement operating procedures and carryout correct troubleshooting
- Describe Merox^a reagents and catalysts and employ the safety all the time

Exclusive Smart Training Kit - H-STK[®]



Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK[®]). The H-STK[®] consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.

Who Should Attend

This course covers systematic techniques and methodology on the control and operations of acid gas removal, UOP and glycol process for process engineers with one year field experience in refining.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Fee


US\$ 5,500 per Delegate. This rate includes H-STK[®] (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours


Certificate Accreditations

Certificates are accredited by the following international accreditation organizations:

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

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The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology’s courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant’s involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant’s CEU and PDH Transcript of Records upon request.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking



Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. Mike Poulos, MSc, BSc, is a Senior Process Engineer with over 35 years of industrial experience within the Utilities, Refinery, Petrochemical and Oil & Gas industries. His expertise lies extensively in the areas of Process Plant & Troubleshooting, Process Equipment Design & Troubleshooting, Petroleum Processing, Process Design Specifications, Process Calculation Methods, Equipment Sizing & Selection, Piping, Pumps, Compressors, Heat Exchangers, Air Coolers, Direct-Fired Heaters, Process Vessels, Fractionator Columns, Reactors, Ancillary Equipment, Mechanical & Safety Aspects, Cost Estimation, Commissioning & Start-Up, Production & Cost Reduction, Reactor Building Ventilation System, PVC Initiators Storage Bunkers, PVC Modernization & Expansion, PVC Reactor, PVC Plant Reactors Pre-Heating, PVC Plant Start-Up & Commissioning, PVC Plant Shutdown, PVC Driers Automation, VCM Recovery, VCM Sphere Flooding System, VCM Storage Tanks, Steam Tripping Facilities, Solvents Plant Automation Commissioning & Start-Up and Inferential Properties System. Further, he is also well-versed in Advanced Process Control Technology, Designing Process Plant Fail-Safe Systems, Quantitative Risk Assessment, On-Line Statistical Process Control, Principles and Techniques of Contemporary Management, Rosemount RS3, Polymer Additives, Polymer Reaction Engineering, Polymer Rheology and Processing, GRID Management and Batch Process Engineering.

During his career life, Mr. Poulos held significant positions as the **Chemical Plants Technology Engineer, PVC Plant Production Engineer, PVC Plant Shutdown Coordinator, PVC Plant/CC Solvents Plants Acting Section Head and Chemical Distribution Section Head** from Hellenic Petroleum, wherein he was responsible for the development of integrated system.

Mr. Poulos has **Master's and Bachelor's degrees in Chemical Engineering** from the **University of Massachusetts and Thessaloniki Polytechnic** respectively. Further, he is a **Certified Instructor/Trainer, a** and a **member of the Greek Society of Chemical Engineers and Greek Society of Engineers.**

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1

0730 - 0800	Registration & Coffee
0800 - 0815	Welcome & Introduction
0815 - 0830	PRE-TEST
0830 - 0930	Module 1: Merox^a Process
0930 - 0945	Break

0945 – 1100	Module 1: Merox^a Process (cont'd)
1100 – 1215	Module 2: Process Flow and Description
1215 – 1230	Break
1230 – 1420	Module 2: Process Flow and Description (cont'd)
1420 – 1430	Recap
1430	Lunch & End of Day One

Day 2

0730 – 0930	Module 3: Process Chemistry
0930 – 0945	Break
0945 – 1100	Module 3: Process Chemistry (cont'd)
1100 – 1215	Module 4: Process Variables
1215 – 1230	Break
1230 – 1420	Module 4: Process Variables (cont'd)
1420 – 1430	Recap
1430	Lunch & End of Day Two

Day 3

0730 – 0930	Module 5: Mechanical Equipment
0930 – 0945	Break
0945 – 1100	Module 5: Mechanical Equipment (cont'd)
1100 – 1215	Module 6: Analytical Methods
1215 – 1230	Break
1230 – 1420	Module 6: Analytical Methods (cont'd)
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4

0730 – 0930	Module 7: Catalytic Handling
0930 – 0945	Break
0945 – 1100	Module 7: Catalytic Handling (cont'd)
1100 – 1215	Module 8: Operating Procedures
1215 – 1230	Break
1230 – 1430	Module 8: Operating Procedures (cont'd)
1420 – 1430	Recap
1430	Lunch & End of Day Four

Day 5

0730 – 0930	Module 9: Troubleshooting
0930 – 0945	Break
0945 – 1100	Module 9: Troubleshooting (cont'd)
1100 – 1215	Module 10: Merox^a Reagents and Catalysts
1215 – 1230	Break
1230 – 1345	Module 11: Safety
1345 – 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises: -



Course Coordinator

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