

COURSE OVERVIEW ME0077(KJ1)-4D
Control Valves, Actuators and Positioners

Course Title

Control Valves, Actuators and Positioners

Course Reference

ME0077(KJ1)-4D

Course Duration/Credits

Four days/2.4 CEUs/24 PDHs



Course Date/Venue

Session(s)	Date	Venue
1	January 15-18, 2024	Business Center, Concorde Hotel Doha, Doha Qatar
2	March 04-07, 2024	Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
3	June 10-13, 2024	Jubail Hall, Signature Al Khobar Hotel, Al Khobar, KSA
4	September 09-12, 2024	Ajman Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Objectives



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.



It is claimed that the majority of control valves throughout the world have not been correctly sized and that large numbers operate on manual mode. Whether this is true or not is difficult to establish but we do know that the method of sizing and selecting a control valve for a specific application is generally not well understood. Although there are many factors that need to be taken into account the subject is not difficult to understand if dealt with in a logical manner. We also find that many maintenance problems result from people treating the symptoms of a problem rather than tackling the true cause – a basic understanding of the principles is all that is usually needed to solve the problem for good.



This course is designed to provide participants with a detailed and up-to-date overview of control valves, actuators and positioners. It covers the valves, construction, characteristics, maintenance, cavitation and flashing of control valves; disassembling and checking parts of globe, cage, butterfly, ball and diaphragm valve; checking the plugs of globe and cage valve; the actuators and positioners including pneumatic, electro, hydraulic, piston diaphragm; and the various types of positioners and how to calibrate them.

Course Objectives

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

- Apply and gain a comprehensive knowledge on the construction, operation and selection of control valves, actuators and positioners
- Discuss the valves, construction, characteristics, maintenance, cavitation and flashing of control valves
- Disassemble and check parts of globe, cage, butterfly, ball and diaphragm valve as well as check the plugs of globe and cage valve
- Determine actuators and positioners including pneumatic, electro, hydraulic and piston diaphragm
- Identify the various types of positioners and demonstrate how to calibrate them

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 provides an overview of all significant aspects and considerations of control valves, actuators and positioners for instrumentation technicians.

Course Fee

Doha	US\$ 4,500 per Delegate. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Dubai	US\$ 4,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Al Khobar	US\$ 4,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Abu Dhabi	US\$ 4,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day

Accommodation


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

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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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 **2.4 CEUs** (Continuing Education Units) or **24 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.

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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 center, Haward Technology meets all of the international higher education criteria and standards set by BAC.

Training Methodology

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Workshops & Work Presentations
- 30% Case Studies & Practical Exercises
- 20% Software, Simulators & Videos

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

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. Alex Iliadis is a **Senior Process Engineer** with over **40 years** of in-depth industrial experience within the **Petrochemical, Oil & Gas** and **Refinery** industries. His wide expertise covers in the areas of **Process Reactors, Catalytic Reformer Unit, Process Systems Foundations, Gas Processing Plant Operations & Control, Gas Processing Monitoring & Troubleshooting, Chemical Engineering, Process Equipment Design & Troubleshooting, Polymers & Polymerization, Applied Process Engineering, Process Plant Optimization, Process Plant Troubleshooting &**

Engineering Problem Solving, Process Plant Performance & Efficiency, Flare Blowdown & Pressure Relief Systems, Polypropylene Manufacturing, Polyethylene & Process Troubleshooting, Ammonia, Ethylene, Solvents, Gas Feed, EDC, VCM, PP, PVC, Chlorine, Fluidized Bed Reactor, Oil Movement & Storage, Power Plant Chemistry, Catalyst Manufacturing Techniques, Fuel Systems Management, Process Design & Optimization, Aviation Fuel, Diesel Engine, Jet Fuel, Petrol, IP Octane, Cetane Control, Pipeline Distribution, Boiler Fundamental Preparation, Flocculation Sedimentation, Hotline Water Softening Processes, Desalination Processes, Reverse Osmosis, Molecular Sieves, Loop Water Management System, Sludge Removal, Cooling Water System, Tank Farms, Hydrocarbons, Energy Conservation, Plant Electrical Power Generation & Cogeneration, Natural Gas Equipment & Networks, Furnaces/Combustion Facilities, Equipment Engineering Design, Rotating Equipment (Pumps, Compressors, Gas Turbines, Refrigeration Systems, etc), LPG Storage Installations, Petroleum Refining Storage Tunnel Installations, Industrial & Commercial Refrigeration Systems and various application codes such as the **API, ANSI, ASME, SHRAE, NFPA, ASTM, etc.**

During his career life, Mr. Iliadis has gained his practical and field experience through his various significant positions and dedications as the **Production & Technical Manager, Technical & Logistics Manager, Project Manager, Project Director, Start-up Leader, Technical Section Head, Engineering Consultant** and **Process Design & Project Engineer** for **Hellenic Petroleum, EXXON, ESSD-PAPPAS** Refining & Petrochemicals and **EBZ Sugar Production Plant** industry within the **European & the USA** regions.

Mr. Iliadis has a **Bachelor's** degree in **Chemical Engineering** from the **University of Thessaloniki (Greece)**. Further, he is a **Certified Instructor/Trainer** and has delivered numerous trainings, courses, workshops, seminars and conferences internationally.



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	<i>Registration & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0830 – 0930	Control Valves
0930 – 0945	<i>Break</i>
0945 – 1100	Valves
1100 – 1215	Construction
1215 – 1230	<i>Break</i>
1230 – 1420	Characteristics
1420 – 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2

0730 – 0930	Maintenance
0930 – 0945	<i>Break</i>
0945 – 1100	Cavitation
1100 – 1215	Flashing
1215 – 1230	<i>Break</i>
1230 – 1420	Practical Tasks
1420 – 1430	Recap
1430	<i>Lunch & End of Day Two</i>

Day 3

0730 – 0930	Disassemble, Check Parts of Globe, Cage, Butterfly, Ball & Diaphragm Valve
0930 – 0945	<i>Break</i>
0945 – 1030	Check Plugs of Globe & Cage Valve
1030 – 1130	Actuators & Positioners
1130 – 1230	Pneumatic, Electro & Hydraulic
1230 – 1245	<i>Break</i>
1245 – 1420	Piston Diaphragm
1420 – 1430	Recap
1430	<i>Lunch & End of Day Four</i>

Day 4

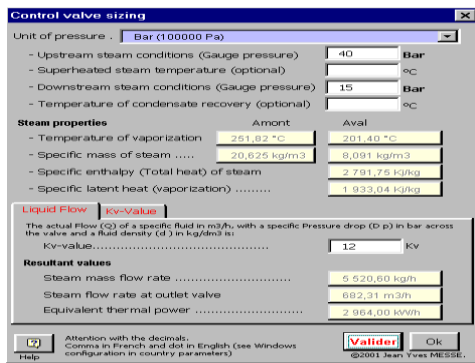
0730 – 0930	Positioners
0930 – 0945	<i>Break</i>
0945 – 1100	Types of Positioners
1100 – 1215	Practical Tasks
1215 – 1230	<i>Break</i>
1230 – 1345	Calibration of Different Types of Positioners
1345 – 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>



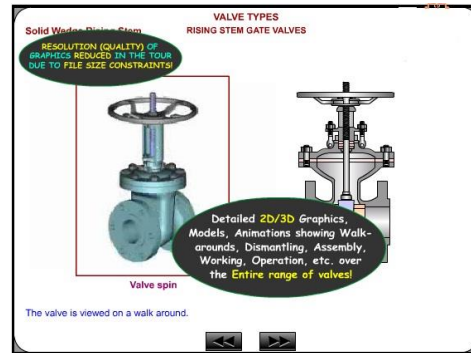


Simulators (Hands-on Practical Sessions)

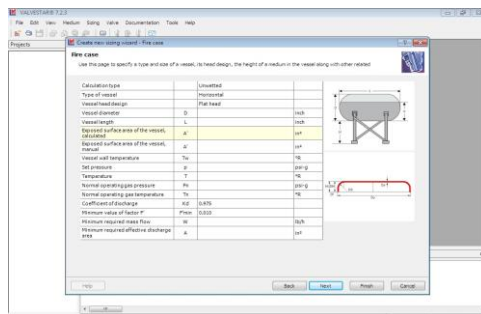
Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using our state-of-the-art simulators “Valve Sizing Software”, “Valve Software 3.0”, “Valvestar 7.2 Software” and “PRV2SIZE Software”.



Valve Sizing Software



Valve Software 3.0



Valvestar 7.2 Software



PRV2SIZE Software

Course Coordinator

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