COURSE OVERVIEW ME0078(AD6)
Maintain and Test Control Valves

Course Title
Maintain and Test Control Valves

Course Date/Venue
February 11-15, 2024/The Mouna Meeting Room, The H Dubai Hotel, Sheikh Zayed Rd - Trade Centre, Dubai, UAE

Course Reference
ME0078(AD6)

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

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

Control valves are valves used to control conditions such as flow, pressure, temperature, and liquid level by fully or partially opening or closing in response to signals received from controllers that compare a "set point" to a "process variable" whose value is provided by sensors that monitor changes in such conditions.

This course introduces the participants an in-depth knowledge on control valve maintenance and troubleshooting both theoretical and practical. They will gain a practical understanding on the actuator types, performance, accessories, and selection of control valves.

The course also provides the delegates with the maintenance techniques that can be used to identify the specific valve problems and arrive at acceptable solution to overcome the defects.

Course Objectives

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

- Apply systematic techniques on control valve maintenance and troubleshooting
- Discuss the various types, performance, accessories and selection of control valve
- Employ proper maintenance techniques and identify defects in control valve
- Carryout bench set-up and implement the maintenance techniques in modern control valve

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, sample video clips of the instructor's actual lectures & practical sessions during the course conveniently saved in a **Tablet PC**.*

Who Should Attend

This course is provides an overview of all significant aspects and considerations of control valves for those who are involved in the maintenance and troubleshooting of such equipment. This includes control engineers, control supervisors and control technicians.

Accommodation

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

Course Fee

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

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 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: -

- 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.

- 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.

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. Saleh Aich is a **Senior Mechanical & Maintenance Engineer** with over **20 years** of extensive experience within the **Oil & Gas**, **Petrochemical** and **Refining** industries. His expertise widely covers in the areas of **Combustion** Techniques, **Combustion** System Performance, **Pump** Operation & Maintenance, **Compressor** Maintenance & Troubleshooting, **Gas Turbine** Control & Protection Systems, **Valve** Troubleshooting & Maintenance, **Vibration** Analysis, **Oil** Analysis, **Dry Gas Seals**, Packing & Mechanical **Seals**, **Seal** Support Systems, **Mechanical Seal** Failure Analysis & Troubleshooting, **Seal** Maintenance & Repair, **Bearing** Care & Maintenance, **Couplings & Alignment**, **Alignment Methods**, Troubleshooting **Piping & Pipe Support** Systems, **Heat Exchangers** Maintenance & Inspection, **Pressure Vessel** Design, Fabrication & Testing, **Burners**, **Blowers**, Piston & Plunger **Gearboxes**, Fin-Fans, Separators, Expansion Drums, Filters, Molecule Sieve, Tanks, Fittings, Root Cause Failure Analysis (**RCFA**), Computerized Maintenance Management System (**CMMS**), **Maintenance** Management, **Planning & Scheduling** Work Management, **Parts & Inventory** Management, **Turnaround & Shutdowns**, **Condition Monitoring**, Regeneration Unit, NGL & Condensate, **Furnace** Operation & Troubleshooting, Performance Measure & Indicators, Total Productive Maintenance (**TPM**), **Preventive & Predictive** Maintenance Analysis, **Rotating & Static Equipment**, **Machinery & Equipment** Failure Analysis, **Gas & Steam Turbines**, **Boilers**, **Coolers**, **Diesel & Gas Engines**, **Heaters**, **Separators**, **Storage Tanks**, H_2S and ISO 9001:2008 Internal Quality Management System.

During his career life, Mr. Saleh has gained his practical and field experience through his various significant positions and dedication as the **Maintenance Instructor**, **Mechanical Supervisor**, **Maintenance Engineer**, **Mechanical Engineer**, **Contract Engineer**, **Planning Engineer** and **Senior Instructor/Lecturer** for various multi-national companies such as the ADNOC Gas Processing (**GASCO**), **ConocoPhillips** and Syrian Gas Company.

Mr. Saleh has a **Bachelor's** degree in **Mechanical Engineering**. Further, he is a **Certified Instructor/Trainer** and has acquired various certifications and has further delivered numerous training, courses, workshops, seminars and conferences worldwide.

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: ***Sunday, 11th of February 2024***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Control Valve Body and Actuator Types***
0930 – 0945	*Break*
0945 – 1100	***Control Valve Body and Actuator Types (cont'd)***
1100 – 1230	***Control Valve Performance***

1230 – 1245	Break
1245 – 1420	***Control Valve Accessories***
1420 - 1430	***Recap***
1430	Lunch & End of Day One

Day 2: Monday, 12th of February 2024

0730 – 0900	***Control Valve Selection***
0900 – 0915	Break
0915 – 1100	***Control Valve Maintenance Techniques*** Reactive
1100 – 1230	***Control Valve Maintenance Techniques (cont'd)*** Preventive
1230 – 1245	Break
1245 – 1420	***Control Valve Maintenance Techniques (cont'd)*** Predictive
1420 - 1430	***Recap***
1430	Lunch & End of Day Two

Day 3: Tuesday, 13th of February 2024

0730 – 0930	***Control Valve Defects*** Travel Deviations
0930 – 0945	Break
0945 – 1100	***Control Valve Defects (cont'd)*** Instrument Air Defects
1100 – 1215	***Control Valve Defects (cont'd)*** Friction
1215 – 1230	Break
1230 – 1420	***Control Valve Defects (cont'd)*** Flashing & Cavitations
1420 - 1430	***Recap***
1430	Lunch & End of Day Three

Day 4: Wednesday, 14th of February 2024

0730 – 0930	***Control Valve Bench Set-up***
0930 – 0945	Break
0945 – 1100	***Control Valve Bench Set-up (cont'd)***
1100 – 1215	***Modern Control Valve Maintenance Techniques*** Diagnostics
1215 – 1230	Break
1230 – 1420	***Modern Control Valve Maintenance Techniques (cont'd)*** Diagnostics (cont'd)
1420 - 1430	***Recap***
1430	Lunch & End of Day Four

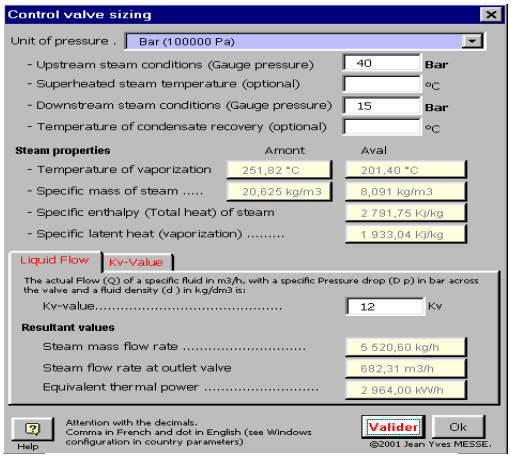
Day 5: Thursday, 15th of February 2024

0730 – 0930	***Modern Control Valve Maintenance Techniques (cont'd)*** Online Monitoring
0930 – 0945	Break
0945 – 1100	***Modern Control Valve Maintenance Techniques (cont'd)*** Online Monitoring (cont'd)
1100 – 1215	***Modern Control Valve Maintenance Techniques (cont'd)*** HART

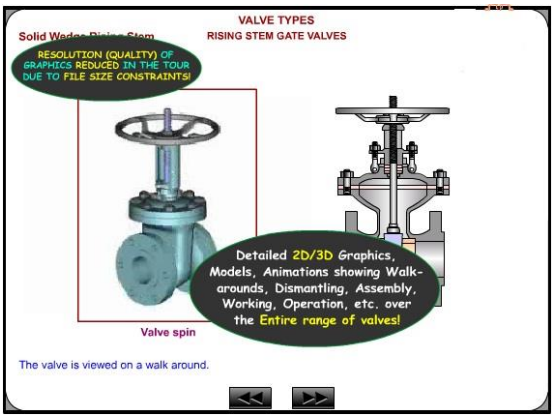
1215 – 1230	*Break*
1230 – 1345	***Modern Control Valve Maintenance Techniques (cont'd)*** *HART (cont'd)*
1345 - 1400	***Course Conclusion***
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Simulators (Hands-on Practical Sessions)

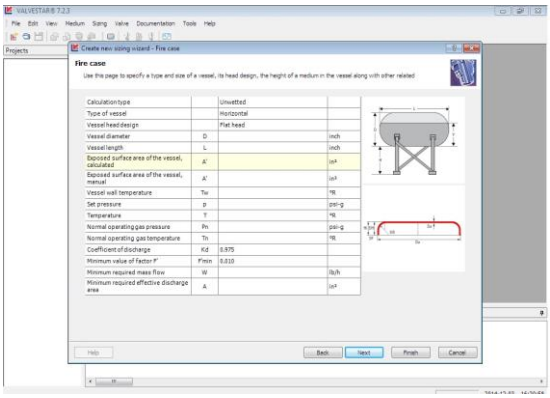
Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using our state-of-the-art simulators "Valve Sizing Software", "Valve Software 3.0", "Valvestar 7.2 Software" and "PRV2SIZE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



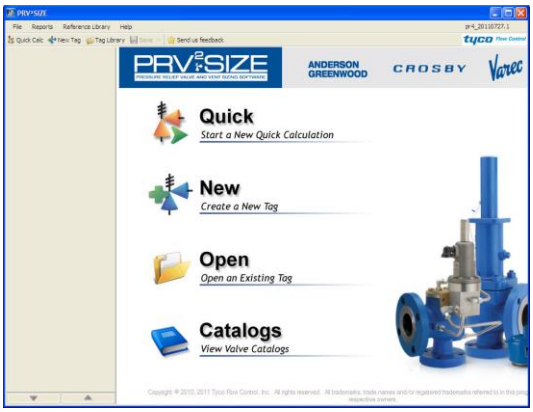
Valve Sizing Software



Valve Software 3.0



Valvestar 7.2 Software



PRV²SIZE Software

Course Coordinator

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