COURSE OVERVIEW PE0182
Process Data Gathering, Analysis and Reporting

Course Title
Process Data Gathering, Analysis and Reporting

Course Date/Venue
Session 1: February 24-28, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
Session 2: August 10-14, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Course Reference
PE0182

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 "MS Office" applications

This course is designed to provide participants with a detailed and up-to-date overview of Process Data Gathering, Analysis and Reporting It covers the process data sheets of static and rotary equipment; the process industry covering its safety, PFD and P&ID review; the line sizes and pressure drops and various applications to process plants; the flow measurement sizing and control valve sizing; the flow measurement and control valve process data sheet; the heat exchanger and pressure vessel sizing; and the heat exchanger and pressure vessel data sheet.

During this interactive course, participants will learn the tray sizing and pump sizing; the distillation tray process and pump data sheet; the relief valve, compressor sizing, relief valve process and compressor data sheet; the flash drum and flare sizing; the flash drum process and flare data sheet; and the relationship between process design and safety.

Course Objectives

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

- Review process data sheets of static and rotary equipments
- Discuss process industry covering its safety, PFD and P&ID review
- Calculate line sizes and pressure drops, review fundamentals and perform various applications to process plants
- Employ flow measurement sizing and control valve sizing and develop a flow measurement and control valve process data sheet
- Carryout heat exchanger and pressure vessel sizing and develop a heat exchanger and pressure vessel data sheet
- Perform distillation tray sizing and pump sizing and develop a distillation tray process and pump data sheet
- Describe relief valve and compressor sizing and develop a relief valve process and compressor data sheet
- Illustrate flash drum and flare sizing and develop a flash drum process and flare data sheet
- Distinguish the relationship between process design and safety

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 process data sheets of static and rotary equipments for operations engineers, process support engineers, design engineers, cost engineers, fresh engineering graduates and for those who are involved in selecting and purchasing static and rotary equipment of plant.

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: -

- 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.

- 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.

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.

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. Kyle Bester is a **Process Engineer and Senior HSE Consultant** with extensive years of practical experience within the **Oil & Gas**, **Power & Water Utilities** and other **Energy** sectors. His expertise includes **Troubleshooting Gas Processing**, **Ammonia Manufacturing & Process Troubleshooting**, **Ammonia Storage & Loading** Systems, **Ammonia Plant** Operation, Troubleshooting & Optimization, **Gas Removal**, **Amine Regeneration**, **Amine & Gas** Dehydration, **Molecular Sieves**, **NGL Recovery**, **LPG Distillation**, **Gas Processing**, **Furnaces**, **Waste Heat Recovery**, **Process** Troubleshooting, **Gas** Compression & Expansion, **Process Liquid**, **Process Handling** & **Measuring Equipment**, **Gas Dehydration**, **Gas Separation**, **Distillation Processes**, Safety in Industrial Plants, **Rigging** Safety Rules, Machinery & Hydraulic **Lifting Equipment**, Handling **Hazardous Chemicals**, Spill Containment, **Fire** Protection, **Fire** Precautions, **Incidents & Accidents** Reporting, **HSEQ** Audits & Inspection, **HAZOP & HAZID**, **HAZMAT & HAZCOM** Storage & Disposal, As Low as Reasonably Practicable (**ALARP**), Process Hazard Analysis (**PHA**), Process Safety Management (**PSM**), **Hazardous Materials & Chemicals** Handling, **Pollution Control**, **Environment, Health & Safety** Management, **Process Risk** Analysis, Effective Tool Box Talks, Construction Sites Safety, **HSSE Management** System, **HSSE Audit & Inspection**, **HSEQ Procedures**, **Authorized Gas** Testing, **Confined Space Entry & Rescue**, **Risk** Management, **Quantitative & Qualitative Risk** Assessment, **Working at Height**, **Firefighting** Techniques, **Fire** & **Gas** Detection System, **Fire Fighter & Fire** Rescue, **Fire Risk** Assessment, **HSE Industrial Practices**, **Manual Handling**, **Rigging Safety Rules**, **Machinery & Hydraulic Lifting Equipment**, **Warehouse Incidents & Accidents Reporting**, **Incident & Accident Investigation**, **Emergency Planning**, **Emergency Response & Crisis** Management Operations, **Waste Management** Monitoring, **Root Cause Analysis**, Hazard & Risk Assessment, Task Risk Assessment (**TRA**), **Incident Command**, Job Safety Analysis (**JSA**), Behavioral Based Safety (**BBS**), **Fall Protection** and **Work Permit & First Aid**. He is currently the **Part Owner & Manager** of Extreme Water SA wherein he manages, re-designed and commissioned a water and wastewater treatment plants.

During his career life, Mr. Bester has gained his practical and field experience through his various significant positions and dedication as the **Project Manager**, **Asset Manager**, **Manager**, **Water Engineer**, **HSE Advisor**, **Safety Engineer**, **Supervisor**, **Team Leader**, **Analyst**, **Process Technician**, **Landscape Designer** and **Senior Instructor/Trainer** for various international companies, infrastructures, water and wastewater treatment plants from New Zealand, UK, Samoa, Zimbabwe and South Africa, just to name a few.

Mr. Bester holds a **Diploma** in **Wastewater Treatment** and a **National Certificate** in **Wastewater & Water Treatment**. Further, he is a **Certified Instructor/Trainer**, an **Approved Chemical Handler** and has delivered numerous courses, trainings, conferences, seminars and workshops 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 – 0745	*Registration & Coffee*
0745 – 0800	*Welcome & Introduction*
0800 – 0815	***PRE-TEST***
0815 – 0915	***Introduction to the Process Industry*** *Safety for the Process Industry ● Review of PFD ● Review of P&ID ● The Calculation of Line Sizes and Pressure Drops ● Review of the Fundamentals ● Application to Process Plants*
0915 – 0930	*Break*
0930–1100	***Flow Measurement Sizing & Developing a Flow Measurement Process Data Sheet*** *Review of the Fundamentals ● Application to Process Plants ● Case Example – Develop Process Data Sheet*
1100– 1230	***Control Valve Sizing & Developing a Control Valve Process Data Sheet*** *Review of the Fundamentals ● Application to Process Plants*
1230 – 1245	*Break*
1245 – 1420	***Control Valve Sizing & Developing a Control Valve Process Data Sheet (cont'd)*** *Case Example – Develop Process Data Sheet*
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0900	***Heat Exchanger Sizing & Developing a Heat Exchanger Data Sheet*** *Review of the Fundamentals ● Application to Process Plants*
0900 – 0915	*Break*
0915 – 1045	***Heat Exchanger Sizing & Developing a Heat Exchanger Data Sheet (cont'd)*** *Case Example – Develop Process Data Sheet*
1045 – 1215	***Pressure Vessel Sizing &Pressure Vessel Data Sheet*** *Review of the Fundamentals ● Application to Process Plants*
1215 – 1230	*Break*
1230 – 1420	***Pressure Vessel Sizing &Pressure Vessel Data Sheet*** *Case Example – Develop Process Data Sheet*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0900	***Distillation Tray Sizing & Developing a Distillation Tray Process Data Sheet*** *Review of the Fundamentals ● Application to Process Plants*
0900 – 0915	*Break*
0915 – 1045	***Distillation Tray Sizing & Developing a Distillation Tray Process Data Sheet(cont'd)*** *Case Example – Develop Process Data Sheet*

1045 – 1215	***Pump Sizing & Developing a Pump Data Sheet*** *Review of the Fundamentals ● Application to Process Plants*
1215 – 1230	*Break*
1230 – 1420	***Pump Sizing & Developing a Pump Data Sheet (cont'd)*** *Case Example – Develop Process Data Sheet*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

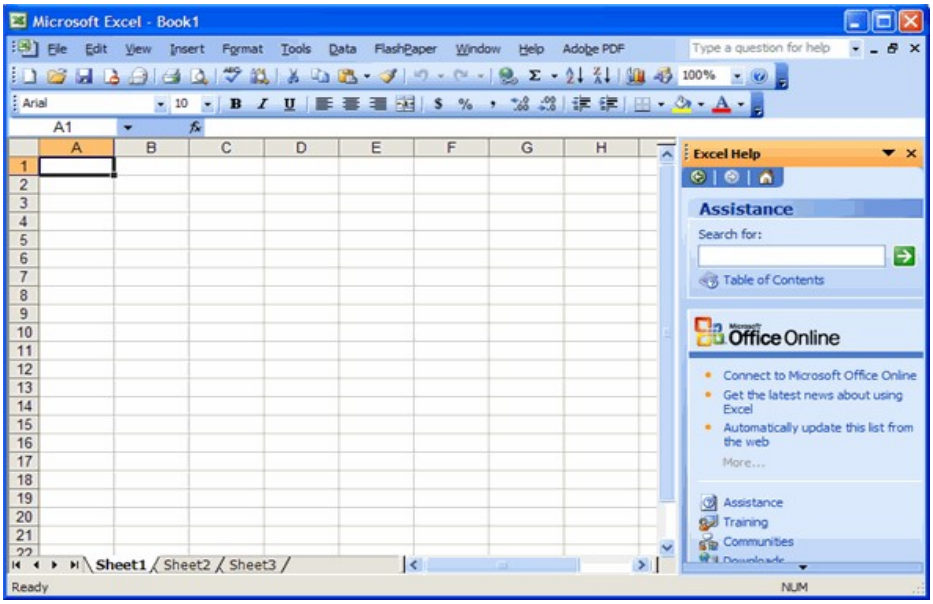
0730 – 0900	***Relief Valve Sizing & Developing a Relief Valve Process Data Sheet*** *Review of the Fundamentals ● Application to Process Plants*
0900 – 0915	*Break*
0915 – 1045	***Relief Valve Sizing & Developing a Relief Valve Process Data Sheet (cont'd)*** *Case Example – Develop Process Data Sheet*
1045 – 1215	***Compressor Sizing & Developing a Compressor Data Sheet*** *Review of the Fundamentals ● Application to Process Plants*
1215 – 1230	*Break*
1230 – 1420	***Compressor Sizing & Developing a Compressor Data Sheet (cont'd)*** *Case Example – Develop Process Data Sheet*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0830	***Flash Drum Sizing & Developing a Flash Drum Process Data Sheet*** *Review of the Fundamentals ● Application to Process Plants*
0830 – 0915	***Flash Drum Sizing & Developing a Flash Drum Process Data Sheet (cont'd)*** *Case Example – Develop Process Data Sheet*
0915 – 0930	*Break*
0930 – 1100	***Flare Sizing & Developing a Flare Data Sheet*** *Review of the Fundamentals ● Application to Process Plants*
1100 – 1200	***Flare Sizing & Developing a Flare Data Sheet(cont'd)*** *Case Example – Develop Process Data Sheet*
1200 – 1215	*Break*
1215 – 1345	***The Relationship between Process Design & Safety***
1345 – 1400	***Course Conclusion***
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Simulator (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 "MS-Excel" application.



MS-Excel

Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org