



COURSE OVERVIEW ME0180
Boiler & Steam System Management
*Performance, Efficiency, Troubleshooting, Tune-Up,
Heat Recovery & Optimization*

Course Title

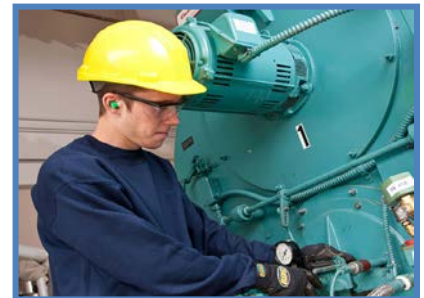
Boiler & Steam System Management: *Performance, Efficiency, Troubleshooting, Tune-Up, Heat Recovery & Optimization*

Course Reference

ME0180

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Date/Venue

Session(s)	Date	Venue
1	January 12-16, 2025	Horus Meeting Room, Holiday Inn & Suites Maadi, Cairo, Egypt
2	February 09-13, 2025	Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
3	April 21-25, 2025	Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
4	July 27-31, 2025	Al Aziziya Hall, The Proud Hotel Al Khobar, Al Khobar, KSA
5	October 26-30, 2025	Club B Meeting Room, Ramada Plaza by Wyndham Istanbul City Center, Istanbul, Turkey

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.

This course provides practical information that can be readily applied to pinpoint and minimize energy losses in boiler plants and energy distribution systems. Participants will be guided through their plant system component by component, showing exactly where and how performance can be improved. Facts will be given on different fuel types and firing methods, and how modern high-efficiency boiler designs and control systems work.

Following easy-to-implement guidelines and helpful, time-saving diagrams-participants will go over strategies to methodically achieve the maximum utilization of fuel and energy to keep operating costs low and equipment performance high.

In addition to the comprehensive training manual, the course includes an e-book entitled “*Boiler Operator’s Guide*”, published by McGraw-Hill Professional, which will be given to the participants to help them appreciate the principles presented in the course.



Course Objectives

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

- Apply and gain an in-depth knowledge on boiler and steam system management
- Perform boiler tuning-up and identify its troubleshooting problems
- Discuss waste heat recovery
- Use test instruments and computers to cut costs in an effective manner
- Apply standard plant calculations including boiler plant safety, boiler controls and 60 ways to improve the plant
- Carryout steam distribution systems, steam traps and pollution control

Who Should Attend

This course provides an overview of all significant aspects and considerations of boiler and steam system management for facilities engineers, operating engineers, energy engineers, managers, supervisory personnel, designers, inspectors, consultants and other technical staff who are involved in the performance, efficiency, troubleshooting, tune-up, heat recovery and optimization of boiler and steam system. The course will provide a clear and refreshing examination of boilers and their systems. It covers a range from very large to small boiler systems and is not specifically oriented toward utility plants.

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:-

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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.

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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.



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. Hossam Kachwar is a **Senior Engineer** with extensive years of **Onshore & Offshore** experience within the **Oil & Gas, Refinery** and **Petrochemical** industries. His wide expertise covers in the areas of **Boiler & Steam System Management, Process Plant Shutdown, Turnaround & Troubleshooting, Process Equipment, Mechanical Integrity, Maintenance Management, Reliability Management, Reliability Best Practices, Maintenance Strategies, Rotating Equipment Failure Analysis, Reliability Optimization, Reliability Centered Maintenance, Risk & Reliability Engineering, Pump Technology, Pump Construction & Installation, Pump Performance, Mechanical Shaft Seals, Petroleum Engineering, Subsurface Mapping, Geostatistical Modeling** Techniques, Formation Evaluation Measurement, **Drilling Hazards & Drilling Bit Optimization, Geological & Hydrocarbon Evaluation, Gas Ratio Analysis & Interpretation, Reservoir Characterization** (Permeability & Porosity), **Structural Geology, Fracture Prediction, Fault Seal Analysis, Mudlogging & Wireline Operations, Coring/Casing, Geological Report, Drilling Parameters Monitoring, Data Analysis** and **Geological Interpretation**. Currently, he is the **Senior Operation & Modeler Geologist** wherein he is responsible in analyzing rocks from the oil and gas wells and involve in geotestical modelling techniques as well as generating and using engineering geological models.

During Mr. Hossam's career life, he has gained his thorough and practical experience through his various positions as the **Hydro Environmental Geologist, Reservoir & Modeler Geologist, Contractor Wellsite Geologist, Consultant Geologist, Data Engineer, Pressure Engineer, Mud Logger Geologist** and **Instructor/Trainer** for Petro-China, Petro-Canada, Suncor Energy Company, Baker Hugs, Geoservices and PetroServices, just to name a few.

Mr. Hossam has a **Bachelor's** degree in **Geology**. Further, he is a **Certified Instructor/Trainer** and has delivered numerous trainings, seminars, conferences and workshops globally.

Accommodation

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



Course Fee

Cairo	US\$ 5,500 per Delegate + VAT . This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Dubai	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
Abu Dhabi	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
Al Khobar	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
Istanbul	US\$ 6,000 per Delegate + VAT . This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

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 - 0900	<i>How to Tune-up a Boiler</i>
0900 - 0915	<i>Break</i>
0915 - 1115	<i>How to Tune-up a Boiler (cont'd)</i>
1115 - 1215	<i>Troubleshooting Problems</i>
1215 - 1230	<i>Break</i>
1230 - 1420	<i>Troubleshooting Problems (cont'd)</i>
1420 - 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2

0730 - 0900	<i>Waste Heat Recovery</i>
0900 - 0915	<i>Break</i>
0915 - 1030	<i>Waste Heat Recovery (cont'd)</i>
1030 - 1215	<i>Use of Test Instruments</i>
1215 - 1230	<i>Break</i>
1230 - 1420	<i>Use of Test Instruments (cont'd)</i>
1420 - 1430	Recap
1430	<i>Lunch & End of Day Two</i>



Day 3

0730 – 0900	Using Computers to Cut Costs
0900 – 0915	Break
0915 – 1045	Using Computers to Cut Costs (cont'd)
1045 – 1215	Standard Plant Calculations
1215 – 1230	Break
1230 – 1420	Standard Plant Calculations (cont'd)
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4

0730 – 0900	Boiler Plant Safety
0900 – 0915	Break
0915 – 1045	Boiler Controls
1045 – 1215	60 Ways to Improve your Plant
1215 – 1230	Break
1230 – 1420	Steam Distribution Systems
1420 – 1430	Recap
1430	Lunch & End of Day Four

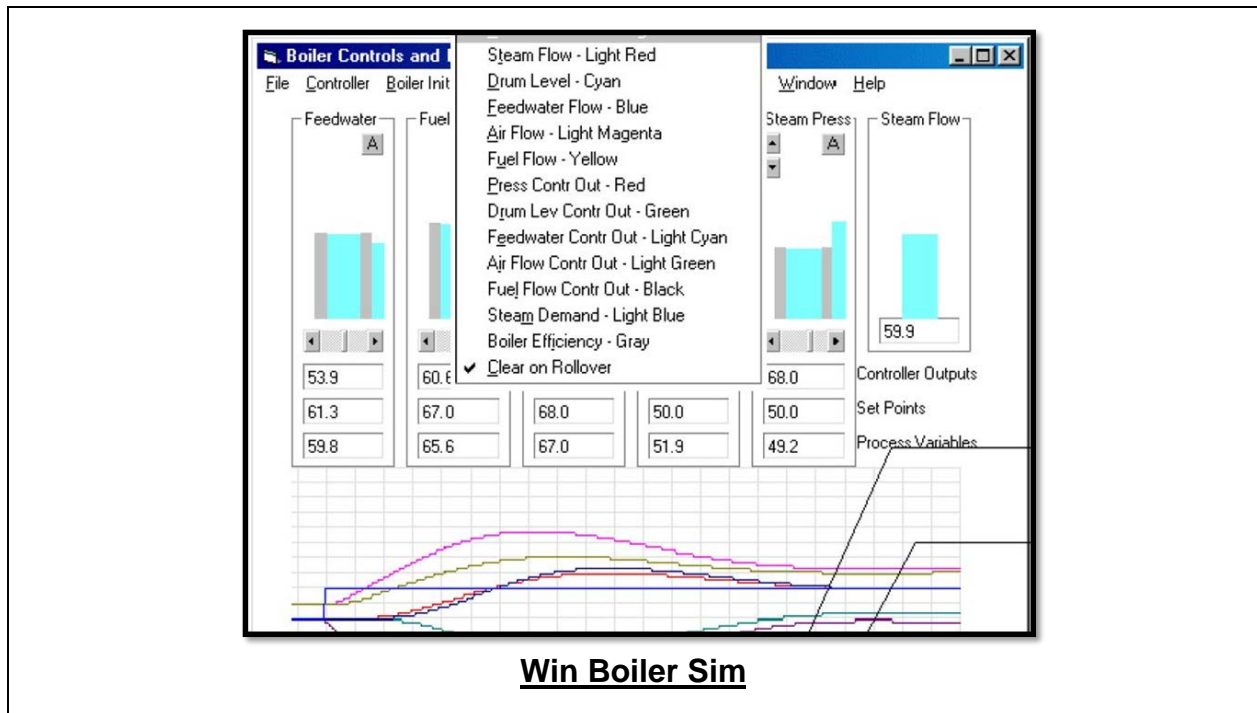
Day 5

0730 – 0900	Steam Traps
0900 – 0915	Break
0915 – 1030	Steam Traps (cont'd)
1030 – 1215	Pollution Control
1215 – 1230	Break
1230 – 1345	Pollution Control (cont'd)
1345 – 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course



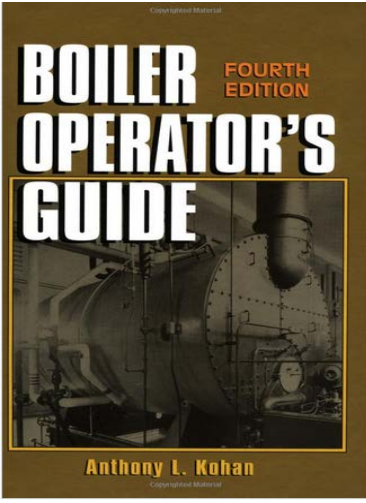
Simulator (Hands-on Practical Sessions)

Practical session 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 the simulator “Win Boiler Sim”.



Book(s)

As part of the course kit, the following e-book will be given to all participants:



Title : Boiler Operator's Guide
ISBN : 978-0070365742
Author : Anthony Kohan
Publisher : McGraw-Hill Professional

Course Coordinator

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