



COURSE OVERVIEW ME0180 Boiler Energy Efficiency Management

Course Title

Boiler Energy Efficiency Management

Course Date/Venue

Session 1: May 12-16, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

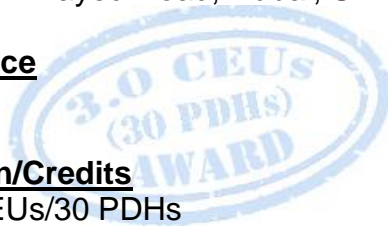
Session 2: November 02-06, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Course Reference

ME0180

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.

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

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 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.

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.

Accommodation

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

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 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. Karl Thanasis, PEng, MSc, MBA, BSc, is **Senior Mechanical & Maintenance Engineer** with over **30 years** of extensive industrial experience. His wide expertise includes **Piping & Pipeline, Maintenance, Repair, Shutdown, Turnaround & Outages, Maintenance & Reliability Management, Mechanical Maintenance Planning, Scheduling & Work Control, Advanced Techniques in Maintenance Management, Predictive & Preventive Maintenance, Maintenance & Operation Cost Reduction Techniques, Reliability Centered Maintenance (RCM), Machinery Failure Analysis, Rotating Equipment Reliability Optimization & Continuous Improvement, Material Cataloguing, Mechanical & Rotating Equipment Troubleshooting & Maintenance, Root Cause Analysis & Reliability Improvement, Condition Monitoring, Root Cause Failure Analysis (RCFA), Steam Generation, Steam Turbines, Power Generator Plants, Gas Turbines, Combined Cycle Plants, Boilers, Process Fired Heaters, Air Preheaters, Induced Draft Fans, All Heaters Piping Work, Refractory Casting, Heater Fabrication, Thermal & Fired Heater Design, Heat Exchangers, Heat Transfer, Coolers, Power Plant Performance, Efficiency & Optimization, Storage Tank Design & Fabrication, Thermal Power Plant Management, Boiler & Steam System Management, Pump Operation & Maintenance, Chiller & Chiller Plant Design & Installation, Pressure Vessel, Safety Relief Valve Sizing & Selection, Valve Disassembling & Repair, Pressure Relief Devices (PSV), Hydraulic & Pneumatic Maintenance, Advanced Valve Technology, Pressure Vessel Design & Fabrication, Pumps, Turbo-Generator, Turbine Shaft Alignment, Lubrication, Mechanical Seals, Packing, Blowers, Bearing Installation, Couplings, Clutches and Gears. Further, he is also versed in Wastewater Treatment Technology, Networking System, Water Network Design, Industrial Water Treatment in Refineries & Petrochemical Plants, Piping System, Water Movement, Water Filtering, Mud Pumping, Sludge Treatment and Drying, Aerobic Process of Water Treatment that includes Aeration, Sedimentation and Chlorination Tanks. His strong background also includes Design and Sizing of all Waste Water Treatment Plant Associated Equipment such as Sludge Pumps, Filters, Metering Pumps, Aerators and Sludge Decanters.**

Mr. Thanasis has acquired his thorough and practical experience as the **Project Manager, Plant Manager, Area Manager - Equipment Construction, Construction Superintendent, Project Engineer and Design Engineer**. His duties covered **Plant Preliminary Design, Plant Operation, Write-up of Capital Proposal, Investment Approval, Bid Evaluation, Technical Contract Write-up, Construction and Sub-contractor Follow up, Lab Analysis, Sludge Drying and Management of Sludge Odor and Removal**. He has worked in various companies worldwide in the **USA, Germany, England and Greece**.

Mr. Thanasis is a **Registered Professional Engineer** in the **USA and Greece** and has a **Master and Bachelor** degrees in **Mechanical Engineering with Honours** from the **Purdue University and SIU in USA** respectively as well as an **MBA** from the **University of Phoenix** in **USA**. Further, he is a **Certified Internal Verifier/Trainer/Assessor** by the **Institute of Leadership & Management (ILM)** a **Certified Instructor/Trainer** and has delivered numerous trainings, courses, seminars, workshops 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

0730 – 0800	<i>Registration & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0830 – 0900	How to Tune-up a Boiler
0900 – 0915	<i>Break</i>
0915 – 1115	How to Tune-up a Boiler (cont'd)
1115 – 1215	Troubleshooting Problems
1215 – 1230	<i>Break</i>
1230 – 1420	Troubleshooting Problems (cont'd)
1420 – 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2

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

Day 3

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

Day 4

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



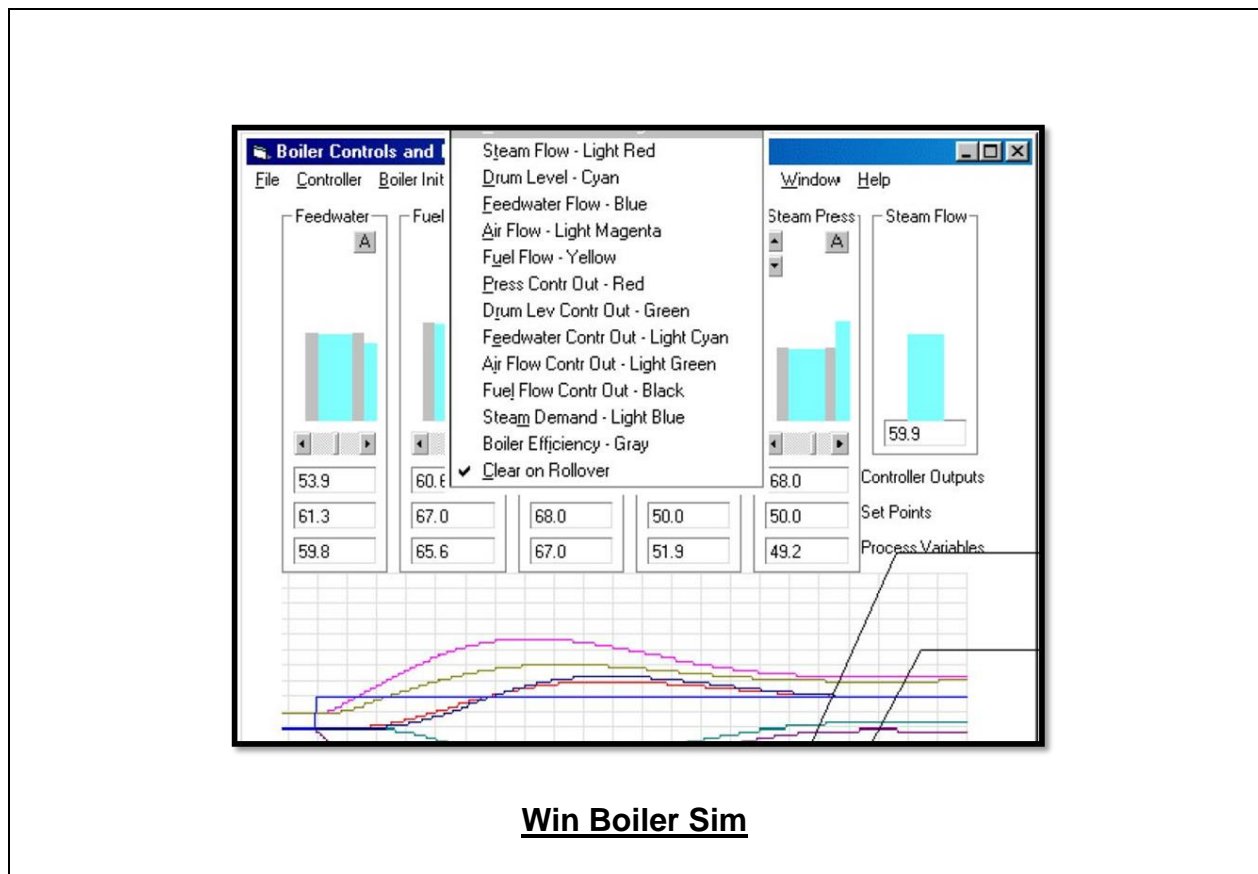


Day 5

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

Simulator (Hands-on Practical Sessions)

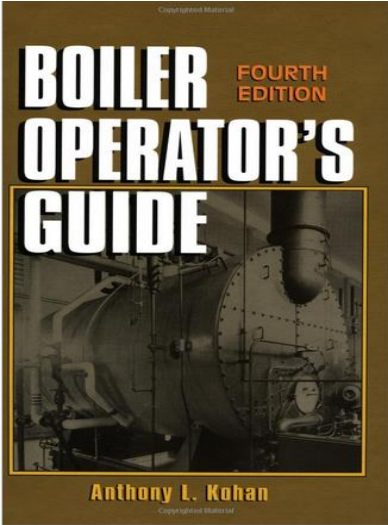
Practical session will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the simulator “Win Boiler Sim”.





Book(s)

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

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

Course Coordinator

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