

THE

HAMWORTHY COMBUSTION INSTITUTE

TRAINING COURSE SCHEDULE

2012



The Hamworthy Combustion Institute

Hamworthy Combustion Engineering has been fully committed to providing technical training since 1948, resulting in the Hamworthy Combustion Technical Training Institute being created and officially opened in September 2008.

Facilities

The Training Institute comprises of:

Three modern and fully equipped training rooms, all fitted with air conditioning, seating up to 70 delegates.

A Technical workshop housing:

- Full range of Hamworthy Combustion Burners (for use in disassembling and reassembling)
- Gas-trains
- Control panels and control simulators
- Igniters

Customer care centre, which is recognized as one of the largest and most comprehensive test rigs in the world, with 16 furnaces, ranging from fire stacks to ethylene cracking up to 100MW. All 16 furnaces are used for research, development and training purposes.

Computerised Fluid Dynamics (CFD) workshop.

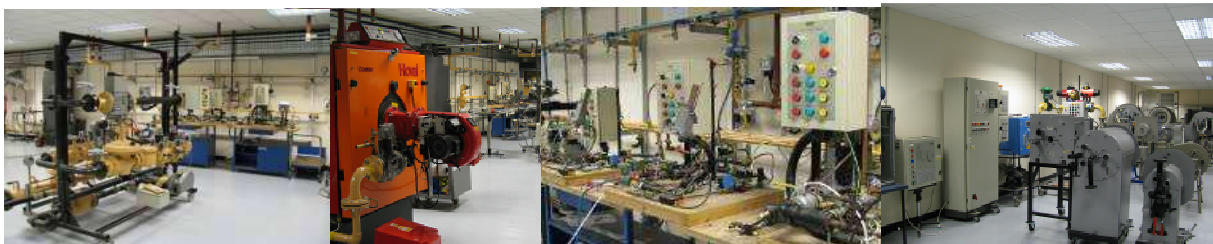
Training Courses

The Hamworthy Combustion Institute offers two types of training course; either a selection of training courses, bookable on a per person basis, or bespoke training, which is constructed to contractual agreements. Both of these types of training incorporate Hamworthy Combustion's range covering six product sectors:

Industrial
Power
Process — Refinery, petrochemical
Marine
Incineration
Flares



Our primary focus is to deliver extensive hands on technical training, with all training courses designed to strict accredited standards. All training courses conclude with an assessment paper, under exam conditions, and delegates are issued with a certificate of attendance and understanding.



Training Locations

Bespoke training courses can be delivered at the Hamworthy Combustion Institute, Poole, Dorset, or at any preferred customer location worldwide. All of our Marine trainers also hold BOSIET Certificates, so they can deliver training offshore.

With our training courses bookable on an individual basis, we have specific dates to conduct set training in the UK, Singapore, Italy, Spain and Poland. If you are interested in any of the courses to be held at a preferred customer location, please contact the Hamworthy Combustion Institute for further details.

Trainers:

We have a team of extremely knowledgeable and experienced lecturers who are specialists in their dedicated fields and all hold necessary teaching qualifications. All trainers are involved with day to day business, so that they are always one step ahead in their dedicated fields.

Courses:

All of the following courses, documentation and lectures will be presented in the English language. If you require services of a translator this can be arranged — please contact the Institute for further information.

Times:

All courses bookable on a per person basis will commence at 09.00 am and complete at 16.30 pm daily.

Training Methods:

Each course is carried out with a mixture of theoretical and practical studies combined with open discussion. To deliver the training at a Customer's preferred location may constrict the amount of practical equipment available, for further information please contact the Institute.

Assessment:

Every course is concluded with a written assessment and each delegate is provided with a certificate.

Bespoke Training:

For further details on how the Hamworthy Combustion Institute can provide a fully comprehensive training course to your contractual requirements please contact the Institute.



For more information telephone: 0044 (0)1202 663904

All you need to know about combustion	6
What is a Burner	7
Gas Awareness	8
Industrial training:	
Boiler Operator Training	9
Dual Fuel Rotary Cup Burner Training	10
Industrial Burner Training	11
In Depth Burner Training	12
Power training	
Understanding Power Burner	13
Power Burners (design, safety and maintenance)	14
Power Burner Ancillaries Training	15
Process – Refinery, petrochemical	
Level 1 Introduction to Refinery or Petro Chemical Burners	16
Level 2 Refinery or Petro Chemical Plant Burner Training	17
Refinery or Petro Chemical Flares Training	18
Refinery or Petro Chemical Plant Burner Ancillaries	19
Marine Training:	
FPSO / FSO Boiler and Burner Operation & Maintenance Training	20
Gas Combustion Unit Training (GCU) – DNV Accredited	21
VOC Boiler Operation and Maintenance Training	22
Operation of Auxiliary Boilers on Ships	23
Flare Training:	
Ground Flares (open & enclosed)	24
Vapor Combustion Units (VCU)	25
Elevated Process & Utility Flares	26
Elevated Staged Flares	27
Low Sulphur Diesel training	28
Terms and Conditions	29

The Hamworthy Combustion Institute Industrial Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	All you need to know about Combustion
Duration:	1 Day
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Boiler and Burner Operators, Plant and Maintenance Engineers, Energy and Environmental Managers and those responsible for burners and combustion plant
Content:	What is Combustion; Chemistry of Combustion — Exhaust gas analysis; fuels and fuel properties; control philosophies for combustion systems; efficient running; terms associated with Combustion; safe storage of fuels; combustion efficiency; Fuel/Air ratios and the safety implications of incorrect ratios
Objective:	The course is aimed to provide the delegate with an adequate knowledge of combustion in order to operate the plant safely and efficiently
Cost:	£235 per person For additional training venues please contact the Hamworthy Combustion Institute
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	13th February 2012 09th July 2012



The Hamworthy Combustion Institute Industrial Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	What is a Burner
Duration:	1 Day
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Administrators; Apprentices; Loss Adjustors; Insurance Personnel; persons new to the burner engineering industry and all other who wish to gain an understanding of burners
Content:	A 70% practical training course, using burner models and components in a workshop environment, to give delegates a full understanding of burners, their applications, hazards and safety prevention
Objective:	The course is aimed to provide non technical delegates a full understanding of burners, what they are, where and why they are used, hazards and their causes and different types of applications
Cost:	£150 per person For additional training venues please contact the Hamworthy Combustion Institute
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	23rd January 2012 10th December 2012



The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

The Hamworthy Combustion Institute Industrial Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Gas Awareness
Duration:	1 Day
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Boiler and Burner Operators; Plant and Maintenance Engineers; Energy and Environmental Managers and those responsible for burners and combustion plant
Content:	General principles include: Combustion—exhaust measurement, effects of bad combustion Ventilation—principles, types and calculations Pipework—route, condition, integrity Flues/Chimneys—principles, types
Objective:	The course is aimed to provide non technical delegates a full understanding of burners, what they are, where and why they are used, hazards and their causes and different types of applications
Cost:	£230 per person
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	07th November 2012



The Hamworthy Combustion Institute Industrial Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Boiler Operator Course
Duration:	2 Day
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Plant Operators, Maintenance Engineers and those responsible for burners and plant
Content:	Shell boiler fittings and functions, principles of operation regarding Shell type boilers, warming-up, new brickwork curing procedure typical steam system, oil system, gas system, fuel isolation, fuel changeover — dual fuel burners, emergency shutdown procedure, daily / weekly burner / boiler routines
Objective:	The course is aimed at providing the delegates with the fundamental knowledge of boiler operation, enabling them to conduct their operations and maintenance in a safe manner
Cost:	£450 per person For additional training venues please contact the Hamworthy Combustion Institute
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	14th—15th February 2012 18th—19th June 2012 19th—20th November 2012



The Hamworthy Combustion Institute
Hamworthy Combustion Engineering,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email:
training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

The Hamworthy Combustion Institute Industrial Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course: Dual Fuel Rotary Cup Burner Training

Duration: 2 Days

Location: The Hamworthy Combustion Institute, Poole, Dorset, UK

Who should attend: Plant Operators, Maintenance Engineers and those responsible for burners and plant

Content: Principles of operation regarding shell type boilers including: chemistry of combustion, safety, warming-up, cooling down procedure, analysis of fuels and conditions required at burner (oil, gas and dual fuel), fuel change over routine, requirements for efficient running, principles of atomisation, gas train components and functions, main gas valve proving systems and ignition system settings, light up procedures and examination of control drawings, fault finding and diagnosis, maintenance with demonstration on simulators.

Objective: The course is aimed to provide the delegate with the fundamental knowledge to carry out basic fault finding and general maintenance work on their dual fuel rotary cup burner, thus reducing burner downtime and saving costs

Cost: £450 per person

Includes: Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day

Dates: 10th—11th July 2012
21st—22nd November 2012



The Hamworthy Combustion Institute Industrial Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Industrial Burner Training
Duration:	2 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Plant Operators, Maintenance Engineers and those responsible for burners and plant
Content:	Safe use of a steam boiler including: warming up, shutting down, steam valves, chemistry of combustion, efficiency monitoring, safe/unsafe combustion, burner parts, air system, oil supply / metering system, gas train, electrical, light up sequence, operations, fuel change over, fault finding and maintenance, shut downs.
Objective:	The course is aimed to provide the delegate with the fundamental knowledge to carry out basic fault finding and general maintenance work on their dual fuel rotary cup burner, thus reducing burner downtime and saving costs
Cost:	£475 per person
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	30th—31st January 2012 23rd—24th April 2012 10th—11th September 2012



The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

The Hamworthy Combustion Institute Industrial Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	In Depth Burner Training
Duration:	2 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Supervisors, Plant Operators, Maintenance Engineers and those responsible for burners and plant
Content:	<p>Burner machine components, functions and overall burner assessment</p> <ul style="list-style-type: none">– Condition– Faults– Rectification– Detailed metering block– Oil passages– Control valves resetting and servicing– Detailed combustion exhaust analysis– Fault finding, rectification and what/how to adjust
Objective:	The course is aimed at providing the delegate with an in depth knowledge of how to safely operate and maintain a typical burner
Cost:	£495 per person
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	01st—02nd February 2012 25th—26th April 2012 12th—13th September 2012



The Hamworthy Combustion Institute Power Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Understanding Power Burners
Duration:	1 Day
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Operators and maintenance engineers, supervisors, plant operators, project managers, operations managers, process engineers, development engineers
Content:	The fundamentals of Power burner design Introduction to power burner applications Overview of different burner designs Set up the burner Adjustments Understanding the gas trains Atomizer types and applications Basic Maintenance
Objective:	To provide the delegate with a greater understanding of the combustion process and how it is relevant to Power burners. Delegates will benefit from being able to differentiate between burner designs and learn the basics of how to safely operate and maintain burner applications.
Cost:	£500 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	23rd April 2012 10th September 2012



The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

The Hamworthy Combustion Institute Power Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Power Burners (design, safety and maintenance)
Duration:	3 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Supervisors, plant operators, maintenance engineers, project managers, operations managers, process engineers, development engineers
Content:	Boiler and burner functions, theory of combustion, burner construction and operation, ancillary equipment, dismantling the equipment for inspection, the burner management system (BMS), operating modes, operation and control sequences, trips, interlocks, analogue controls, basic maintenance
Objective:	This course provides the delegate how to safely operate and maintain a typical Power Burner. The objective is to minimize the risk of unforeseen failure, maximize availability, and optimize performance of the burner.
Cost:	£475 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	03th—15th February 2012 06th—08th August 2012



The Hamworthy Combustion Institute Power Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

- Course:** **Power Burner Ancillaries Training**
- Duration:** 2 Days
- Location:** The Hamworthy Combustion Institute, Poole, Dorset, UK
- Who should attend:** Operators and maintenance engineers, supervisors, plant operators, project managers, operations managers, process engineers, development engineers, persons wanting to gain a knowledge and understanding of power burner ancillaries
- Content:** Introduction to Ancillaries, Study the integration of each element of the process, fans, valves, Igniters, scanners and control systems
- Objective:** This 2 day Power Burner Ancillaries course is aimed at providing the delegate with the ability to identify ancillary components, instrumentation and control systems. It will enable them to understand ladder logic control of burners – starting / maintaining shutting down etc.
- Cost:** **£425 per person, per day**
- Includes:** Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
- Dates:** **14th—15th May 2012**

The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com



The Hamworthy Combustion Institute Process Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

- Course:** **Level 1 Introduction to Refinery or Petro Chemical Burners**
- Duration:** 3 Days
- Location:** The Hamworthy Combustion Institute, Poole, Dorset, UK
- Who should attend:** Supervisors, plant operators, maintenance engineers, project managers, operations managers, process engineers, development engineers, persons wanting to gain a knowledge and understanding of Process burners
- Content:** Process burner design, combustion theory, fuel systems delivery and control, practical examples on how to identify combustion, problems flame monitoring factors affecting shape and colour
- Objective:** This generic course aims to provide the delegate with an understanding of design and operation of burners used in heaters, furnaces and boilers in the process industries, such as refineries and petrochemical, with the main focus being on the safe operation, preventative and remedial maintenance. The delegates will be able to recognize the features common to all burners and how they work. The differences between burners will also be studied, such as forced draft or natural draft.
- Cost:** **£480 per person, per day**
- Includes:** Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
- Dates:** **23rd—25th January 2012**
19th—21st November 2012



The Hamworthy Combustion Institute Process Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Level 2 Refinery or Petro Chemical Plant Burner
Duration:	3 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Maintenance engineers, supervisors, plant operators, project managers, operations managers, process engineers, development engineers and persons involved in Process (refinery or petro chemical) industry
Content:	Health and safety management procedures, combustion theory, design & operation of the burner, optimisation of efficiency, ancillary equipment and proprietary devices, valves, & instruments, start up and shut down sequences, burner management system, analogue controls, routine preventive maintenance, basic fault finding
Objective:	The course provides the delegate with in depth knowledge of process burners allowing them to safely and confidently operate, maintain and repair process burners, to optimise performance
Cost:	£449 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	06th—08th February 2012 26th—28th November 2012



An ISO 9001:2008
approved company

The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

The Hamworthy Combustion Institute Process Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Refinery or Petro Chemical Flares Training Course
Duration:	2 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Supervisors, plant operators, maintenance engineers, operations managers, process engineers, development engineers, persons wanting to an introduction and understanding of refinery or petro chemical flares
Content:	Types of flares, flare safety, flare pilots, operation, maintenance, efficiency, emissions
Objective:	The course provides the delegate with an introduction into the specific types of Process Flare burners. They will also gain an understanding of the safe operation and maintenance and covers how to efficiently run the burner as well as the control of safe emissions.
Cost:	£399 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	09th—10th July 2012 Please contact the institute for further dates



The Hamworthy Combustion Institute Process Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Refinery or Petro Chemical Plant Burner Ancillaries
Duration:	2 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Operators and maintenance engineers, supervisors, plant operators, project managers, operations managers, process engineers, development engineers
Content:	Study the integration of each element of the process, heater / boiler / furnace, burner fans (forced draft & induced draft), flow control valves, valve skid, instrumentation & controls (temperature, pressure, flow), control cabling & signal routing, flame scanners, igniters
Objective:	The course provides the delegate with in depth knowledge of the controls associated with process burners, allowing them to safely and confidently operate, maintain and repair any problems should they arise.
Cost:	£449 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	08th—09th October 2012



The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

The Hamworthy Combustion Institute Marine Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	FPSO / FSO Boiler and Burner Operator and Maintenance
Duration:	3 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Operators, Project managers, Operations Managers, Process Engineers, Maintenance Engineers, Instrument Technicians
Content:	Project & process overview of steam raising and thermal fluid boilers: Feed water treatment, dosing, pumps, functionality of ancillary equipment:, level controls, combustion controls (PLC & DCS). Operator level training and technician fault finding, start up and shut down sequences. Routine preventive maintenance and repairs & replacement, safety equipment & management procedures, preservation & storage. Regulations, standards, & codes
Objective:	The objective is to provide skills to operate and maintain the boiler and combustion system. The delegates will recognise how this theory is applied in the boiler and burner, how to ensure safe and reliable operation and skills in preventative and remedial maintenance of the combustion and boiler equipment.
Cost:	£595 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	27th—29th February 2012 02nd—04th July 2012



The Hamworthy Combustion Institute Marine Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course: Gas Combustion Unit Training (GCU) – DNV Accredited

Duration: 3 Days

Location: The Hamworthy Combustion Institute, Poole, Dorset, UK

Who should attend: Operators and Maintenance Engineers, Operations Managers, Process Engineers, Project Managers, Instrument Technicians and Cadets

Content: Background of the GCU, combustion theory, differences between vessels, study of GCU fabric including burner maintenance, fault finding, valves system (BOG, oil and waste gas reliquefaction), fans, control logic, motor control centre, igniters, PLC & DCS (SCADA)

Objective: The course will give all delegates a thorough knowledge of the GCU, sufficient to operate and maintain the GCU confidently

Cost: £550 per person, per day

Includes: Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day

Dates: 05th—07th March 2012
25th—27th June 2012
05th—07th November 2012



The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

Course:	VOC Boiler Operation and Maintenance
Duration:	3 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Operators, Maintenance Engineers, Operations Managers, Process Engineers, Project Managers, Instrument Technicians and Cadets
Content:	Basic combustion theory, process overview of VOC recovery unit operation: Boiler overview, feed water treatment, dosing, pumps, functionality of ancillary equipment: Burner and components, fuel mixture, operation, Wobbe index meter: level, pressure, combustion controls, light up cycle, sequences: Fault finding, routine preventive maintenance, repairs & replacement, safety equipment & management procedures, preservation & storage. Regulations, standards and codes
Objective:	The objective of the course is to train the operator to minimise the risk of unforeseen failure and unsafe conditions. The aim is to also gain an appreciation of the installed system. This includes its physical fabric, burner, ignition and scanning systems, sufficient to operate and maintain the equipment with confidence
Cost:	£620 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	28th—30th May 2012 17th—19th September 2012

The Hamworthy Combustion Institute Incineration Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Operation of Auxiliary Boilers on Ships
Duration:	2 Days - A third day can be included in the course if a vessel is available For practical training on board
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	Operators, Chief Engineers – 4 th Engineers, Maintenance and Instrument Technicians – persons responsible for Operation of Auxiliary Boilers
Content:	Project & process overview of steam production and use: P&I Diagrams. Boiler design features: Feed water treatment, dosing, pumps, level controls. Combustion science and Burner Design: Functionality of equipment: Boiler controls: start up and shut down sequences. Fault finding: routine preventive maintenance, repairs, & replacement: Spare parts strategy. Regulations, standards, & codes
Objective:	The objective is to provide all delegates with the skills to operate and maintain the boiler and combustion system safely, efficiently, and confidently. The delegates will recognise how theory is applied and how this explains what is occurring in the boiler
Cost:	£595 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	16th – 17th July 2012



The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

The Hamworthy Combustion Institute Flares Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Ground flares (open and enclosed)
Duration:	3 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	All Engineers
Content:	Basic combustion theory, principles of operation, staging system, refractory, chamber design, thermal radiation, smoke suppression, noise, emissions, efficiency, safety, pilots ignition & monitoring, maintenance, troubleshooting, flare upgrades.
Objective:	The objective is to provide skills to give an understanding and safely maintain Ground Flares
Cost:	£480 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	Dates and additional venues on application



The Hamworthy Combustion Institute Flares Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Vapor Combustion Units (VCU)
Duration:	3 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	All Engineers
Content:	Basic combustion theory, principles of operation, staging system, refractory, chamber design, thermal radiation, smoke suppression, noise, emissions, efficiency, safety, pilots Ignition & monitoring, operation and control sequences, trips, interlocks, maintenance, troubleshooting, flare upgrades
Objective:	The objective is to provide skills to give a full understanding and knowledge of Vapor Combustion Units
Cost:	£450 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	Dates and additional venues on application



The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

The Hamworthy Combustion Institute Flares Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Elevated Process & Utility Flares
Duration:	4 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	All Engineers
Content:	Basic combustion theory, principles of operation, type of flares, flare selection guide, stack design, thermal radiation, smoke suppression, noise, emissions, efficiency, safety, pilots ignition & monitoring, maintenance, troubleshooting, flare upgrades
Objective:	The objective is to provide skills to give an understanding and safely maintain the utility flare
Cost:	£450 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	Dates and additional venues on application



The Hamworthy Combustion Institute Flares Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Course:	Elevated Staged Flares
Duration:	3 Days
Location:	The Hamworthy Combustion Institute, Poole, Dorset, UK
Who should attend:	All Engineers
Content:	Basic combustion theory, principles of operation, stack design, staging system, thermal radiation, smoke suppression, noise, emissions, efficiency, safety, pilots ignition & monitoring, operation and control sequences, maintenance, troubleshooting, flare upgrades, burner construction and components, ancillary equipment, combustion theory, combustion control, PLC's operating modes, operation and control sequences, trips, interlocks
Objective:	The objective is to provide skills to give an understanding and safely maintain elevated staged flares
Cost:	£480 per person, per day
Includes:	Tutorial support, training documentation (manuals, reference books), course certification, buffet lunch and refreshments throughout the day
Dates:	Dates and additional venues on application



The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

The Hamworthy Combustion Institute Flares Training

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

- Course:** **Low Sulphur Diesel**
- Duration:** 1 Day Seminar
- Location:** The Hamworthy Combustion Institute, Poole, Dorset, UK
- Who should attend:** Most Marine Operators have already selected, designed or procured the necessary remedial measures. This seminar will help the ships' engineers understand the implications of the new equipment. The favoured solution is to change to LSDO fuel. This fuel has a higher safety risk which needs to be understood by all ships' engineering crew
- Content:** The Legislation; increased hazards using LSDO — Safety implications (*for operators to take into account when utilising LSDO*); equipment required for use of LSDO; procedures — complying with the legislation on board; models and drawings.
- Objective:** This seminar will give an explanation of the legislation and detail of equipment being adopted throughout the industry. The delegates will take away a course book describing the important information. Considerable time will be available for discussion with the Seminar experts and there will be opportunity to compare with other delegates what stage they are at in adopting the regulations
- Cost:** **Dependant on venue**
- Includes:** Buffet lunch and refreshments throughout the day
- Dates:** **Dates and additional venues on application**



The Hamworthy Combustion Institute

Terms & Conditions

GLOBAL SOLUTIONS. . . LOCAL DELIVERY

Unless expressly varied as detailed below, all terms will be as set out in Hamworthy Combustion Standard Conditions of Sale, FO125 Issue 1, a copy of which is available upon application

Payment Terms:

Full payment should accompany your registration form, within 6 weeks of the course start date, unless you have requested payment by invoice.

Payment by Invoice:

In this instance please note that registration forms received without a supporting Purchase Order document cannot be processed. All invoices are to be settled within 14 days, certificates will not be issued until payment is received.

Confirmation:

Confirmation will be sent upon receipt of payment/purchase order document and registration. Full course instructions will be sent 7 — 10 days prior to the course start date.

Cancellations:

If a minimum number of students are not registered 14 days prior to the course start date, the administrative team reserve the right to reschedule the course. Students will be contact via email or telephone and will be rescheduled on the next available course. In this instance ALL paid students will have priority.

Where a student wishes to cancel a registration the following charges will apply:

0 to 2 weeks prior to course start date — 100% of the total course cost
3 to 4 weeks prior to course start date — 75% of the total course cost
5 to 6 weeks prior to course start date — 50% of the total course cost

Please note that substitutions are welcome. Please notify the Hamworthy Combustion Institute if this is the case.



The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

The Hamworthy Combustion Institute
Hamworthy Combustion Engineering Limited,
Fleets Corner, Poole, Dorset, BH17 0LA
Tel: +44 1202 663904
Fax: +44 1202 663999
Email: training@hamworthy-combustion.com
Website: www.hamworthy-combustion.com

