



2024



INDEPENDENT STEAM & BOILER TRAINING





"We are committed to offering a **professional training service**, that is current and up to date with all Legislation, Guidelines, and best working practices.

Our company has over **40 years of experience**, our trainers have the skills and knowledge to deliver our courses in our purpose built training room, online, or on the client's site.

In the last year, we have introduced:

- Boiler House E-Learning modules
- Boiler House Managers Awareness
- 2 Day Energy Efficiency & CO2 Reduction

Coming soon will be a brand new steam design course, enabling you to gain a greater understanding surrounding the designing of steam/ condensate systems.

Mr. Paul Bough IEng MIET

The Importance of Training

Whether the training is for yourself or your employees; having correctly trained staff is essential. Not only it is the law, it can also improve plant safety and it can also save vast amounts of money.

M&M Training addresses the need for training and ensures all attendees leave better equipped for their job.



What our customers have to say...

"Superb organisation! From the booking, through to the warm welcome, refreshments and lunch. The venue and facilities were also superb."

Johnsons Workwear

"The practical parts of the courses has given our employees an insight to 'behind the scenes'. They now fully understand the mechanics of our system."

Anglian Water

"Paul delivered the BOAS course in a way that is easy to understand. His knowledge and passion made me feel comfortable and stopped any worry about the course being online."

Prinovis UK

STEAM UTILISATION

Who Should Attend?

This course is intended for all personnel that are involved with the steam plant. Also, for those who are responsible – or may become involved with the installation/ maintenance of steam equipment.

We recommend this course is taken in conjunction with our Boiler House Course.

Aims

To ensure that all personnel involved with steam equipment understand the principles of steam and are able to recognise how steam equipment should be sized, installed and checked to give maximum efficiency and safety. Delegates are given the opportunity to take a certified examination which is a recognised qualification valid for 5 years.

Course Content

- Why Do We Need to Be Trained on Steam?
- What Is Steam?
- Formation of Steam
- Steam Tables
- Steam Production
- Steam Distribution
- Steam Design
- What is Condensate?
- Steam Traps
- Steam Trap Sizing
- Steam Headers (Manifolds)
- Trapping of Process Plant
- Pressure Reduction
- System Control
- Control Valves
- Valves and Ancillaries
- Electric Condensate Recovery Units
- Thermal Expansion
- Safe Operation of Valves

**Additional Information**

The Steam Utilisation course begins at 09:00 and concludes at approximately 16:30. Additionally, all refreshments and lunch are included within the costs.

In order to accommodate our customers requirements, the course is available to attend in a variety of ways/ locations. Such as;

- M&M Training Centre
- Webinar
- On-site



BOILER HOUSE

Who Should Attend?

Our Boiler House course is intended for all personnel involved with the operation and management of steam boiler plant.

We recommend this course is taken alongside our Steam Utilisation Course.

Aims

To provide a detailed understanding of the operation of steam boiler(s) and to ensure operators are aware of the mandatory requirements and safety procedures surrounding the operation of a boiler. Delegates are then given the opportunity to take a certified examination, which is a recognised qualification valid for 5 years.

**Course Content**

- Legislation
- Boiler Construction
- Different Types Of Boilers
- The Boiler House & Equipment
- Water Quality
- Water (Pre-Treatment)
- Boiler Feed Tanks
- Water (Post Treatment)
- Boiler Blowdown & TDS
- Boiler Water Level Control
- Boiler Burner Control (Pressure)
- Burner Combustion
- Ventilation
- Energy Saving Potential
- Boiler Routines
- BG01 Compliance
- Safe Isolation
- Boiler Inspections

Additional Information

The Boiler House course begins at 09:00 and concludes at approximately 16:30. Additionally, all refreshments and lunch are included within the costs.

In order to accommodate our customers requirements, the course is available to attend in a variety of ways/ locations. Such as;

- M&M Training Centre
- Webinar
- On-site



BOILER HOUSE (E-MODULES)

Due to the success of our virtual and in house Boiler House course - we have introduced an alternative way to attend the course. Delegates now have to option to gain accreditation via a state of the art e-learning platform.

Upon receipt of payment, delegates are granted access to an advanced web-based learning platform that enables them to undertake 9 distinct modules. Following the completion of each module, delegates will undertake a multiple choice examination that assesses their understanding of the topics covered in the preceding module.



The e-modules offer a significant advantage, as delegates have the freedom to progress through the modules at their preferred pace (maximum of 1 month). Additionally, each module can be paused and rewind if needed. Similar to our other courses, delegates are still able to obtain certification (valid for 5 years).

Course Content

- Legislation
- Boiler Construction
- Different Types Of Boilers
- The Boiler House & Equipment
- Water Quality
- Water (Pre-Treatment)
- Boiler Feed Tanks
- Water (Post Treatment)
- Boiler Blowdown & TDS
- Boiler Water Level Control
- Boiler Burner Control (Pressure)
- Burner Combustion
- Ventilation
- Energy Saving Potential
- Boiler Routines
- BG01 Compliance
- Safe Isolation
- Boiler Inspections

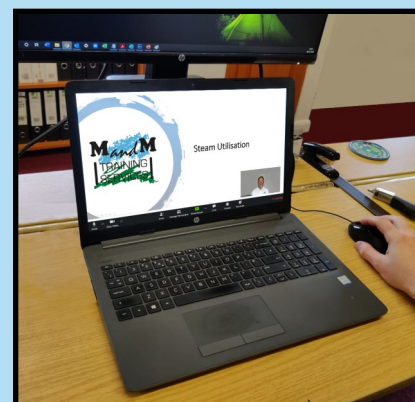
Who Should Attend?

Our Boiler House course is intended for all personnel involved with the operation and management of steam boiler plant.

Aims

To provide a detailed understanding of the operation of steam boiler(s) and to ensure operators are aware of the mandatory requirements and safety procedures surrounding the operation of a boiler.

	Price (per person)	5 Year Accreditation
Boiler House (E-Learning)	£380.00	£110.00



1-DAY WATER TREATMENT

Who Should Attend?

Our Water Treatment course(s) are intended for operators of industrial steam boilers and plant managers who wish to understand the importance of water quality for their boiler.

This course is typically taken in conjunction with our Steam Utilisation and Boiler House Course.

Aims

Upon completion, this course will enable the delegates to undertake the most important/regular tests on their industrial steam boiler. Complete with video demonstrations, the delegate will be able to optimise their boiler plant water treatment, improving safety, efficiency and steam quality.

Course Content

- Safety, Legislation & Guidelines
- Water and its Impurities
- Water Pre – Treatment Methods
- Hotwells & Deaerators (Thermal De-Aeration)
- Water Post Treatment (Chemical Dosing)
- The Boiler Water
- Consequences of Impurities in the Boiler
- Blowdown & TDS
- Magnetite
- Idle Boilers
- Getting it Wrong
- Sampling & Testing



Additional Information

Upon completion of the course, delegates are given lifetime access to video testing tutorials.

The Water Treatment course begins at 09:00 and concludes at approximately 16:30. Additionally, all refreshments and lunch are included within the costs.

In order to accommodate our customers requirements, the course is available to attend in a variety of ways/ locations. Such as;

- M&M Training Centre
- Webinar
- On-site

2-DAY WATER TREATMENT

Who Should Attend?

Our Water Treatment course(s) are intended for operators of industrial steam boilers and plant managers who wish to understand the importance of water quality for their boiler.

This course is typically taken in conjunction with our Steam Utilisation and Boiler House Course.



Aims

Upon completion, this course will enable the delegates to undertake the most important/regular tests on their industrial steam boiler. Complete with practical and video demonstrations, the delegate will be able to optimise their boiler plant water treatment, improving safety, efficiency and steam quality. All delegates will receive a copy of BG04

Course Content

Day 1

- The Water Cycle
- Contamination of Water
- Blowdown Calculations
- Water Treatment Methods
- Good Practices
- Feedtanks/ Hotwells
- Idle Boilers
- Bottom Blowdown & TDS
- Consequences of High TDS
- Safety & Legal Requirements
- Typical Water Treatment Testing Kits



Day 2

- Practical demonstrations/ physical water treatment testing.

Delegates are encouraged to bring samples of their own boiler water in enabling to gain greater knowledge/ experience with their own WT regime.

Additional Information

The Water Treatment course begins at 09:00 and concludes at approximately 16:30. All refreshments and lunch are included within the costs.

In order to accommodate our customers requirements, the course is available to attend in a number of ways. Such as;

- M&M Training Centre
- On-site

BOILER HOUSE MANAGERS AWARENESS

Until now, there was little training available which is focused directly on the management of the boiler house. Consequently, since launching the course in 2022 - it has received an astonishing amount of interest. Therefore, dates are filling up rapidly.



Who Should Attend?

Our BHMA course is suitable for:

- Boiler house managers
- Employees hoping to become boiler house managers
- Supervisors
- Safety professionals/ representatives responsible for operation, manning and safety within the boiler house

Aims & Objectives

The principal aim and objectives of the programme is to provide delegates with the range of tools required to manage all aspects within the boiler house, to ensure that it is safe, efficient, and environmentally friendly

Course Content

- Legislation, guidelines & best practices
- Hazard analysis
- What can go wrong?
- Pressure systems overview
- Emergency procedures
- Managers checklists
- Boiler house checks
- Efficiency gains



Additional Information

The BHMA course begins at 09:00 and concludes at approximately 16:00. Additionally, all refreshments and lunch are provided to delegates free of charge.

In order to accommodate our customers requirements, the course is available to attend in a number of ways. Such as;

- M&M Training Centre
- Webinar
- On-site

ENERGY EFFICIENCY & CO2 REDUCTION (EE & CO2 RED)

Who Should Attend?

Our course is suitable for:

- Boiler house managers
- Plant/ Boiler operators
- Supervisors
- Safety professionals/ representatives responsible for operation and manning of boiler house



Aims

The principal aim and objectives of the programme is to provide delegates with the range of tools required combat their plants energy efficiency. During the course, delegates will be taught how to calculate losses from: steam, energy, water and chemicals.

Course Content

- | | |
|---|--|
| <ul style="list-style-type: none"> • Environmental Issues • Steam Tables • Formation of Steam • Steam Distribution • Condensate & Water Hammer • Savings from Returning Condensate • Steam Traps & Losses • Steam Trap Testing • Air in the Boiler & Steam System • Heat Exchanger Load Calculation & System Control Issues • Economy, steam leaks, Insulation + blowdown • Hot wells | <ul style="list-style-type: none"> • TDS & Bottom Blowdown • Blowdown Savings from Water Treatment &/OR Heat Recovery • Heat Transfer • Combustion • Pre-Heating of Combustion Air • Boiler & Plant Efficiency • Condensate Closed Loop Systems • Economisers • Maximising Efficiency Gains • The Future |
|---|--|

Additional Information

The 2-Day Energy Efficiency & CO2 Reduction course begins at 09:00 and concludes at approximately 16:30. Additionally, all refreshments and lunch are provided to delegates free of charge.

In order to accommodate our customers requirements, this course is available to attend a number of ways. Such as;

- M&M Training Centre
- On-site



Boiler Operation Accreditation Schemes (BOAS)

The Boiler Operations Accreditation Scheme (BOAS) was designed in collaboration with the Health and Safety Executive, the insurance industry, manufacturers of boilers and associated equipment, and employers.



To date, over 5000 boiler operators and managers have been assessed and accredited under the BOAS scheme.

Who Should Attend?

The BOAS course is an advanced course and is only intended for boiler operators, managers and supervisors with a minimum of 100 operating hours spread over 6-months (for which evidence must be provided).

We therefore encourage delegates as a minimum to attend both our steam utilisation, boiler house and water treatment courses. This will allow all delegates to put into practice things learnt and slowly start to gather the necessary evidence and experience needed prior to applying for BOAS.

Aims

To provide a thorough and complete understanding, and training in preparation for the BOAS qualification, whilst promoting safety and energy efficiency in the boiler house, with due regard for environmental aspects and legal requirements.

BOAS trained staff can ensure the boiler plant runs at its optimum efficiency. Correct training can potentially save thousands of pounds in fuel costs, chemicals and equipment used, and reduce repairs. The BOAS qualification is the only qualification which can prove competence upon completion.

Content

- Safety & Legal
- Boiler Design & Construction
- Heat Transfer
- Water Treatment
- Combustion & Draught
- Fuel Concepts
- Control & Instrumentation
- Boiler Auxiliaries
- Environment
- Energy Efficiency
- Operation
- Management



Categories

As M&M are an approved BOAS training provider, we can help achieve your BOAS qualification within the following categories

Category 1 - Hot Water Boilers At Any Pressure And Temperature

This syllabus is applicable to Operators and Managers with responsibility for hot water boilers which are directly fired, waste heat boilers and combination boilers (direct fired boilers with a waste heat section).

The training and all aspects of the assessment can be carried out a variety of ways/locations such as;

- M&M Training Centre
- Webinar
- Onsite



Category 2 - Shell-type Industrial Steam Boilers

This syllabus is applicable to Operators and Managers with responsibility for horizontal multitubular shell boilers which are directly fired, waste heat boilers and combination boilers (direct fired boilers with a waste heat section).

The training and all aspects of the assessment can be carried out a variety of ways/locations such as;

- M&M Training Centre
- Webinar
- Onsite

Category 5 - Coil Steam Generator

One-day course covering a range of safety and operational issues that the coil boiler operator should be aware of. This type of boiler is also often referred to as a Steam Generator.

Coil boiler operators will be assumed to have little prior technical or safety knowledge in relation to steam raising plant.

The training and all aspects of the assessment can be carried out a variety of ways/locations such as;

- M&M Training Centre
- Onsite

Technical Boiler House Risk Assessment

A suitable and sufficient Technical Boiler House Risk Assessment is a legal requirement under The Management of Health and Safety at Work Regulations 1999 (MHSWR), Section Three.

A Technical Boiler House Risk Assessment is an example of the type of record that should be kept and made available for scrutiny under The Pressure Systems Safety Regulations 2000 (PSSR), Regulation Fourteen, and is further recommended within BG01 Guidelines and The Health and Safety Executive Publication: INDG436.

What We Offer

Not just an Operational Task Risk Assessment, the Technical Boiler House Risk Assessment assesses the entire Boiler House; including things such as:

- The Steam Boiler(s) and Boiler Controls
- The Primary Steam Header and Distribution System exiting the Boiler House
- The Feed Water Tank (Hotwell)
- The Water Treatment Plant and Associated Feedwater System
- The Blowdown Vessel and Boiler Blowdowns

Within our detailed Technical Boiler House Risk Assessment; we consider issues such as, although not limited to:

- The likelihood and severity of potential injuries
- The location and layout of the boiler room
- Operational risks
- Manning levels
- Additional controls for remote and/or unmanned boiler operation
- Conformance with current Guidelines and Regulations
- Achievable efficiency gains
- Documentation available concerning steam raising plant and equipment



M&M Training offer an independent risk assessment of your Boiler House, carried out by engineers who provide you with a written report. Should there be any issues, these will be identified within the report by the use of a simple **traffic light system**.

The report will also recommend any necessary control measures needed, and the reduced level of risk shown within the traffic light system. We are then able to offer our services to help you take the necessary steps, to keep all personnel and the surrounding property safe.

In addition to our aforementioned courses/services, M&M Training can offer a more tailored option for you and your company. Listed below is a list of other courses/services we provide. Should you require any further information regarding these - please contact us.

Competency Checks

Whilst a number of our courses are certified/accredited, they do not provide proof of competency. Competence is a combination of:

- Training
- Skills
- Experience
- Knowledge

Therefore, we recommend an additional service in which we can conduct competency checks on delegates. This involves our trainers attending site, reviewing operational procedures, assessing the delegate's ability and evidence of their/your experience.

Similar to the BOAS pre-requisite, experience can be proven by providing evidence of either 6 months or 100+ hours of work. Typically, we can assess a maximum of 5 delegates in a working day.



Service	Price (per day)
Competency Checks	£2,415.00

Additional Services

- Operating Procedure Writing
- Technical Water Treatment Risk Assessment
- Steam & Condensate System Audits
- Training & Qualification Reviews/Analysis
- Assessing Potential Employees
- Production of Safe Systems of Work and Site Standards
- HSG-253 Assessments

Accredited Courses

- BOAS Cat 1, 2 & 5
- Steam Plant & Maintenance
- Steam Utilisation
- Boiler House
- 1-Day Water Treatment
- 2-Day Water Treatment
- Boiler House Managers Awareness (BHMA)
- Energy Efficiency & CO2 Reduction Course
- Steam Design (coming soon)
- Hazardous Fluids

Continuous Development Courses

- Steam Awareness
- Boiler House Awareness
- Steam Trap Training
- Control Valves
- De-superheaters
- Corrugator & Laundry
- Legionella Awareness
- Abrasive Wheels



PRICE LIST

(excl. VAT)



Service	Price
Technical Boiler House Risk Assessment (TBHRA)	£4,250.00 + expenses

Virtual (Online) Courses			
Course Title	Duration	Price (per person)	5 Year Accreditation (Optional) + £110.00
Steam Utilisation (SU)	1-Day	£345.00	✓
Boiler House (BH)	1-Day	£345.00	✓
Water Treatment (WT)	1-Day	£345.00	✓
Boiler House (E-Modules)	30 Days*	£380.00	✓
* Delegates are given up to 30 days to complete all modules.			

In-House Courses			
Course Title	Duration	Price (per person)	5 Year Accreditation (Optional) + £110.00
Steam Utilisation (SU)	1-Day	£395.00	✓
Boiler House (BH)	1-Day	£395.00	✓
Water Treatment (WT)	1-Day	£395.00	✓
2 Day Water Treatment	2-Day	£1068.00	✓
Boiler House Managers Awareness (BHMA)	1-Day	£395.00	✓
Energy Efficiency & CO2 Reduction	2-Day	£930.00	✓
Steam Plant & Maintenance	1-Day	£395.00	✓
Steam & Boiler House Awareness	1 Day	£395.00	X
Pressure System Awareness	1-Day	£395.00	X

On-Site Courses
All of our bespoke training courses can be undertaken at our customer's facilities. Please get in touch to find out more.

Prices shown were accurate at time of publishing, although are subject to change. Therefore, please contact us to confirm pricing is valid.



BOAS PRICE LIST

(excl. VAT)



Course Title	Duration	Location	Price (per person)
BOAS (Cat 2)	4 Days	M&M Training	£1,470.00
CEA Registration			£110.00
Choice of Qualification			
Operator	Manager	Dual	
£410.00	£460.00	£610.00	

Course Title	Min/Max Number of Delegates	Duration	Location	Price
BOAS (Cat 2)	4 / 8	4 Days	ON-SITE	£8,085.00
BOAS (Cat 2)	9 / 12	4 Days	ON-SITE	£10,395.00
CEA Registration				£110.00 (per person)
Choice of Qualification				
Operator	Manager		Dual	
£410.00	£460.00		£610.00	
Excluding Expenses				

Other Categories	
Course Title	Price
CAT 1 - Hot Water Boilers At Any Pressure And Temperature	CONTACT US
CAT 5 - Coil Steam Generators	CONTACT US

On-Site Courses
All of our training courses can be undertaken at our customer's facilities. Please get in touch to find out more.

Prices shown were accurate at time of publishing, although are subject to change. Therefore, please contact us to confirm pricing is valid.



2024 TRAINING CALENDAR



MONTH	LOCATION	SU	BH	WT (1 DAY)	WT (2 DAY)	EE & CO2 (2 DAY)	BHMA
JAN	Web	Mon-29	Tue-30	Wed-31			
	M&M	Mon-15 Tue-30	Tue-16 Wed-31	Wed-17			
FEB	Web	Mon-19	Tue-20	Wed-21			
	M&M	Mon-26	Tue-27		01-02ND	07-08TH	Wed-28
MAR	Web	Mon-04	Tue-05	Wed-06			
	M&M	Mon-25	Tue-26	Wed-27		20-21ST	
APR	Web	Mon-08 Mon-29	Tue-09 Tue-30	Wed-01 Wed-10			
	M&M	Mon-15	Tue-16		17-18TH		
MAY	Web						
	M&M	Mon-20	Tue-21	Wed-22			
JUN	Web	Mon-03	Tue-04	Wed-05			
	M&M	Mon-17	Tue-18				Mon-19
JUL	Web	Mon-08	Tue-09	Wed-10			
	M&M	Mon-15	Tue-16		17-18TH		
AUG	Web	Mon-05	Tue-06	Wed-07			
	M&M	Mon-12	Tue-13			14-15TH	
SEPT	Web	Mon-23	Tue-24	Wed-25			
	M&M	Mon-02 Mon-16	Tue-03 Tue-17	Wed-04			Wed-18
OCT	Web	Mon-28	Tue-29	Wed-30			
	M&M	Mon-14	Tue-15		16-17TH		
NOV	Web	Mon-25	Tue-26	Wed-27			
	M&M	Mon-11	Tue-12			13-14TH	
DEC	Web	Mon-09	Tue-10	Wed-11			
	M&M	Mon-02	Tue-03	Wed-04			

Dates are accurate upon time of publishing. However, please contact us prior to booking to confirm.



2024 BOAS TRAINING CALENDAR



Month	Location	BOAS (CAT 2)	BOAS (CAT 5)
Jan	M&M	22-25TH	18/01/2024
Feb	M&M	19-22ND	29/02/2024
Mar	M&M	11-14TH	
Apr	M&M	22-25TH	
May	M&M	13-16TH	
Jun	M&M	10-13TH	
Jul	M&M	22-25TH	02/07/2024
Aug	M&M	19-22ND	
Sep	M&M	09-12TH	
Oct	M&M	21-24TH	
Nov	M&M	18-21ST	
Dec	M&M		

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