



PROVIDER OF STEAM, HOT WATER & THERMAL OIL BOILER TRAINING





Victoria Timson-Ayears
Training & Accounts Director

Welcome to M&M Training Services

Thank you for taking the time to explore our training brochure. At M&M Training Services, we are proud to offer high quality, industry leading courses designed to strengthen your technical skills and support your professional development.

Our origins trace back to our sister company - **Flomar**, incorporated in 1983. In 1987, *Martin and Mary* began delivering specialist training under the Flomar umbrella, quickly building a reputation for practical expertise and high standards. As demand continued to grow, their dedicated training arm evolved and in 2002 it became the company you know today as **M&M Training Services**. This long standing heritage forms the foundation of the knowledge-rich, industry-led training we deliver today.

Over my four years with the company — I've had the privilege of progressing from Accounts Assistant to Training and Accounts Director — I've seen our facilities, course range and overall capability develop significantly. Today, we are pleased to offer two purpose built training rooms:

The Paul Bough Training Room

- Our newest space, designed for hands-on water treatment training and practical learning.

The Martin Fletcher Training Room

- Recently refurbished and equipped with an electric steam boiler, demonstration rig and block and bleed kit to support an even broader selection of courses.

Our greatest strength lies in the abundant knowledge and experience of our skilled trainers. Their technical insight, industry experience and passion for sharing their expertise ensure that every delegate receives engaging, comprehensive and practical training.

Inside this brochure, you'll find a wide range of programmes created to support both individuals and organisations in reaching their training goals. We continue to develop new courses to meet the evolving needs of our clients.

I am fortunate to work with a fantastic, knowledgeable team who take real pride in delivering exceptional customer service. Whatever your training requirements, we're here to support you every step of the way.

We look forward to welcoming you soon.

Promoting Safety and Efficiency

Training for boiler operators and managers is essential to ensure both safety and optimal performance in boiler operations. Proper training minimises accidents, reduces downtime and guarantees adherence to regulations.

Key Advantages of Training

1. **Safety:**
Well-trained operators are better prepared to manage emergencies, perform regular safety checks, operate boilers correctly and spot potential hazards, greatly reducing accident risks.
2. **Efficiency:**
Training helps operators run boilers at peak efficiency, leading to energy savings and lower operational costs.
3. **Compliance:**
Being well-versed in industry standards and regulations is vital. Training ensures operators and managers stay current with the latest requirements.

Investing in thorough training programs for steam boiler operators and managers is not only a regulatory necessity but also a strategic choice that boosts safety, efficiency and overall operational performance.





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DO NOT LET THIS HAPPEN TO YOU



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STEAM AWARENESS

Who Should Attend?

This course is designed for plant operators, production personnel and site staff responsible for steam-using equipment and operations. It is also ideally suited to individuals beginning their careers in industries where steam plays a significant role, providing them with a strong foundation in the safe and efficient operation of steam systems.

Aims

The Steam Awareness is a ½ day Basic Course and is designed to provide plant operators, production personnel and site staff with a solid foundation in understanding steam systems, their operation and safety guidelines. This introductory course covers the basics of steam formation, temperatures and pressures, water hammer and relevant health and safety guidelines.

Course Content

- Legislation
- Energy Efficiency
- Environmental Impacts
- Basics of Steam
- Steam Distribution
- Condensate
- Steam Traps
- Steam Equipment
- Steam Isolation



Duration and Delivery

Duration: 1/2 Day.

Location: M&M Training Centre, or on your site.

BOILER AWARENESS

Who Should Attend?

This course is designed for plant operators, production personnel and site staff responsible for boiler operations and associated equipment. It is also ideally suited to individuals who are beginning their careers in industries where boiler operations play a significant role, providing them with the knowledge and understanding required to operate and maintain boiler systems safely and effectively.

Aims

The Boiler House Awareness Basic Course is a half-day course designed to provide plant operators, production personnel and site staff with a solid foundation in understanding boiler systems, their operation and safety guidelines. This introductory course covers the basics of boiler operation, safety protocols and relevant health and safety guidelines.

Course Content

- Legislation
- Boiler Efficiency
- Environmental Impacts
- Boiler House
- Bottom Blowdown & TDS
- Water Treatment
- Burners & Combustion
- Ventilation
- Procedures
- BG01



Duration and Delivery

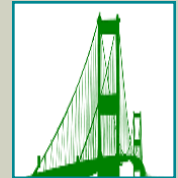
Duration: 1/2 Day.

Location: M&M Training Centre, or on your site.

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

Duration and Delivery

Duration: 1 Day.

Location: M&M Training Centre, virtually, or on your site.



BOILER HOUSE (1 DAY)

Who Should Attend?

Our 1 day 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

Duration and Delivery

Duration: 1 Day.

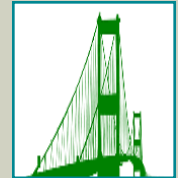
Location: M&M Training Centre, virtually, or on your site.



BOILER HOUSE (2 DAY)

Who Should Attend?

Our 2 day Boiler House course is intended for all personnel involved with the operation and management of steam boiler plant.



Aims

The Two Day Boiler House Operations course provides boiler operatives, technicians and maintenance personnel with the essential knowledge and practical competencies required to operate steam raising plant safely, efficiently and in compliance with UK legislation.

This course is delivered on your site and is uniquely structured around your own boiler house, enabling learners to apply theory directly to the plant they operate every day. Throughout the two days, the trainer works with delegates both inside the boiler house and in the classroom, examining real equipment, real layouts and real operating conditions. This ensures a thorough, practical understanding of your steam system—not just in principle, but in the context of your plant's design, hazards, procedures and operational challenges.

Each delegate receives a workbook, which they complete during the course. This includes practical “touch drills” carried out on your equipment, such as gauge glass blowdown, water sampling and daily/weekly boiler house checks.

Course Content

- Legislation and Guidance
- Boiler House Overview
- Water & Water Treatment Methods
- Feedwater Tank
- Chemical Dosing
- Boiler Construction & Fittings
- Combustion
- Boiler Operation
- Safe Isolation
- Inspection

Duration and Delivery

Duration: 2 Days.

Location: On your site.



BOILER HOUSE (E-MODULES)

Developed in conjunction with “e-tech learning” we now offer our certified Boiler House course to be undertaken at the delegates own pace.

Upon receipt of purchase order, 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. This lowers the need to organise shift cover and arrange travel/ hotels.

Course Modules

- Safety First – Legislation and Compliance
- Boiler Design and Construction
- Boiler Fixtures and Fittings
- Water Quality
- Water Management
- Combustion and Boiler Control
- Operations and Procedures
- Energy Saving Techniques
- Environment and MCPD

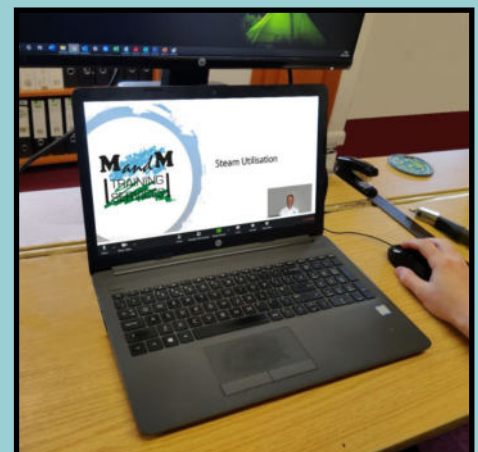


Who Should Attend?

Our Boiler House course is intended for new starters and apprentices who will be having involvement with the boilers/ boiler house equipment.

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.



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



Duration and Delivery

Duration: 1 Day

Location: M&M Training Centre, on your site and virtually.

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.

Course Content

Day 1

- The Water Cycle
- Contamination of Water
- Blowdown Calculations
- Water Treatment Methods
- Good Practices
- Feed tanks/ 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 must bring samples of their own boiler water in enabling to gain greater knowledge/ experience with their own WT regime.

Duration and Delivery

Duration: 2 Day

Location: M&M Training Centre, on your site.

ALARM RESPONSE TRAINING

Who Should Attend?

The Boiler House Alarm Response Training Course is designed to equip Boiler House managers, operators, maintenance personnel and alarm responders with the essential skills and knowledge to respond effectively to boiler house alarms.

Aims

This course provides a comprehensive understanding of boiler house operations, with particular emphasis on the importance of responding promptly to alarms, following safe operating procedures, diagnosing faults effectively and making informed decisions to minimise risk, protect personnel and equipment and maintain operational continuity.



Course Content

This course is typically tailored to your specific boiler house, incorporating site-specific documentation, operating procedures, alarm protocols and photographs of your own equipment. To ensure the training is fully relevant and accurate, a pre-course site visit may be required to gather the necessary information and familiarise the instructor with your installation.

- Safety Protocols and Compliance
- Legislation and Standards
- Alarm Response Safety
- Boiler System Overview
- Consequences of Critical Alarms
- Common Boiler Alarms
- Alarm Diagnosis
- Critical Alarms
- Fault-Finding Techniques
- Practical Boiler House Training
- Alarm Response Exercises
- Critical and Non-Critical Alarm Scenarios

Duration and Delivery

Duration: 1 Day

Location: M&M Training Centre, or on your site.

Please note that the best learning experience will be achieved by presenting this course on the site that the boiler house is located.

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.



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

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



Duration and Delivery

Duration: 1 Day

Location: M&M Training Centre, on your site and virtually.

COIL STEAM GENERATOR

Who Should Attend?

This course is ideal for boiler operators, maintenance technicians, engineering teams, supervisors and managers responsible for steam-heated plant operations, as well as personnel preparing for competency assessments or seeking refresher training to enhance their knowledge and skills.

Aims

The Steam Coil Boiler Course provides boiler operatives, technicians and maintenance personnel with the essential knowledge required to operate, monitor and maintain steam coil heated boilers safely and efficiently. The course focuses on the unique characteristics of steam heated systems, including coil design, heat transfer behaviour, condensate management and the operational risks associated with steam supply failure, flooding and coil integrity.

This course can be delivered on your site, at our training centre, or online, giving you complete flexibility in how your team receives their training. When delivered on site, delegates learn directly from the equipment they use every day, with the trainer working both inside the boiler house and in the classroom to link theory to real plant conditions.

Course Content

- Legislation
- Boiler Construction
- Different Types of Boilers
- The Boiler House and Associated Equipment
- Water Quality & Water Pre-Treatment
- Boiler Feed Tanks
- Water Post-Treatment
- Blowdown Procedures
- Burner Combustion Principles
- Boiler House Ventilation
- Energy Saving Opportunities
- Boiler Operating Routines
- Controls and Instrumentation
- Safe Isolation Procedures



Duration & Delivery

Duration: 1 Day

Location: M&M Training Centre, virtually, or on your site.

ENERGY EFFICIENCY & COST SAVING

Who Should Attend?

Our course is suitable for:

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

**Aims**

The principal aim and objectives of the programme is to provide delegates with the range of tools required to 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 | <ul style="list-style-type: none">• Hot wells• 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 |
|--|---|

Duration and Delivery

Duration: 2 Day

Location: M&M Training Centre, on your site and virtually.



ELECTRIC BOILER

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Boiler Operation Accreditation Schemes (BOAS)

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 to attend our other courses prior to attempting BOAS. 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.

Content

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



Category	Duration	Location
Cat 1 - Hot Water Boilers (At Any Pressure / Temp)	4 Days	M&M Training Centre, or on your site.
Category 2 - Conventional Shell Type Steam Boilers	4 Days	
Category 5 - Steam Coil Generators	1 Day	

STEAM, BOILER HOUSE & WATER TREATMENT - (SBW 1 & 2)

Overview

SBW 1 is a comprehensive 3-day training course designed to equip participants with the knowledge and skills necessary for the effective and efficient management of steam equipment, boiler house operations and water treatment processes.

The SBW 2 course builds on the SBW 1 course, with the first three days covering the same material. It includes an additional fourth day focused on practical water treatment training, where participants work directly with water samples provided by their own facility.

To ensure participants meet the course prerequisites, evidence of the student's role and/or experience as an operator or manager within the boiler house must be provided prior to attendance. This will be assessed to confirm eligibility for the course.

At the end of each day, students must successfully pass an exam (one per day). These exams are more advanced than those offered in the 1-day courses and successful completion grants the student a pass certificate accredited for 5 years. This certificate confirms that the student has acquired the necessary knowledge but does not by itself prove competence.

Competency Assessment:

To be deemed fully competent, participants must undergo a separate competency assessment, which can be purchased upon course completion.

- The assessment involves a site visit, typically 2–3 months after the student has passed the course. This allows time for the student to refine their skills in a practical setting.
- During the site visit, practical competency checks are conducted to ensure the student can effectively apply their learning in the workplace.
- Upon successful completion, the student will receive a certificate of competency, confirming their ability to perform tasks safely and efficiently in a boiler house environment.

Course Objectives:**SBW1:**

- Understand the fundamental principles of steam generation and utilisation.
- Safely operate boiler house equipment.
- Implement strategies to reduce energy consumption and improve boiler efficiency.
- Monitor and treat water quality to prevent scaling, corrosion and fouling in steam systems.
- Understand and comply with health, safety and environmental regulations in boiler house operations.

SBW2:

- Gain practical knowledge of carrying out water treatment testing



STEAM, BOILER HOUSE & WATER TREATMENT - (SBW 1 & 2)

Course Content

Day 1: Introduction to Steam Systems & Utilisation (SBW 1 & 2)

- Law, regulations, approved codes of practice and guidance applicable to steam systems.
- How steam and condensate are generated, distributed (basic design) and the removal of condensate.
- Steam quality and the removal of air and gases from steam.
- Water hammer: what it is and why it must be avoided.
- Reading and using steam tables.
- Key steam system components: stop valves, pressure reduction valves, regulators, steam traps and condensate recovery equipment.
- Thermal expansion of pipework and safe valve operation.
- Steam system isolation (HSG 253).



Day 2: Boiler House Operations (SBW 1 & 2)

- Boiler types: wetback, dry back, steam generators and vertical tubeless.
- Key boiler components: gauge glasses, level limiters and pressure transmitters.
- Key boiler house components: burners, economisers, feedwater systems, hot wells, deaerators and fuel systems.
- Combustion and heat transfer.
- Boiler annual inspections.
- Boiler cold start and warm start procedures.
- Daily and weekly boiler house checks.

Day 3: Water Treatment for Steam Systems (SBW 1 & 2)

- The role of water quality in boiler performance and longevity.
- Types of water treatment and equipment: softening, demineralisation and reverse osmosis.
- Effects of poor water quality: scaling, corrosion, fouling and efficiency reduction.
- Basics of water chemistry: pH, hardness, alkalinity, conductivity and total dissolved solids (TDS).
- Treatment options for steam systems: chemical dosing, filtration and monitoring systems.
- Bottom blowdown and side (TDS) blowdown: objectives and management.

Day 4: Practical Water Treatment Testing (SBW 2)

- A wide range of practical testing and fault finding.

Duration and Delivery

SBW 1: 3 Days

SBW 2: 4 Days

Location: M&M Training Centre, or on your site.

STEAM PLANT MAINTENANCE

Who Should Attend?

The SPM is designed to provide steam plant managers, operators and maintenance personnel with the essential skills and knowledge to maintain efficient, safe and reliable steam plant operations. This comprehensive course covers the critical aspects of steam plant maintenance, emphasising safety, efficiency and regulatory compliance.



Aims

This course provides an understanding of the components and operation of steam plant systems, equipping delegates with the knowledge to maintain them safely and efficiently. Participants will learn effective maintenance strategies, best practices for improving reliability and performance and how to identify and resolve common maintenance issues. The course also covers key safety and environmental requirements to help ensure ongoing regulatory compliance.

Course Content

This course is tailored to meet the specific needs of your steam plant, incorporating literature, procedures and photographs relevant to your own equipment and maintenance protocols. Therefore, a site visit may be necessary prior to the course to gather the required information and ensure the training is fully aligned with your operational environment and equipment.

- Safety and Compliance
- Legislation and Regulations
- Safe Maintenance Practices
- Steam Plant Systems
- Components and Operation
- Common Challenges
- Safe Isolation
- Maintenance Best Practices
- Preventive Maintenance
- Diagnostic Techniques
- Critical Maintenance Tasks
- Practical Training
- Maintenance Exercises and Procedures

Duration and Delivery

Duration: 2 Days

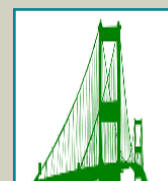
Location: M&M Training Centre, or on your site.

The best learning experience is achieved when the course is conducted on-site, allowing participants to engage directly with their own equipment and systems.

STEAM SYSTEM DESIGN

Who Should Attend?

The Steam Boiler and Steam System Design Course is designed to provide plant engineers, designers, consultants, contractors with the essential skills and knowledge to design efficient, safe and reliable steam systems. This comprehensive course covers the critical aspects of steam and boiler plant design, emphasising safety, efficiency and regulatory compliance.

**Aims**

This course provides an understanding of steam system design and compliance requirements, including how to calculate steam demand and correctly size boilers and boiler house equipment. It also covers the selection and sizing of steam system components, such as pipework, valves, steam traps, pressure-reducing valves, safety valves and condensate systems, to ensure safe and efficient operation.

Course Content

- Legislation and Standards
- Compliance Risks
- Pre-Design
- Risk Assessments
- URS, P&IDs and HAZOPs
- Mass Balance
- Steam Load Calculations
- Capacity Limitations
- Steam & Condensate Systems
- Pipework and Headers
- Expansion and Trapping
- Pressure Reduction and Control
- Condensate Recovery
- Sizing Calculations
- Flow Rates
- Velocities & Pipe Sizing
- System Design
- Packaged System Design
- Applying Design Principles and Formulae

**Duration and Delivery**

Duration: 4 Days

Location: M&M Training Centre, or on your site.

STEAM TRAP TRAINING

Who Should Attend?

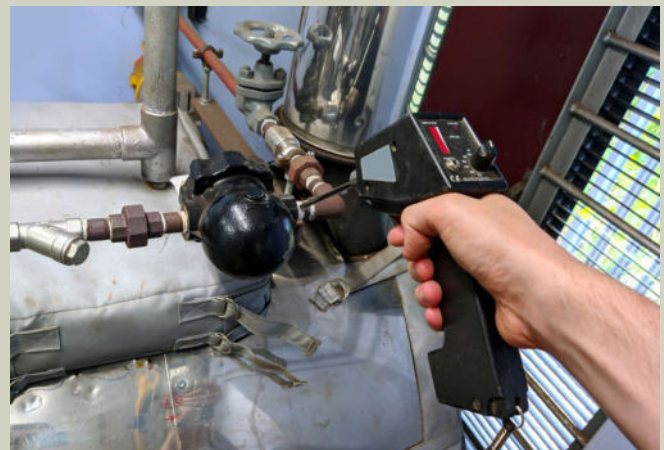
This course is designed for maintenance personnel and engineers, energy managers and auditors, facilities management teams and boiler house operators and technicians who are involved in the operation, maintenance, efficiency and performance of steam and boiler systems. It provides the knowledge required to improve system reliability, optimise energy use and support safe and efficient plant operation.

Aims

This course provides an understanding of the role and function of steam traps within a steam system, including how different trap types are applied in various operational situations. Delegates will learn how to identify, test and accurately diagnose steam trap performance, as well as understand the impact that faulty or failed steam traps can have on system efficiency, energy consumption and operating costs.

Course Content

- Functions and Types of Traps
- Sizing and Condensate Return
- Common Faults
- Practical Training
- Steam Trap Testing
- Testing Procedures
- Visual Inspections
- Ultrasonic and Infrared Testing
- Leak and Fault Detection
- Results Recording



Duration and Delivery

Duration: 1 Day

Location: This is an on-site course only, allowing participants to work directly with their own steam system.

THERMAL FLUID SYSTEMS

Who Should Attend?

This course is designed for anyone involved in the operation, maintenance, servicing, or management of thermal fluid systems. It is ideally suited to plant operators, production personnel, engineering and maintenance teams, and site staff responsible for equipment that uses thermal fluids. The programme is also an excellent foundation for individuals entering roles where thermal fluid systems form an integral part of plant operations and process efficiency.

**Aims**

The aim of this course is to provide delegates with a practical understanding of thermal fluid systems, their operation, and the key safety considerations associated with their use. Participants will gain knowledge of thermal fluid principles, system components, heat transfer processes, and safe operating practices. The course also supports compliance with relevant safety and environmental requirements, while developing an understanding of equipment isolation, maintenance practices, and system performance optimisation.

Course Content

- Safety, environmental, and legal requirements.
- Introduction to thermal fluids and their industrial applications.
- Thermal fluid heaters and associated auxiliary equipment.
- Principles of heat and heat transfer.
- Fuels, combustion, and draught fundamentals.
- Thermal fluid system components and operation.
- Energy efficiency and system performance optimisation.
- Safe isolation procedures and best practices.
- Routine operation and maintenance requirements.
- Thermal fluid testing, condition monitoring, and maintenance.
- Common system issues and preventative maintenance techniques.

**Duration and Delivery**

Duration: 1 Day

Location: M&M Training Centre, or on your site.

WATER TUBE BOILER

Who Should Attend?

This course is designed for EfW boiler operators and plant technicians, maintenance engineers working on high pressure steam systems and shift team leaders or supervisors. It is also suitable for new starters transitioning into EfW or steam raising operations, staff responsible for environmental compliance or boiler house safety and engineers seeking a structured introduction to water tube boiler operation.

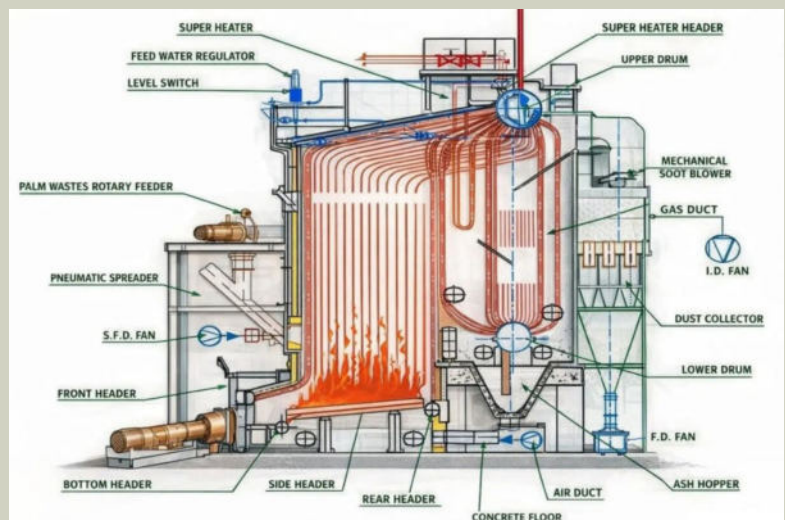
Aims

The Water Tube Boiler Operations in EfW Plants course provides operators, technicians and maintenance teams with a clear, practical understanding of how modern water tube boilers function within Energy from Waste (EfW) facilities. The course focuses on safe operation, boiler fundamentals, combustion and emissions control, water chemistry, common failure modes and operator responsibilities under UK legislation.

It is designed to build confidence, improve plant reliability and support compliance with recognised industry standards for high pressure water tube boiler operation.

Course Content

- The Law – Why Do We Need to Be Trained?
- Introduction to Water Tube Boilers in EfW Plants
- EfW Process and Combustion Fundamentals
- Water Chemistry and Boiler Integrity
- Safe Operation and Control Systems
- Environmental Compliance
- Operational Performance and Troubleshooting
- Practical Benefits



Duration and Delivery

Duration: 3 Days

Location: M&M Training Centre, or on your site.

COMBUSTION

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HIGH TEMPERATURE HOT WATER BOILER (ABOVE 110°C)

Who Should Attend?

This course is designed for experienced plant operators responsible for high-temperature hot water systems, maintenance engineers and supervisors with responsibility for boiler house risk management and facilities or utilities managers overseeing compliance, water treatment and asset reliability programmes. It is also suitable for personnel preparing for BOAS or similar accredited operator and management training pathways.



Aims

By the end of this course, delegates will understand their legal responsibilities and recognised competency requirements for operating high-temperature hot water systems. They will learn how hot water behaves at temperatures above 110°C, identify water quality risks and common failure mechanisms and recognise the key components and controls within a boiler house. The course also covers safe isolation and reinstatement procedures, along with practical operator checks and record-keeping requirements to support safe and reliable operation.

Course Content

- The Law
- Responsibilities and Compliance
- Above 110°C Hot Water Systems
- Generation and Circulation
- Pressure and Temperature Basics
- Water Quality
- Treatment Requirements
- Corrosion, Scale and Failures
- Safe Isolation
- Isolation and Lockout Procedures
- Reinstatement Checks
- Operator Practices
- Routine Checks
- Record Keeping and Handover Procedures



Duration and Delivery

Duration: 1 Day

Location: M&M Training Centre, on your site and virtually.

LOW TEMPERATURE HOT WATER BOILER (BELOW 110°C)

Who Should Attend?

This course is designed for plant operators responsible for hot water systems, maintenance engineers and technicians working on low-pressure hot water plant and site managers or supervisors with responsibility for boiler house safety and compliance. It is also suitable for new starters and personnel transitioning from other thermal systems into hot water boiler operation.



Aims

By the end of this course, delegates will understand their legal responsibilities and duty of care requirements relating to hot water boiler systems. They will gain an understanding of how hot water is generated and circulated, identify common causes of system failure and recognise the key components and controls found within a boiler house. The course also covers safe isolation and reinstatement procedures, along with the practical checks and record-keeping activities required to support safe and reliable operation.

Course Content

- The Law
- Responsibilities and Compliance
- Below 110°C Hot Water Systems
- Generation and Circulation
- Pressure and Temperature Basics
- Water Quality
- Treatment Requirements
- Corrosion, Scale and Failures
- Safe Isolation
- Isolation and Lockout Procedures
- Reinstatement Checks
- Operator Practices
- Routine Checks
- Record Keeping and Handover Procedures



Duration and Delivery

Duration: 1 Day

Location: M&M Training Centre, on your site and virtually.

FIRST AID IN THE BOILER HOUSE

Overview

This course is designed to provide participants with essential first aid knowledge and skills specific to the unique environment of a boiler house. Participants will learn how to address injuries, medical emergencies and hazards commonly encountered in boiler house operations.



Who Should Attend?

- Boiler house managers, operators and technicians.
- Maintenance and facilities management teams.
- Health and safety officers.
- Emergency response personnel.

Course Objectives

By the end of this course, participants will:

- Understand the potential risks and medical emergencies associated with boiler house operations.
- Learn essential first aid techniques and responses tailored to the boiler house environment.
- Develop confidence in managing emergencies effectively while awaiting professional medical assistance.

Course Content

COMING SOON

- Identifying and mitigating potential risks.
- Emergency protocols and evacuation procedures.

Basic First Aid Techniques

- Managing burns, scalds, other heat-related injuries.
- Treating cuts, bruises and fractures.
- Chemical eye contamination, inhalation and ingestion
- Head, body impact injuries
- Recognizing and responding to medical emergencies (e.g., cardiac arrest, heat exhaustion).
- Use of Defibrillators and CPR.

Practical Training

- Hands-on practice of first aid techniques.
- Simulated scenarios for handling common boiler house emergencies.
- Assessing and improving emergency response readiness.

Duration and Delivery

Duration: 1 Day

Location: M&M Training Centre, or on your site.

LEGIONELLA AWARENESS (L1)

Who Should Attend?

This course is designed for anyone with responsibilities for the management, maintenance, or monitoring of water systems within commercial, industrial, or public buildings. It is particularly beneficial for facilities managers, maintenance personnel, health and safety professionals, duty holders, responsible persons and individuals tasked with ensuring compliance with Legionella control requirements. It also provides valuable knowledge for those involved in the day-to-day operation and management of water systems who require an understanding of Legionella risks and their control.



Aims

The aim of this course is to provide delegates with a clear and practical understanding of Legionella bacteria, the health risks associated with exposure and the steps required to effectively manage and control those risks. Participants will gain an awareness of the conditions that encourage Legionella growth, learn how to identify high-risk water systems and develop an understanding of current legal and regulatory responsibilities. The course also introduces key monitoring and control measures that help organisations maintain safe water systems and demonstrate compliance with recognised guidance and legislation.

Course Content

- Introduction to Legionella bacteria and Legionnaires' disease.
- How Legionella develops, spreads and impacts human health.
- Understanding the risks associated with water system contamination.
- Overview of relevant legislation and guidance, including HSWA, COSHH, ACOP L8 and HSG274.
- Roles, responsibilities and duties of those managing Legionella risks.
- Compliance requirements, record-keeping and documentation.
- Conditions that contribute to Legionella growth and proliferation.
- Identification of high-risk water systems, including hot and cold water systems and cooling towers.
- The purpose and benefits of Legionella risk assessments.
- Basic water system maintenance and good practice control measures.
- Introduction to Legionella control schemes and monitoring procedures.
- Understanding and interpreting water system schematic diagrams.

Duration and Delivery

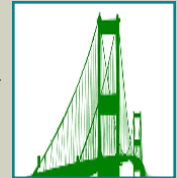
Duration: 1 Day

Location: M&M Training Centre, on your site, on virtually.

LEGIONELLA APPOINTED PERSON (L2)

Who Should Attend?

This course is specifically designed for individuals who have been appointed with responsibility for the management and control of Legionella risks within their organisation. It is ideal for Responsible Persons, Appointed Persons, facilities and estates personnel and anyone tasked with overseeing water hygiene management, ensuring compliance with legislation and coordinating Legionella control measures within the workplace.

**Aims**

The aim of this course is to equip delegates with the knowledge and confidence required to effectively carry out the role of Legionella Appointed Person. Participants will gain an understanding of the history, ecology, transmission and health implications of Legionella bacteria, as well as the conditions that encourage its growth. The course provides practical guidance on legal responsibilities, risk management, the use of competent contractors and the assessment of monitoring records, sampling programmes and documentation to support ongoing compliance and effective water system management.

Course Content

- Legionella bacteria, Legionnaires' disease and associated health risks.
- History, ecology, occurrence and transmission of Legionella.
- Conditions that promote bacterial growth and proliferation.
- Relevant legislation and guidance, including ACOP L8, HSG274 and HTM04-01.
- Roles and responsibilities of the Appointed Person, Responsible Person and supporting staff.
- Identification of high-risk water systems and environments.
- Understanding and reviewing Legionella risk assessments.
- Evaluating system records, monitoring results and performance data.
- Record-keeping requirements and compliance documentation.
- Sampling procedures and interpretation of results.
- Managing Legionella risks through effective control measures and competent personnel.
- Best practices for maintaining compliance and reducing the risk of Legionnaires' disease outbreaks.

Duration and Delivery

Duration: 1 Day

Location: M&M Training Centre, on your site and virtually

LEGIONELLA & EVAPORATIVE COOLING TOWERS (L3)

Who Should Attend?

This course is designed for maintenance personnel, facilities managers, health and safety professionals, duty holders, responsible persons and anyone involved in the management, operation, or maintenance of evaporative cooling tower systems. It is particularly suited to those responsible for controlling water hygiene risks, ensuring regulatory compliance and implementing effective Legionella management programmes within their organisation.



Aims

The aim of this course is to provide delegates with a thorough understanding of Legionella risks associated with evaporative cooling systems and the practical measures required to manage them effectively. Participants will develop knowledge of the legislation and guidance governing cooling tower operation, learn how to assess and control risks and gain an understanding of best practices for water treatment, monitoring, cleaning and maintenance. The course is designed to support organisations in maintaining safe, compliant and efficiently managed cooling water systems.

Course Content

- Legionella bacteria, Legionnaires' disease and associated health risks.
- Principles and operation of evaporative cooling tower systems.
- Types of cooling systems and their associated risk factors.
- Conditions that encourage Legionella growth within cooling water systems.
- Relevant legislation and guidance, including ACOP L8 and HSG274 Part 1.
- Roles and responsibilities of duty holders, responsible persons and appointed personnel.
- Compliance requirements, monitoring programmes and record-keeping.
- Legionella risk assessment principles and review processes.
- Water treatment methods and monitoring techniques.
- Cleaning, disinfection and maintenance requirements.
- Developing effective control measures and risk management strategies.
- Best practices for reducing risk and maintaining safe cooling tower operations.

Duration and Delivery

Duration: 1 Day

Location: M&M Training Centre, on your site and virtually

COMPETENCY CHECKS

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 experience.

Operators will be asked to demonstrate a variety of tasks from:

- Safe entry into the boiler house
- Describing the functions of the boilers controls/ ancillaries
- Blowdowns (TDS, Bottom & Gauge)
- Calibration of instruments
- Start-up / shutdown procedures
- Many more

Duration and Delivery

Duration: 1 day. (A maximum of 4 delegates)

Location: On your site



TECHNICAL BOILER HOUSE RISK ASSESSMENTS

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.

TECHNICAL WATER TREATMENT RISK ASSESSMENT

Overview

At M&M Training Services, we specialise in providing comprehensive **Technical Water Treatment Risk Assessments** tailored specifically for steam and hot water boiler houses. Our expert team ensures that your facility complies with all relevant safety regulations, minimising the risk of boiler failures, corrosion and other hazardous events.

The Importance of Technical Water Treatment Risk Assessments

- **Legal Requirement:** Conducting a Technical Water Treatment Risk Assessment is a legal obligation for businesses operating steam and hot water boiler houses.
- **Compliance with Combustion Engineers Association Guidelines:** Our assessments are conducted in line with the CEA guidance documents BG01 (Guidance on the Safe Operation of Boilers) and BG04 (Boiler Water Treatment). This ensures that the risk assessments are comprehensive and adhere to industry best practices.



Why Choose M&M Training Services?

- **Expertise and Experience:** Our team has extensive knowledge of steam and hot water systems and water treatment regulations. We conduct thorough assessments to identify potential hazards and propose effective mitigation measures.
 - **Independent Assessments:** Unlike assessments conducted by a client's own water treatment company, our risk assessments are entirely independent. This ensures an unbiased evaluation, providing you with a comprehensive and objective understanding of your boiler house's condition.
- Comprehensive Assessments:** We scrutinise every area of risk within your boiler house, documenting our findings and providing a detailed report with prioritised recommendations.
- Compliance with Regulations:** Our assessments ensure that your facility complies with all relevant legislation, including the HASAW Act 1974, PUWER 1998, Water Industries Act 1961, MHSWR 1999, PSSR 2000, DSEAR 2002, MCPD 2015, PER 2016, BS EN 12953, BS 2790 and BS2486 + others.
- Peace of Mind:** With our thorough risk assessments, you can be confident that your boiler house is operating safely, efficiently and in compliance with all legal requirements concerning water treatment.

What We Offer

- **Detailed Risk Assessments:** Comprehensive evaluation of potential hazards related to water treatment in steam and hot water boiler houses.
- **Mitigation Strategies:** Practical recommendations to eliminate or reduce identified risks.
- **Documentation and Reporting:** Detailed reports outlining findings and proposed actions, ensuring transparency and accountability.
- **Guidance and Support:** Guidance on implementing recommended safety measures and ongoing support to maintain compliance.

DSEAR ASSESSMENT

Overview

At M&M Training Services, we specialise in providing comprehensive **DSEAR (Dangerous Substances and Explosive Atmospheres Regulations) risk assessments** tailored specifically for steam boiler houses (we do not use generic software).

Our expert team ensures that your facility complies with all relevant DSEAR requirements, minimising the risk of fires, explosions and other hazardous events.

The Importance of DSEAR Risk Assessments

- **Legal Requirement:** Conducting a DSEAR risk assessment is a legal obligation for businesses operating steam boiler houses
- **Identifying Overlooked Hazards:** Many existing site DSEAR risk assessments do not sufficiently address the boiler house, missing critical risks such as furnace side explosions and inadequate air changes within the boiler house, among others.



Why Choose M&M Training Services to carry out your DSEAR Risk Assessment?

- **Expertise and Experience:** Our team has extensive knowledge of steam systems and DSEAR regulations. We conduct thorough DSEAR risk assessments to identify potential hazards and propose effective mitigation measures.
- **Comprehensive Assessments:** We scrutinise every area of risk within your steam boiler house, documenting our findings and providing a detailed report with prioritised recommendations.
- **Peace of Mind:** With our thorough DSEAR risk assessments, you can be confident that your steam boiler house is operating safely and in compliance with all legal requirements concerned with DSEAR regulations.

What We Offer

- **Detailed Risk Assessments:** Comprehensive evaluation of potential hazards related to dangerous substances and explosive atmospheres.
- **Mitigation Strategies:** Practical recommendations to eliminate or reduce identified risks.
- **Documentation and Reporting:** Detailed reports outlining findings and proposed actions, ensuring transparency and accountability.
- **Guidance and Support:** Guidance on implementing recommended safety measures and ongoing support to maintain compliance.

SOP'S & EOP'S

What are SOP's & EOP's?

SOP = Standard operating procedures.

A written instruction of how to operate the piece of equipment or system safely and within its operating limits under standard (normal) operating conditions. Producing the Standard operating procedures (SOP) is part of the risk assessment exercise itself and provides a written means to instruct employees on how a particular procedure should be carried out and lays out boundaries of responsibility.

The process of writing a SOP necessitates thinking through all steps of a procedure and encourages the elimination of potential risks to the process itself. This is critical to providing reassurance and governance.

Operating procedures should clearly lay down instructions for operation of process plant that take into consideration COSHH, manual handling, permit to work, PPE Regulations, quality, HAZOP and SHE requirements.

A common example within the boiler house would be how to undertake a gauge glass blowdown.

EOP = Emergency Operating procedure

Procedures for staff, or other trained & competent personnel to follow in an emergency.

The template falls much the same as the SOPs, however the risks now can vary quite significantly and thus dynamic risk assessments must be undertaken when attending such an event.

A common example within the boiler house would be attending a boiler low level alarm condition.



Why provide SOP's & EOP's?

These documents in essence, provide guidance on the step-by-step explanation / instructions on how to conduct specific tasks and/or interact with equipment or systems. By setting out the way a certain task or activity can be undertaken safely, we aim to mitigate mistakes (either in action or timing) that could lead to situations where the safe operating envelope may be breached are averted.

It can be used to satisfy legal compliance requirements too.

The three key reasons for managing health and safety in an organisation and providing such SOPs & EOPs are:

1. Legal
2. Financial
3. Moral & Ethical

SOP'S & EOP'S

What Procedures are Provided?

Whilst our procedures will be tailored specifically to your boiler house, below is an example list of procedures we will aim to produce.

SOP's

1. Safe Entry Into The Boiler House
2. Daily Checks
3. Gauge Glass Procedure
4. Automatic Bottom Blowdown Override Test
5. Boiler TDS Sample
6. Inspecting The TDS Probe
7. Calibrating The TDS Probe
8. Boiler Flame Failure Test
9. Boiler Evaporation Test
10. High Water Level Test
11. Pre-Requisite Checks for Boiler Start-Ups
12. Cold Start Up
13. Warm Start Up
14. Letting Steam Onto The Range – System Offline
15. Isolating the boiler from the header
16. Conservation When The Boiler Is Out Of Service
17. Shutting Down A Boiler Fully
18. Draining The Boiler
19. Isolating The Fuel Supply – Gas

20. Draining Down The Hotwell
21. Adding Salt To The Brine Tank
22. Adding Chemicals To The Tanks
23. Log Keeping
24. Defect Log
25. Boiler House Security



EOP's

- Boiler Alarm Response
- Boiler Critical Alarm –Plant Emergency Shutdown Pressure
- Boiler Critical Alarm – Low Water Level
- Boiler Alarm – High Water Level
- Boiler Alarm – High Pressure
- Burner Lockout
- Loss Of Fuel Supply – Gas
- Fire
- Mains Power Failure
- Water Leak – Flood
- Steam Leak
- Boiler High TDS Alarm
- Chemical Spill
- Evacuation

HSG-253 ASSESSMENTS

Overview

At M&M Training Services, we specialise in providing comprehensive HSG 253 Isolation Risk Assessments tailored specifically for your steam and hot water boiler houses. Our expert team ensures that your facility complies with HSG 253 minimising the risk of accidents and hazardous events during maintenance and operational activities.

The Importance of HSG 253 Isolation Risk Assessments

- **Legal Requirement:** Conducting an HSG 253 Isolation Risk Assessment is a legal obligation for businesses operating steam and hot water boiler houses.
- **Compliance with HSG 253 Guidelines:** Our assessments are conducted in line with the Health and Safety Executive's (HSE) HSG 253 guidelines (Safe Isolation of Plant and Equipment), ensuring that the risk assessments are comprehensive and adhere to industry best practices.
- **Identifying Overlooked Hazards:** Many existing site risk assessments do not sufficiently address isolation of steam, condensate and hot water systems, missing critical risks such as inadequate isolation procedures, potential for accidents during maintenance and improper locking and tagging practices.



Why Choose M&M Training Services?

- **Expertise and Experience:** Our team of highly experienced engineers and safety consultants have extensive knowledge of steam systems and isolation procedures as outlined in the HSG 253 guidelines. We conduct thorough assessments to identify where and what type of isolation is required such as Double Block and Bleed Proven Isolation or Double Block and Bleed with proven and Positive Isolation amongst other types.
- **Independent Assessments:** Unlike assessments conducted by your in-house team, our risk assessments are entirely independent. This ensures an unbiased evaluation, providing you with a comprehensive and objective understanding of your boiler house's isolation procedures.
- **Comprehensive Assessments:** We scrutinise every area of risk within your boiler house, documenting our findings and providing a detailed report with prioritised recommendations.
- **Compliance with Regulations:** Our assessments ensure that your facility complies with all relevant legislation, including the HASAW Act 1974, PUWER 1998, Water Industries Act 1961, MHSWR 1999, PSSR 2000 and HSG253 amongst others

What our customers have to say...

Had Nathan on site today to evaluate our boiler economisers. Top level work done and executed professionally. Superb to work with Flomar & M&M.

"Thank you so much! Whilst the rest of the country ground to a halt, Flomar were able to hand deliver critical spares which enabled production to stay online"

"Superb organisation! The venue and facilities were superb. I learnt a lot, without a doubt the best course I have ever attended in my 11 years"

"Flomar were the only company that presented us with a plan customised specifically to our needs. A great team to work with, who took a good old-fashioned pride in their work."

"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."

"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."

"I could not have completed it without you in my corner! The part that I am most pleased with, is that I completed the BHMA first. This helped tremendously. Your advice and guidance with the evidence pack, proved invaluable."

"Flomar & M&M have consistently delivered a reliable, professional service. Their team is knowledgeable, responsive, and committed to high standards of quality and safety."

An excellent organisation to deal with and a knowledge that is on another level. Our staff always return with enthusiasm and positive feedback.

"For several years, we've worked with M&M and Flomar to deliver training for our boiler operators. This encompasses boiler house, Steam utilisation and water treatment but also CAT 2 BOAS. More recently, we've also engaged in TBRA for four of our STCs, the standard of which is very high.

The level of training provided is exceptionally high, a testament to the level of experience held by the trainers at M&M. Their firsthand exposure to various industries contributes significantly to that. The trainers impart their knowledge and real-world experience to the candidates so people can really relate to that. I've had some great discussions in the classroom on issues I've faced on site and then have the confidence to take the steps needed to resolve once and for all.

Having undergone BOAS training three times, I consistently learn new things. This has greatly contributed to my professional growth. I have built some strong relationships here and I've always found M&M and Flomar readily available to provide advice when needed. A great asset to the industry. "



INTRODUCING FLOMAR LTD



"With over **40 years experience** providing **steam and hot water solutions**, Flomar has gained industry wide respect.

Independence from specific equipment manufacturers allows us to recommend the **best equipment available**, tailored to your needs.

Whether you wish to improve plant efficiency, increase steam demand or hot water consumption, our team will provide the **best solution** for you."

Mr. Leigh Ridlington
Managing Director

Products

- Isolation Valves
- Steam Traps
- Control Valves
- Pressure Reducing Valves
- Pipeline Ancillaries
- Safety Valves
- Hotwells, CRUs & Associated Equipment

Services

- Steam System Design
- PED, PESR & PSSR Assessments
- Steam Trap Surveys
- Steam Efficiency Surveys
- Insulation Surveys
- Boiler House Upgrades
- Burner & Boiler Servicing
- Boiler Room Care Packages

