

# Boiler House Management

9/10 March 2010 - Nottingham



A two day open course on managing and operating boiler plant

- at peak efficiency
- safely
- with minimum environmental impact

## Course Aim

To equip delegates to manage and operate boiler plant at peak energy efficiency, safely and with minimum environmental impact.

## Who should attend?

Operators, Supervisors and Managers who have responsibility for the safe and efficient operation of boiler plant.

## Plant Covered

- Hot Water and Steam Boilers
- Shell Boilers
- Water Tube Boilers
- Combined Heat and Power Units
- Waste Heat Boilers
- Process and Space Heating Systems



## Course Content

### **Boiler Plant Safety**

Potential problems and consequences

### **Types of Plant and Ancillary Equipment**

Shell, water-tube, steam generators, superheaters, economisers

### **Boiler Protective Devices and Fittings**

Functions and safe operating limits. Testing of fittings and controls.

### **Industrial Fuels**

Oil, gas, solid fuel. Composition, properties, characteristics. Fuel handling systems

### **Combustion Air**

Properties, primary, secondary, excess air, ventilation

### **Products of Combustion**

CO<sub>2</sub>, CO, SO<sub>x</sub>, NO<sub>x</sub>, Grit and Dust, Smoke

### **Corrosion**

Sulphur corrosion. Causes and Prevention

### **Draught**

Forced, induced, natural

### **Heat Transfer**

Conduction, Convection, Radiation

### **Environmental Issues**

Clean Air Act, EPA, IPPC, Authorisation

### **Firing Equipment**

Gas, liquid, solid fuel systems

**Water Treatment**

External and Internal treatment. Physical and chemical methods

**Efficiency**

Combustion analysis, heat recovery opportunities, insulation

**Steam and Hot Water Generation**

Temperature, pressure, heat content (enthalpy), saturated and superheated steam, dryness fraction, flash recovery, water hammer, priming

**Safe Systems of Work**

HSE Guidance Notes PM5 and PM60 SAFed (AOTC) Examinations of Steam and Pressurised Hot Water Systems

 **Course Details****Tailoring**

The course content is subject to modification. Registered delegates will be asked to complete an on-line questionnaire requesting details of their plant. These details will be taken into account by the course tutor who will vary the course to meet as many interest areas as possible.

**Documentation**

The course is fully documented. Each delegate will receive a copy of the book "The Boiler Operators handbook" prepared by National Industrial Fuel Efficiency Service (NIFES), together with supporting documentation and a certificate of attendance.

**Venue**

The venue is The Phoenix Centre, Millennium Way, Nottingham.

**Dates**

9/10 March 2010.

**Accommodation**

Delegates are responsible for making their own overnight hotel arrangements. A list of local hotels, indicating location and costs will be sent to those registering.

**Registration**

- To book your place please phone 0115 9844 944 and ask for Training Division.
- Course fee of £550 + VAT includes, tuition, "The Boiler Operators Handbook", supporting notes, buffet lunches and refreshments.
- Early registration is advised as delegate numbers are restricted to 10 per course.
- The course begins at 9.00 a.m. on day 1 and ends at 4.30 p.m. on day 2.

**Further Details**

Please contact Gail Balfour at NIFES Nottingham Office.

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web: [www.nifes.co.uk](http://www.nifes.co.uk)

## Course Tutors

The courses will be delivered by one of the following experienced NIFES' training consultants.

### Mr. Mike Cogan BEng CEng MEI

Mike has had 25 years experience in technical education and training in the UK and overseas. He has extensive experience of boilers, compressors and turbines and has led seminars for multi-national companies to improve safety and efficiency in plant operation.

### Mr. David Morton BSc MSc CEng CSci CChem MEI MRSC

Dave has over 25 years experience in the energy industry including research and development, technical service and training. He has worked in the fields of combustion studies and fuel utilisation in a wide range of industrial and commercial applications.

### NIFES Bespoke Services

NIFES provide tailor-made services and training courses for clients. These include:

- Tailored Boiler House Management courses delivered at clients' sites and tailored to specific plant and training needs of delegates.
- Development of Boiler Plant Operating Procedures in accordance with HSE Guidance Note PM5 and SAFed Guidelines for the Operation of Steam Boilers PSG2.
- Surveys of boiler plant and steam/hot water distribution systems to identify energy saving measures and highlight improved practice in boiler plant operation.
- Boiler plant decentralisation feasibility studies.
- Waste heat recovery feasibility.
- Studies on use of biomass and alternative fuel options.
- Integration of good quality combined heat and power.
- Safe systems of work.
- Environment emissions measurements and reports.
- Engineering design and project management of new boilers and ancillary plant.

### Delegates' Comments

“Very good delivery from a very knowledgeable tutor. The course was interesting and most of all, informative..”

Elyo UK, Ambrosia Plant

“Well worth doing the course and will recommend it to others”

Boston Scientific, Galway, Ireland

“Very good and instructive course”

Emcor Facilities Services, AWE Burghfield

## Recent Clients

Aberdeen University  
BPB Paperboard  
British Petroleum  
Carbon Trust  
Corus  
CP Pharmaceuticals  
De Beers  
Defence Estates  
Eden Vale  
Ford Motor Company

Glanbia Cheese  
Knorr Bestfoods  
London Clinic  
National Health Service  
Nestlé  
Parliamentary Works  
Pringles  
Proctor and Gamble  
Rhone Poulenc  
Scottish Courage

SP Tyres  
Spirax Sarco  
Sustainable Energy Ireland  
Tate & Lyle  
Toyota  
Tullis Russell  
UKAEA  
Van Den Bergh Foods  
Vauxhall  
Volvo

