

Steam Boiler Water Level Controls

Water level controls on steam boilers provide a critical safety function, actuating feed water pumps or controlling feed water feed valves, to keep the water at a safe operating level. They also give alarm and trip outputs, ensuring that if high or low water conditions do occur then appropriate action takes place to keep the boiler plant safe.

Water Level Controls

Replacement, upgrading or maintaining, Delta Mobrey is the only logical choice for boiler level controls. As we supply, install and maintain both float and probe level controls, you will receive unbiased and expert advice on both types of technology. In addition to the boiler water level controls we cover the associated equipment such as feed water control valves and blowdown valves.

High Integrity Water Level Controls



We supply, install and commission equipment that fully complies with the Guidance for Safe Operation of Boilers (BG01), for when your boilerhouse is unmanned. This includes providing remote alarm and shutdown panels. Furthermore we provide maintenance contracts to ensure the equipment is regularly inspected, tested and serviced, to give you the confidence that the controls will give trouble free operation.



Hydrastep & Hydratect

Hydrastep is an electronic gauge system which provides a continuous level measurement of water in the steam drum. Its fault tolerant and fail-safe design provides an outstanding level of reliability, coupled with an impressive range of outputs for critical alarms and trips. Hydratect utilizes the same technology which gives a high reliability system for water detection in steam drums, steam lines, and drain pots, commonly used for Turbine Water Induction Protection.

To complement these highly successful products we offer a full range of on-site services with our own factory trained engineers, who will advise on best installation practices, provide commissioning and start-up support, and carry out any repairs which become necessary. In addition we provide maintenance contracts to ensure the equipment is routinely inspected, serviced and tested, keeping it operating reliably and the plant running safely.



Boiler blowdown

The blowdown of shell boilers is essential to control the level of dissolved and suspended solids within the boiler water. As the water is converted to steam, the impurities in the water are left behind and overtime build up to levels which cause problems.

Foam can occur which can get carried over into the steam distribution system, affecting valves, steam traps, heat exchangers and other equipment, and can also contaminate and spoil product. Foam can also result in some types of level controls giving false readings which could have catastrophic results.

Suspended solids can accumulate and form sludge, which coats heating surfaces, reducing efficiencies and ultimately cause overheating and damage, which again could have catastrophic results. Sludge can also block ports of external level control chambers and gauge glasses, leading to false levels and dangerous situations.



There are two methods to control the level of solids in the water, bottom or rear-end blowdown, and continuous blowdown. All shell boilers have bottom blowdown valves. Some boilers also have continuous blowdown, which can be either manually or automatically controlled.

Automatic Total Dissolved Solids (TDS)

Fitting of automatic TDS control equipment for continuous blowdown will maintain boiler water at an optimum level of TDS. Failure to correctly control TDS can be costly.

Too little blowdown results in:	Too much blowdown results in:
Carry over of boiler water with steam.	Energy wastage.
Damage to product.	Loss of water treatment & wasted fuel.
Fouling of heat exchangers.	Excessive water usage.
Blockage of valves & steam traps.	Effluent disposal problems.

We install and commission new equipment from a number of manufacturers, and we also provide maintenance contracts for existing systems to ensure that they are regularly serviced and calibrated to ensure optimum performance.

Timed Bottom Blowdown (TBB)

Automating the bottom blowdown operation has many advantages. It ensures that the action of blowing down the boiler is not too short or too long, with the following benefits:

- Reduced operating costs.
 - less water, fuel and treatment chemicals are wasted.
 - reduced effluent disposal.
- Saves labour and time for other important tasks.
- Cleaner and more efficient boiler.
- Promotes safer boiler operation.

We provide new TBB systems and replacement parts and spares for existing equipment. We also supply manually operated bottom blowdown valves and spares.

Boilerhouse Instrumentation

Boilerhouses contain a plethora of instrumentation. Some of it is the latest modern sophisticated instrumentation, but much is older and often neglected. Yet in all cases it was provided to give the boilerhouse operator control of the processes, and if instrumentation is missing, inoperable or uncalibrated, then the boilerhouse is out of control.

Tank Level/Contents Gauges, Controls & Alarms

Most boilerhouses have several tanks in or adjacent to them, these including the boiler feed tank or hotwell, fuel tanks and other associated tanks and vessels. All of these need some type of level indication and or control. These gauges and controls perform a vital role in indicating the contents level, controlling pumps and valves, and in some cases actuating low or high level alarms.

Delta Mobrey is one of the largest manufacturers of level equipment in the UK. We have a large range of continuous reading and point level devices, so whatever your requirement is, we can provide the solution.

In addition to supplying, installing and commissioning level equipment we also service, repair and calibrate existing equipment.



Flow Measurement

We offer a comprehensive range of flow measurement solutions, with a complete package of installation, commissioning and calibration. Steam measurement with minimal pressure drop and high accuracy, including mass flow.

Gas or liquid measurement, with systems for fuel monitoring, water, oil and condensate flow. We also offer on site liquid flow calibration of existing equipment, without breaking into the line or disrupting the process.



Stack Emissions & Obscuration

We supply and support a range of equipment to measure, monitor, record and control the emissions from furnaces, incinerators, boilers and industrial combustion plant.

Obscuration monitors are designed to measure dust and smoke discharged, allowing you to comply with legal requirements to monitor smoke and particulate emissions into the atmosphere. They can continually monitor and display optical density or opacity, and will also display particulate emissions when properly calibrated. The equipment comprises a digital indicator control unit suitable for panel mounting, transmitter and receiver units, complete with extension tubes for mounting to the flue or stack.

Emission monitors measure the flue gases and give real time measurements of oxygen and carbon dioxide. Optional extras include carbon monoxide and temperature measurement from which efficiency can be calculated. The system includes a wall mounted digital display and control unit and a duct mounted sensor.

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