



PROCESS AND CHEMICAL ENGINEERING

Boiler Feed Water and Steam Generation Chemistry

5 day course

Classroom, online or in-house

Course overview

Nearly every boiler tube failure and turbine deposit traces back to water chemistry, and the chemistry is controlled by people who often inherited a dosing regime without understanding it. This course explains it. Delegates work through raw water sources and their contaminants, pretreatment by clarification, filtration, softening, reverse osmosis and demineralisation, and the specifications a boiler actually requires at its operating pressure. Internal treatment, dosing chemistry and control limits follow, alongside condensate return and the contamination it can bring back. The course covers steam purity, carryover and the deposits that reach a turbine, and closes on sampling, analysis and acting on an out of specification result.

What you will learn

- Identify raw water contaminants and the problems each causes
- Select pretreatment appropriate to the source and the boiler pressure
- Apply the water specification a boiler requires at its operating pressure
- Control internal treatment chemistry and dosing
- Manage condensate return and the contamination it carries
- Assess steam purity, carryover and turbine deposits
- Sample and analyse reliably, and act on an out of specification result

Who should attend

- Water treatment and utilities operators
- Boiler and plant engineers
- Chemists and laboratory staff supporting utilities
- Maintenance staff dealing with tube failures
- Process engineers responsible for steam systems

Course outline

- 01 Raw water sources and their contaminants
- 02 Clarification, filtration and softening
- 03 Reverse osmosis and demineralisation
- 04 Boiler water specifications by operating pressure
- 05 Internal treatment and dosing chemistry
- 06 Condensate return and returned contamination
- 07 Steam purity, carryover and turbine deposits
- 08 Sampling, analysis and out of specification response

Upcoming dates

Dates	Venue	Format	Fee per delegate
26 to 30 October 2026	Gaborone, Botswana	Classroom	R19,950
2 to 6 November 2026	Lusaka, Zambia	Classroom	USD 1,325
14 to 18 December 2026	Online	Online	R8,500
25 to 29 January 2027	Kigali, Rwanda	Classroom	USD 1,325



Fees and how to register

This 5 day course is **R8,500** per delegate online, **R19,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 1,325** in the classroom elsewhere in Africa. In-house training is quotation on request. Book 2 or more delegates on this course and save 10%.

To register or request an in-house proposal, visit www.afrisciencegroup.com, email info@afiscience.co.za, or WhatsApp us on **+27 63 479 1136**.

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