



ENGINEERING AND TECHNICAL TRAINING

Process Plant Optimisation and Energy Conservation

5 day course

Classroom, online or in-house

Course overview

Energy is often the largest controllable cost in a process plant, and much of it is lost to causes that are well understood and rarely addressed. This course builds the method for finding and closing that gap. Delegates carry out energy accounting across a plant, apply pinch analysis to heat integration, examine steam and condensate systems, compressed air, pumping and fired heaters for the losses each typically hides, and work through debottlenecking to raise throughput without capital. The course finishes on the harder part: quantifying a saving credibly, building the case for it, and putting monitoring in place so the saving does not quietly disappear over the following year.

What you will learn

- Carry out energy accounting across a plant and locate the significant losses
- Apply pinch analysis to identify heat integration opportunities
- Assess steam, condensate, compressed air and pumping systems for recoverable loss
- Evaluate fired heater and boiler efficiency
- Identify debottlenecking opportunities that raise throughput without capital
- Quantify a saving credibly and build the investment case
- Establish monitoring that keeps a saving in place after the project ends

Who should attend

- Process and plant engineers
- Energy managers and utilities engineers
- Operations and production managers
- Maintenance and reliability engineers
- Technical staff responsible for plant cost

Course outline

- 01 Energy accounting and establishing the plant baseline
- 02 Pinch analysis and heat integration
- 03 Steam and condensate systems: traps, losses and recovery
- 04 Compressed air and pumping systems
- 05 Fired heater and boiler efficiency
- 06 Debottlenecking to raise throughput without capital spend
- 07 Quantifying and defending a saving
- 08 Monitoring and targeting so the saving persists

Upcoming dates

Dates	Venue	Format	Fee per delegate
2 to 6 November 2026	Lagos, Nigeria	Classroom	USD 1,325
23 to 27 November 2026	Lusaka, Zambia	Classroom	USD 1,325
1 to 5 February 2027	Gaborone, Botswana	Classroom	R19,950
15 to 19 March 2027	Online	Online	R8,500



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@afriscience.co.za, or WhatsApp us on **+27 63 479 1136**.

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