



PROCESS AND CHEMICAL ENGINEERING

Refinery Process Heaters and Fired Equipment

5 day course

Classroom, online or in-house

Course overview

A fired heater is the largest single energy consumer in most refinery units and the item with the shortest distance between a control problem and a serious incident. This course covers operating and maintaining them. Delegates work through heater types and configuration, combustion and burner behaviour including the excess air that separates efficiency from a hazard, and draft and stack control. Tube metal temperature, coking and the mechanisms that end tube life are covered in detail, alongside the inspection and monitoring that detect them. Efficiency improvement, air preheat and the safety systems governing light off and trip complete the programme.

What you will learn

- Describe heater types, configuration and their duty
- Control combustion, excess air and burner performance
- Manage draft and stack conditions
- Monitor tube metal temperature and recognise coking
- Identify the mechanisms that end tube life
- Improve efficiency including through air preheat
- Operate light off and trip systems safely

Who should attend

- Refinery process and operations engineers
- Panel and field operators on fired equipment
- Inspection and integrity engineers
- Maintenance and reliability staff
- Energy and performance engineers

Course outline

- 01 Heater types and configuration
- 02 Combustion, burners and excess air
- 03 Draft, stack and flue gas control
- 04 Tube metal temperature and monitoring
- 05 Coking and decoking
- 06 Tube life mechanisms and inspection
- 07 Efficiency improvement and air preheat
- 08 Light off, trip systems and safety

Upcoming dates

Dates	Venue	Format	Fee per delegate
2 to 6 November 2026	Accra, Ghana	Classroom	USD 1,325
9 to 13 November 2026	Pretoria, South Africa	Classroom	R19,950
22 to 26 February 2027	Durban, South Africa	Classroom	R19,950
8 to 12 March 2027	Gaborone, Botswana	Classroom	R19,950



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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