



OIL, GAS AND PETROCHEMICALS TRAINING

Delayed Coking and Residue Upgrading

5 day course

Classroom, online or in-house

Course overview

Vacuum residue is the least valuable part of the barrel, and the units that upgrade it run hot, foul quickly and still involve some of the most hazardous manual tasks in a refinery. The course first compares bottom of the barrel routes: delayed coking, visbreaking, solvent deasphalting and residue hydroconversion, with their yields and where each fits. Delayed coking is then covered in depth: coker heater coil fouling and spalling, drum switching, steaming, quench and drain cycles, unheading and hydraulic decoking, foamover prevention and the coker fractionator. Coke quality, from fuel grade to anode and needle grades, and its dependence on feed are discussed next. Drum cycle optimisation and safe unheading practice close the programme. Delegates finish able to operate or support a coker safely and to weigh one upgrading option against another.

What you will learn

- Compare delayed coking, visbreaking, deasphalting and residue hydroconversion
- Predict coker yields from feed carbon residue and operating conditions
- Manage heater coil fouling through spalling and online decoking
- Sequence drum switching, steaming, quenching and draining
- Apply safe unheading and hydraulic cutting practices
- Prevent drum foamover and control antifoam use
- Relate feed and operation to green coke quality grades
- Optimise drum cycle time against throughput and reliability

Who should attend

- Coker operators and drum deck crews
- Process engineers on residue upgrading units
- Refinery planners evaluating bottom of the barrel options
- Maintenance and reliability engineers for coke drums
- Safety advisers covering coker operations

Course outline

- 01 Residue properties and upgrading routes
- 02 Delayed coking fundamentals
- 03 Coker heater operation and fouling
- 04 Drum cycle and switching
- 05 Unheading, decoking and drum safety
- 06 Fractionator and gas plant
- 07 Coke quality and markets
- 08 Visbreaking, deasphalting and hydroconversion

Upcoming dates



Dates	Venue	Format	Fee per delegate
26 to 30 October 2026	Accra, Ghana	Classroom	USD 1,325
2 to 6 November 2026	Casablanca, Morocco	Classroom	USD 1,325
18 to 22 January 2027	Online	Online	R8,500
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**.

AfriScience Group | +27 61 536 6531 | info@afriScience.co.za | Pretoria, Gauteng, South Africa