



Air Cooled Heat Exchanger Training Course

DURATION

5 days

CONTACT HOURS

30

LEVEL

Intermediate

FEE PER DELEGATE

US\$1,500

Operating and maintaining air coolers, where performance falls with ambient temperature, fouling and airflow nobody is measuring.

Air cooled exchangers are usually the limiting item on a hot day and are rarely instrumented well enough for anybody to know why. Performance degrades through tube side and air side fouling, fan pitch and belt condition, recirculation from poor plot layout, and louvre control that was set once. Because the duty varies with ambient, degradation hides inside normal seasonal variation until the plant has to cut rate. This week covers the thermal behaviour, the mechanical items, and the monitoring that separates fouling from weather.

Available as classroom, live online, in house.

Who it is for

Process and operations engineers responsible for cooling, maintenance and mechanical engineers, inspection and integrity staff, and reliability engineers investigating capacity loss.

What you will be able to do

- Explain how duty varies with ambient, airflow and fouling, and quantify each.
- Separate a fouling problem from a hot day using available data.
- Assess fan, drive and louvre condition against the airflow they should deliver.
- Plan cleaning on condition rather than on a calendar.
- Identify a design or layout limitation rather than chasing it as a fault.

The outline

DAY 1

How they work

Air side and tube side, and which controls the duty · Induced against forced draught, and what each implies · Finned tube construction, and fin to tube bond · Design ambient, and the days the design did not include

DAY 2

Thermal performance

Duty, approach temperature and the effect of ambient · Airflow, and how much a degraded fan costs · Fouling, both sides, and its thermal signature · Normalising performance so degradation is visible

DAY 3

Mechanical items

Fans, blade pitch and the balance of a bank · Belts, gearboxes and bearings · Vibration and the structure it is mounted on · Louvres, variable pitch and control that has stopped working

DAY 4

Integrity and cleaning

Tube and header inspection, and leak detection · Corrosion under the fins · Cleaning methods, and the damage each can do · Plugging, retubing and the decision between them

DAY 5

Operating limits

Recirculation from plot layout and wind · Winterisation and freeze protection · Capacity loss that is design rather than condition · Debottlenecking options, costed

What you leave with

- A performance assessment of one air cooler, normalised for ambient.
- A monitoring method that would show fouling against weather.
- A cleaning and mechanical inspection plan based on condition.

Published dates

DATES	WHERE	FEE
23 to 27 November 2026	Nairobi, Kenya	US\$1,500
30 November 2026 to 4 December 2026	Kampala, Uganda	US\$1,500
7 to 11 December 2026	Gaborone, Botswana	R15,000
14 to 18 December 2026	Dubai, United Arab Emirates	US\$1,500

Fees are per delegate and cover travel and accommodation arranged by the delegate. Registration fees are separate.

Register or ask a question

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