



POWER AND ELECTRICAL TRAINING

Electrical Heat Tracing Systems

3 day course

Classroom, online or in-house

Course overview

Heat tracing keeps process lines above a temperature that a product, an instrument or a safety case depends on, and its failures are usually discovered when something has already frozen or solidified. This course covers designing and maintaining it. Delegates work through tracing types including self regulating, constant wattage and mineral insulated, heat loss calculation and circuit design, and the selection of insulation, which affects the result more than the cable does. Control and monitoring, hazardous area requirements and certification of installations are covered, and the course closes on commissioning tests, fault finding on an installed circuit and the maintenance regime that catches a degraded circuit before the process notices.

What you will learn

- Compare self regulating, constant wattage and mineral insulated tracing
- Calculate heat loss and design a tracing circuit to maintain temperature
- Select thermal insulation appropriately for the design
- Specify control, monitoring and temperature limiting
- Apply hazardous area requirements to a tracing installation
- Commission a circuit and carry out the required tests
- Find faults on an installed circuit and maintain against degradation

Who should attend

- Electrical and instrumentation engineers
- Process and project engineers
- Maintenance technicians
- Commissioning engineers
- Contractors installing tracing systems

Course outline

- 01 What heat tracing is protecting, and the cost of its failure
- 02 Tracing types and their characteristics
- 03 Heat loss calculation
- 04 Circuit design and sizing
- 05 Thermal insulation selection
- 06 Control, monitoring and temperature limiting
- 07 Hazardous area requirements
- 08 Commissioning, fault finding and maintenance

Upcoming dates

Dates	Venue	Format	Fee per delegate
30 September to 2 October 2026	Lusaka, Zambia	Classroom	USD 995
23 to 25 November 2026	Pretoria, South Africa	Classroom	R14,950
14 to 16 December 2026	Online	Online	R6,500
6 to 8 January 2027	Cape Town, South Africa	Classroom	R14,950



Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** 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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