



Vibration Analysis and Practical Solutions

DURATION

5 days

CONTACT HOURS

30

LEVEL

Intermediate

FEE PER DELEGATE

US\$1,500

Reading a vibration spectrum well enough to name the fault, and to rule out the three faults that look like it.

Vibration analysis goes wrong in two ways. The data is collected badly, from an inconsistent point with the wrong setup, so the spectrum answers a different question each month. Or the data is good and the diagnosis stops at high vibration, which recommends a balance on a machine whose real problem is a bearing, a coupling or a foundation. This week concentrates on diagnosis: what each fault looks like, what else looks like it, and what confirms which. Delegates work on real spectra, their own where they can bring them.

Available as classroom, live online, in house.

Who it is for

Condition monitoring and reliability technicians and engineers, rotating equipment and maintenance engineers, and planners who commission the work and act on the reports.

What you will be able to do

- Set up a measurement so the data is comparable month to month.
- Read a spectrum, a waveform and a phase measurement together.
- Separate unbalance, misalignment, looseness and bearing defect.
- Confirm a diagnosis before recommending an intervention.
- Write a recommendation a planner can schedule and justify.

The outline

DAY 1

Getting data worth analysing

Transducer selection and mounting, and what each one hides · Measurement points, direction and repeatability · Frequency range, resolution and averaging · Speed, load, and the conditions a reading depends on

DAY 2

Reading the data

Spectrum, time waveform and phase, used together · Orders against absolute frequency · Harmonics, sidebands, and what generates each · Baselines, trends and alarm limits that mean something

DAY 3

The common faults

Unbalance, and what it does not explain · Misalignment, angular and parallel · Mechanical looseness, and its stages · Bent shaft, soft foot and foundation problems

DAY 4

Bearings, gears and the rest

Rolling element defect frequencies and progression · Gear mesh, and reading a damaged tooth · Blade pass, electrical faults and resonance · Lubrication problems that present as something else

DAY 5

From diagnosis to action

Confirming before recommending · Severity, and how long the machine has · Writing a recommendation a planner can schedule · Verifying the repair worked, and closing the loop

What you leave with

- A measurement standard for the delegate's own machines, with points and setup fixed.
- A worked diagnosis of a real fault, with the confirming evidence recorded.
- A reporting format stating the fault, the severity and the required action.

Published dates

DATES	WHERE	FEE
23 to 27 November 2026	Lagos, Nigeria	US\$1,500
30 November 2026 to 4 December 2026	Durban, South Africa	R15,000
7 to 11 December 2026	Cairo, Egypt	US\$1,500
14 to 18 December 2026	Nairobi, Kenya	US\$1,500

Fees are per delegate and cover all materials and travel arrangements by the delegate. Reg

Register or ask a question

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This copy was produced on 30 October 2026.