GATI

WELDING, CORROSION AND INSPECTION

API 579 Fitness-for-Service of Piping, Vessels and Tanks

DURATION	CONTACT HOURS	LEVEL	FEE PER DELEGATE
5 days	30	Intermediate	R15,000

Deciding whether damaged equipment can stay in service, using the assessment levels in API 579.

Equipment comes out of inspection with a flaw and the question is always the same: run, repair or replace. Answering it by judgement is how plants either shut down work that was safe or keep running something that was not. This standard replaces the judgement with an assessment, and it is layered deliberately, from a conservative screening any competent engineer can run to a detailed analysis that needs a specialist. The week covers the common assessments in the order a plant meets them, works each on real geometry and real readings, and is honest about where a Level 1 result should send you upward rather than let you sign.

Available as classroom, live online, in house.

Who it is for

Integrity, reliability and mechanical engineers, senior inspectors, plant engineers making run or repair decisions, and consultants supporting turnaround scopes.

What you will be able to do

- Choose the assessment level that suits the flaw and the data available.
- Run general and local metal loss assessments on real measurements.
- Assess pitting, blisters, laminations, weld misalignment and shell distortion.
- Carry out a crack like flaw assessment, and understand what it rests on.
- Set a remaining life and an inspection interval from the result.

The outline

DAY 1

The framework

Levels 1, 2 and 3, and what each demands · Data quality, and the assessment it will support · Where fitness for service sits beside the inspection codes

DAY 2

Metal loss

General metal loss and thickness profiles · Local thin areas · Remaining strength factor · Worked examples on vessels, piping and tanks

DAY 3

Pitting and laminations

Pitting couples and grading · Blisters and hydrogen damage · Laminations, and when they matter

DAY 4

Geometry and crack like flaws

Weld misalignment and out of roundness · Crack like flaw assessment and the failure assessment diagram · Fracture toughness, and the problem of estimating it

DAY 5

Using the answer

Remaining life and monitoring · What to document, and for whom · Communicating a marginal result without losing the argument

What you leave with

- Completed assessments on your own equipment data.
- A decision record showing the basis of a run or repair call.
- A route for escalating an assessment when Level 1 fails.

Published dates

DATES	WHERE	FEE
23 to 27 November 2026	Cape Town, South Africa	**R15,000**
30 November 2026 to 4 December 2026	Cairo, Egypt	**US$1,500**
7 to 11 December 2026	Gaborone, Botswana	**R15,000**
14 to 18 December 2026	Durban, South Africa	**R15,000**

Fees are per delegate and co
arranged by the delegate. Reg

Register or ask a question

globalaxistraining.co.za/courses/api-579-fitness-for-service-of-piping-vessels-and-tanks
info@globalaxistraining.co.za
+27 72 337 9234

250 Beyers Naude Drive, Rustenburg, North West, 2999, South Africa

This copy was produced on 30 October 2026.