



INSPECTION, INTEGRITY AND CORROSION TRAINING

Welding Procedure and Welder Qualification to ASME Section IX

5 day course

Classroom, online or in-house

Course overview

A joint can look flawless and still fail a bend test because the welder changed shielding gas, preheat or heat input beyond what the procedure was ever qualified to cover. ASME Section IX is the rulebook that ties those variables to qualification, and delegates learn to read it as a reviewer would. They work through essential, supplementary essential and nonessential variables, P numbers, F numbers and A numbers, and how coupon thickness fixes the qualified range. They then draft a welding procedure specification, plan the test coupon and complete a procedure qualification record from tensile, guided bend and impact results. Welder and welding operator performance qualification, continuity and revocation follow, with the standard welding procedure route. Delegates leave able to approve or reject a contractor's WPS and PQR package.

What you will learn

- Explain the structure of ASME Section IX and its relationship to the construction codes
- Classify welding variables as essential, supplementary essential or nonessential
- Apply P number, F number and A number groupings to base metals and filler metals
- Determine the qualified thickness and diameter range from a test coupon
- Prepare a welding procedure specification and the supporting procedure qualification record
- Interpret tensile, guided bend and impact test results
- Plan welder and welding operator performance qualification, continuity and revocation
- Evaluate a contractor's procedure package for compliance

Who should attend

- Welding engineers and welding coordinators
- Quality managers in fabrication workshops
- Client welding reviewers on construction projects
- Welding supervisors managing welder qualification records
- Mechanical engineers who approve contractor procedures

Course outline

- 01 Structure of Section IX and the referencing codes
- 02 Essential, supplementary essential and nonessential variables
- 03 P numbers, F numbers and A numbers
- 04 Writing a welding procedure specification
- 05 Test coupons and qualified ranges
- 06 The procedure qualification record and mechanical tests
- 07 Welder and welding operator performance qualification
- 08 Continuity, revocation and standard welding procedures
- 09 Reviewing a contractor procedure package

Upcoming dates



Dates	Venue	Format	Fee per delegate
19 to 23 October 2026	Cape Town, South Africa	Classroom	R19,950
2 to 6 November 2026	Lusaka, Zambia	Classroom	USD 1,325
30 November to 4 December 2026	Kigali, Rwanda	Classroom	USD 1,325
14 to 18 December 2026	Kampala, Uganda	Classroom	USD 1,325

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**.

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