



# AWS-CERTIFIED WELDING INSPECTOR 5 DAY COURSE

(INCORPORATING API 577 ADVANCED WELDING AND  
METALLURGY PRE-EXAMINATION PREPARATION)



## TRAINING METHODOLOGY

Facilitator lead classroom training modules with study of API and ASME Codes Reviewing example problems and solutions Solving practice problems and reviewing detailed solutions.

There will be quizzes throughout the course, and an API 577 /AWS-CWI mock test at the end of the course.

## COURSE DURATION

Course Duration: 5 Days

Eight (8) hours per day for Five (5) days of Classroom Training)

## TO REGISTER CALL NOW!

+61 8 9535 8176

## VISIT:

[www.worldwidetank.com.au](http://www.worldwidetank.com.au)

## EMAIL:

[admin@worldwidetank.com.au](mailto:admin@worldwidetank.com.au)

## WHO SHOULD ATTEND

No Course pre-requisites requirement. However, participants who wish to sit for the API exam should have an experience stated below. AWS-CWI experience listed below.

Welding Engineers, Welding Inspectors, Welding Supervisors, Foreman, NDT Examiners and those seeking an understanding of welding QA/QC will find the course useful. Those aspiring to be qualified to AWS-CWI and/or API 577.

Personnel working in the process, oil, gas and petrochemical industry, and who are involved in the design, procurement, engineering construction, operation, maintenance and inspection of welded components and related facilities. Inspectors, engineers, maintenance and QA/QC personnel who work for owner-user companies, inspection companies, fabricators, Ship Building/ Ship Repair and Construction, Offshore Fabrication, Railways, maintenance service and repair companies, and EPC's from petrochemical plants, refineries, power plants, gas / oil pipeline companies, resources companies and palm oil



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## **COURSE DESCRIPTION**

The main emphasis of this program is on improving and ensuring safety through the use of owner / user or third-party welding inspectors specialised in Oil and Gas requirements in a manner that protects employees, the public, and the environment.

The course also provides the understanding of the welding requirements for fabrication, inspection and testing portions of ASME Codes for new construction and how they work with API Codes for post construction inspection, repairs and alterations.

It provides the process, oil, gas, petrochemical and other process industries with the assurance that personnel trained and certified under this internationally recognized program have the required knowledge and experience for the job in the field.

Course participants aspiring to be certified by American Petroleum Institute will undergo a rigorous program to get them well versed with the various code books and standards, including API Standards that cover maintenance, inspection, rating, repair and alteration of related equipment.

## **LEARNING OUTCOME**

The course will provide participants with the knowledge necessary to:

- Successfully pass the applicable API certification exam
- Successfully pass the applicable AWS-CWI certification exam

Effectively use major codes:

- American Petroleum Institute and ASME Boiler and Pressure Vessel Code ASME IX & V
- Use API's requirements during inspection, repairs, and alterations, Tanks, Piping., Vessels
- Review of Welding Procedures (WPS / PQR) and Welder Performance Qualifications (WPQ)
- Use AWS Welding Technology Codes. For inspection of welds and welding processes.



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## COURSE CONTENT— 5 DAY COURSE

- API 577 Scope and Definition · Welding Inspection to AWS-CWI· Welding Processes
- ASME IX Requirements for WPS, PQR, WPQ, Mechanical Testing Requirements
- ASME V NDT Requirements and methodology , Acceptance Rejection Criteria for API 653 (Tanks), API 570 / ASME B31.3 (Piping) and API 510 (Vessels)
- Welding Materials , Metallurgy, Welding defects/discontinuities
  - The Welding Inspector
  - Documents governing welding inspection and control of materials
  - Weld joint geometry and welding terminology
  - Welding and non-destructive testing symbols
  - Code Review
  - Welding procedure and Welder Qualification
  - Welding, Brazing and Cutting Processes
  - Welding Metallurgy for the welding inspector
  - Mechanical and Chemical Properties of Metal
  - Destructive Test
  - Weld and Base Metal Discontinuities
  - Non-Destructive Testing
  - Non-Destructive Testing
  - Visual Inspection as an Effective Quality Control Tool
  - AWS CWI Examination
- Mock-up Examination



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## **REFERENCE MATERIALS MAIN REFERENCE**

API Recommended Practice 577: Advanced Welding Inspection and Metallurgy  
AWS WIT-T:2008 WELDING INSPECTION TECHNOLOGY

## **SUPPLEMENTARY REFERENCE**

- American Society of Mechanical Engineers (ASME),
- Boiler and Pressure Vessel Code Section V,
- Nondestructive Examination Section IX, Welding and Brazing Qualifications, Welding and mechanical testing only

**NOTE:** Participants are required to bring their own **HARDCOPY VERSION** of the Reference Materials stated above and **CALCULATOR**

## **BASIC ENTRY / QUALIFICATION REQUIREMENTS FOR API 577 EXAMINATION**

Effective May 2013, candidates applying for the API 577 certification program are no longer required to hold a current API 510, API 570 or API 653 certificate in order to qualify. If you do hold any of these certificates you automatically qualify for the API 577 exam.

If you do not hold a current certification in either API 510, 570 or 653, then you must have one of the combinations of education and experience listed in the grid below.

- The minimum years of experience required is based upon your level of education and must have been acquired within the last ten years.
- CWI examination candidates are required to pass an eye examination.

### **Education Minimum (AWS)**

BS or higher in engineering  
2 year technical degree  
High school diploma or Equivalent  
No formal education

### **Experience required**

1 year of experience in the petrochemical industry  
2 years of experience in the petrochemical industry  
3 years of experience in the petrochemical industry  
4 years of experience in the petrochemical industry

Pre-course reading requirements are required and candidates are required to purchase required AWS-API Documentation before attending the course.