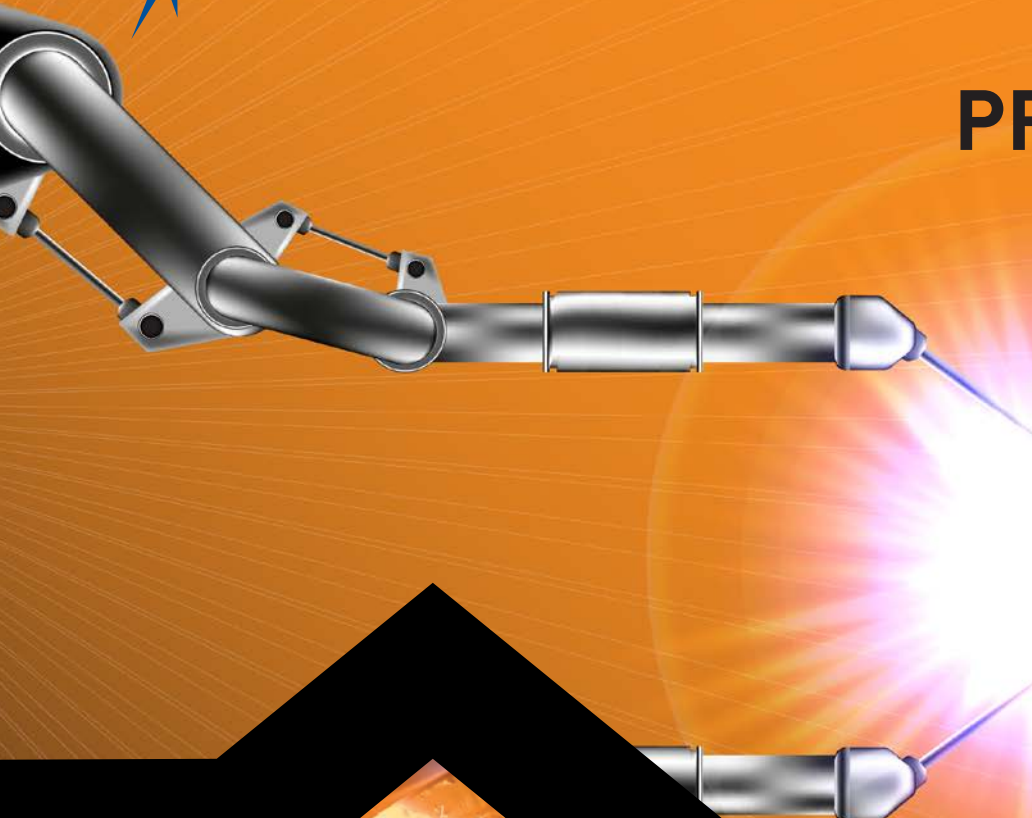




Southern African Institute of Welding

# COURSE PROSPECTUS 2022



Promoting World Class Excellence in Welding,  
Non-Destructive Testing and Allied Technology

# About Competent Persons Training

**The SAIW Competent Person courses are ideal for persons intending to work as inspectors for an Approved Inspection Authority (AIA) which has in-service inspection included in the scope of its accreditation and approval by the Department of Employment and Labour.**

These courses are also suitable for engineering personnel responsible for in-service inspection requirements according to the Pressure Equipment Regulations (PER). The qualification will ensure that the user's responsibility in terms of the in-service inspection requirements of the PER are appropriately managed.

Competent persons perform the in-service inspections which are required by the PER according to the Occupational Health and Safety Act. Competent persons are required to be certified by the SAQCC Competent Persons certification body and it is an essential requirement that the candidates have successfully completed an approved training course for certification.

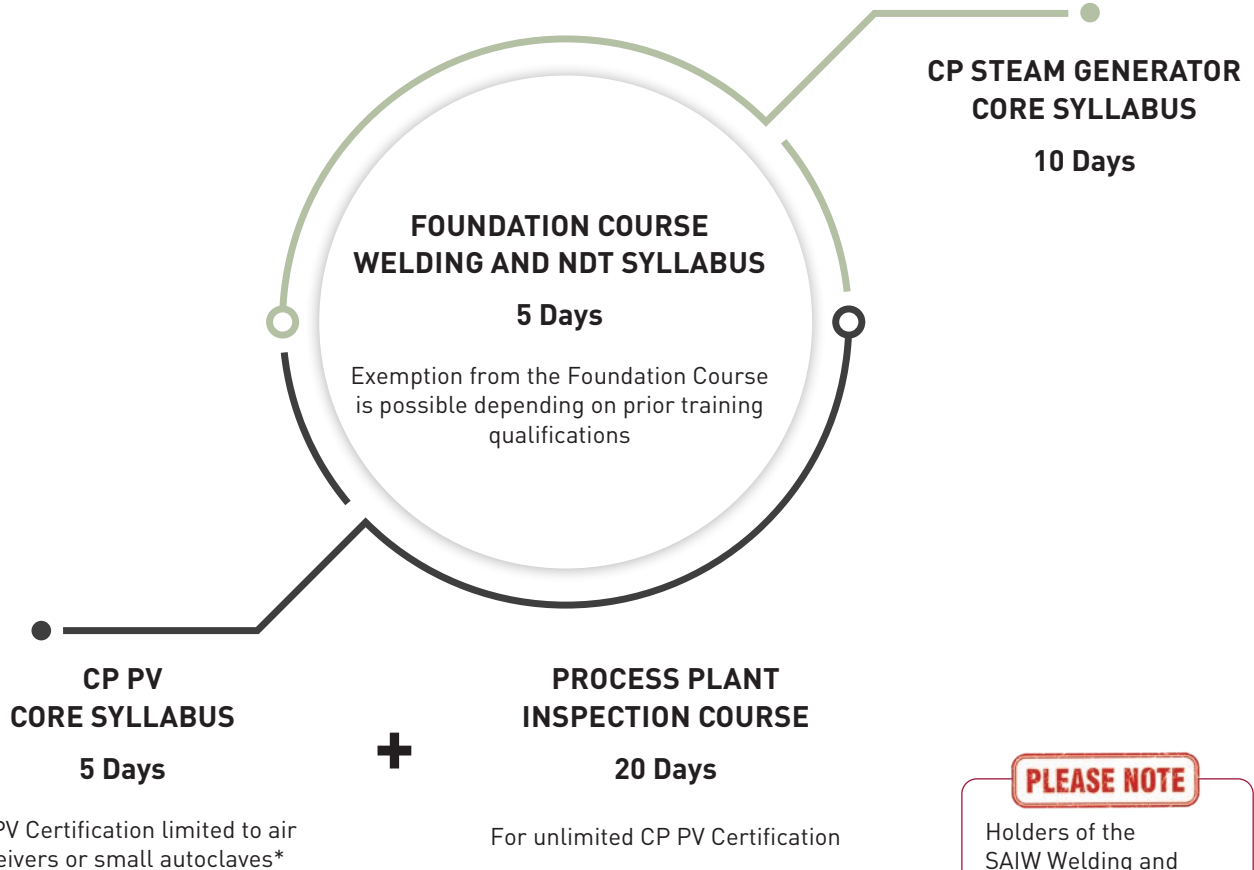
Certification is available in two categories – pressure vessels or steam generators.

Successful candidates will have a basic knowledge of common welding processes used in steam generator manufacture and repair and the defects that may occur in original manufacture; have gained knowledge and understanding of the defects that arise in service and possible equipment failure mechanisms; have gained knowledge of the suitability of NDT test methods; understand the roles and responsibilities of the user, the AIA in-service and the competent person inspector in complying with the in-service inspection requirements of the PER and have sufficient technical knowledge to be able to perform in-service inspection of steam generators.

## **TRAINING EVALUATION**

The Foundation Week ends with an examination aimed to ensure the candidate has sufficient background knowledge in welding and NDT to start work in Competent Person activities and study further courses leading to certification.





**PLEASE NOTE**

Holders of the SAIW Welding and Fabrication Inspector Level 1 or IWI-Basic Level qualification are exempt from the foundation module.

# Competent Persons Training

## COURSE INFORMATION

### Foundation Week

#### ENTRY REQUIREMENTS

1. The SAIW Competent Person courses are ideal for persons intending to work as inspectors for an Approved Inspection Authority (AIA) which has in-service inspection included in the scope of its accreditation and approval by the Department of Employment and Labour. These courses are also suitable for engineering personnel responsible for in-service inspection requirements according to the Pressure Equipment Regulations (PER).
2. It is recommended that candidates should have a minimum of Grade 10 or an equivalent qualification and some relevant experience in inspection or operation of pressurised equipment, however, all candidates will be considered.

#### COURSE DURATION

5 Days

#### PRICING (Including VAT)

Corporate Member	<b>R 16,250</b>
Non-Corporate Member	<b>R 17,570</b>

### Pressure Vessel – Core Week

#### ENTRY REQUIREMENTS

Completed Competent Persons Foundation Module or hold a Welding Inspector qualification (SAIW Level 1) or IWIP-B. For description and dates of the CP Foundation Module see page 69.

#### COURSE DURATION

5 Days

#### PRICING (Including VAT)

Corporate Member	<b>R 16,250</b>
Non-Corporate Member	<b>R 17,570</b>

#### TRAINING EVALUATION

The Core Week examination has two parts, which ensure candidates understand the requirements of the PER and have a good general knowledge of the common defects and failure mechanisms arising with pressure vessels in-service.

### Steam Generators – Core Week

#### ENTRY REQUIREMENTS

Completed Competent Persons Foundation Module or hold a Welding Inspector qualification (SAIW Level 1) or IWIP-B. For description and dates of the CP Foundation Module see page 69.

#### COURSE DURATION

10 Days

#### PRICING (Including VAT)

Corporate Member	<b>R 32,500</b>
Non-Corporate Member	<b>R 35,135</b>

#### TRAINING EVALUATION

The Core Week examination has two parts which ensure candidates understand the requirements of the PER and have a good general knowledge of the common defects and failure mechanisms arising with steam generators in-service.

## COURSE SCHEDULE | Competent Persons Training

<b>FOUNDATION WEEK</b>				
	HRS	JHB 1	DBN 1	CPT 1
This one week Foundation course covers an introduction to the common welding processes, their application and the defects arising, common non destructive testing methods, their application, advantages and disadvantages	40	04 - 07 Apr	14 - 17 Feb	14 - 17 Feb
Examination	1	08 Apr	18 Feb	18 Feb
<b>PRESSURE VESSEL - CORE WEEK</b>				
	HRS	JHB 1	DBN 1	CPT 1
Background to legislation, pressure equipment regulations, codes and standards, safety procedures and vessel entry, autoclaves, external and internal inspections, defects arising in-service, failures and repairs, including specific equipment and service conditions, overpressure protection devices, pressure testing, report writing, information and discussion forum for inspection and testing of pressure vessels	40	20 - 23 Jun	14 - 17 Mar	28 - 31 Mar
Examination ( 1 x 2 hrs)	1	24 Jun	18 Mar	01 Apr
<b>STEAM GENERATION - CORE WEEK</b>				
	HRS	JHB 1	DBN 1	CPT 1
Background to legislation, Pressure Equipment Regulations, codes and standards, types of steam generators, knowledge of operation, safety prior/during and after inspections, external and internal inspections, failures and repairs, including specific equipment and service conditions, water treatments, fire side inspections, overpressure inspection devices, application of NDT methods, pressure testing, report writing requirements, information an discussion forum for the inspection and testing of steam generators	40	12 - 22 Sep	22 Aug - 01 Sep	09 - 19 May
Examination ( 2 x 2 hrs)	1	23 Sep	02 Sep	20 May

Please note that any comments, compliments or complaints related to:

1. Training can be forwarded to [quality@saiw.co.za](mailto:quality@saiw.co.za)
2. Examination and Certification can be forwarded to [quality@saiw.co.za](mailto:quality@saiw.co.za)

# PROCESS PLANT INSPECTION

## COURSE INFORMATION

### ENTRY REQUIREMENTS

1. Completed Competent Persons Pressure Vessel Core Week (see page 69).

### THIS COURSE IS SUITABLE FOR

- In-service Inspectors must have completed Competent Persons Pressure Vessel Core Week (see page 69).
- All types of engineering personnel wishing to gain more insight into in-service inspection requirements and in-service damage mechanisms.

### COURSE DURATION

20 days

### PRICING (Including VAT)

Corporate Member	<b>R 46,000</b>
Non-Corporate Member	<b>R 49,730</b>

#### PLEASE NOTE

Process Plant Inspection modules are essential modules for persons wishing to become Competent Persons with unlimited certification.



## The Process Plant Inspection course is a follow-on course from the Competent Person Pressure Vessel course.

This course builds on pre-existing inspection knowledge and is focused on areas of knowledge which are needed specifically for process plant equipment.

The course has been specifically designed for the petrochemical industry to address the inspection requirements on a petrochemical refinery and is focused around the best operating standards developed by the American Petroleum Institute (API).

On completion of this course, the candidate may apply for unlimited certification for Competent Persons: Pressure Vessels. Persons intending to complete the SAIW inspection diploma should apply for this course, as it is an essential module for this diploma.

### MODULE 1

- API 510** • Pressure Vessel Inspection Code: In-service inspection, rating, repair and alteration
- ASME VIII** • Rules for Construction of Pressure Vessels Div 1 – Calculations to API 510
- ASME IX** • Welding, Brazing and Fusing Qualifications – Procedure and welder qualification
  - Engineering Drawing and Design

### MODULE 2

- API 574** • Inspection Practices of Piping System Components
- API 570** • Piping Inspection Code: In-service inspection, repair, and alteration of piping systems
  - ASME B31.3 Process Piping
- API 576** • Inspection of Pressure Relieving Devices

### MODULE 3

- API 571** • Damage mechanisms affecting fixed equipment in the refining industry
- API 580** • Risk Based Inspection
- API 572** • Process Equipment Knowledge
  - Inspection of Pressure Vessels
  - Towers, Drums, Reactors, Heat Exchangers and Condensers – Process Equipment
  - Process Diagrams
  - Recommended Repair Methods.

### MODULE 4

- API 579:** • Fitness for service
  - Advanced NDT
- API 653:** • Tank inspection repair, alteration and reconstruction
  - Report writing.

## COURSE SCHEDULE | Process Plant Inspection

JOHANNESBURG   DURBAN			
	HRS	JHB 1	DBN 2
<b>MODULE 1</b>	40	17 - 20 Oct	30 May - 02 Jun
Examination (approx. 1 x 1 hr)	1	21 Oct	03 Jun
<b>MODULE 2</b>	40	24 - 27 Oct	06 - 09 Jun
Examination (approx. 1 x 1 hr)	1	28 Oct	10 Jun
<b>MODULE 3</b>	40	21 - 24 Nov	04 - 07 Jul
Examination (approx. 1 x 1 hr)	1	25 Nov	08 Jul
<b>MODULE 4</b>	40	28 Nov - 01 Dec	11 - 14 Jul
Examination (approx. 1 x 1 hr)	1	02 Dec	15 Jul

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