



## **Competent Persons**

### **Pressure Vessels, Steam Generators**

#### **Guidelines for application for initial certification**

#### **1. Scope**

Regulation 11 of the Pressure Equipment Regulations (as contained in the Occupational Health and Safety Act, 1993 (Act 85 of 1993) was amended in 2009 to reflect the requirements for the statutory periodic internal and external inspections and hydraulic testing of pressure vessels and steam generators to be carried by a approved in-service inspection authority.

SANS 10227:2007 'Criteria for the operation of inspection authorities performing inspection in terms of the Pressure Equipment Regulations' Section 12 Table 1 defines the functions and qualification/certification requirements for pre-commissioning and in service pressure equipment inspection by an AIA. The in-service inspection and testing function is designated as requiring an SAQCC qualified and certified Competent Person.

The South African Qualification and Certification Committee for Competent Persons and Inspectors of Pressurised Equipment (SAQCC-CP/IPE) has established the minimum requirements for technical knowledge together with the experience/training requirements for qualification and certification as a Competent Person (Steam Generators) and/or a Competent Person (Pressure Vessels). This procedure provides the applicant with guidelines and requirements for application for certification as a Competent Person.

#### **2. Responsibilities**

2.1 It is the responsibility of the applicant for certification to complete SAQCC-CP application forms.

A separate application is required for Competent Persons-Pressure Vessels and Competent Persons-Steam Generators. It is the responsibility of the Administration Controller (Certification) to provide the applicant with the application form and to forward the completed application forms and related documents to the SAQCC-CP/IPE committee for assessment and to inform applicants of the assessment results.

- 2.2 It is the responsibility of the SAQCC-CP/IPE committee to assess applications for certification from Competent Persons-Pressure Vessels and Competent Persons-Steam Generators in accordance with this document.

### **3. Requirements for certification**

To be certified as a Competent Person:

- 3.1 Each applicant is required to complete the attached application form and attach a certified copy of a Competent Person training and examination certificate, substantiating that the applicant has proven knowledge of the inspection and test of Pressure Vessels or Steam Generators. Such knowledge will also include the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and/or The Mineral Act, 1991 (Act 50 of 1991). It is mandatory for each applicant to have attended an approved training course and to have been successful in the final examination. The application form also requires that the applicant completes educational and qualification details as well as employment history. Table 1 shows the minimum training periods required for applicants related to their academic qualifications and employment background.

Each applicant must be physically able to perform all activities involved, and will provide:

- 3.2.1 proof of visual acuity tested within the last six months:

- a. such that the applicant is able to read J1 (or N5) sized letters of the standard Jaeger or equivalent test chart at 300 mm and J7 (orN10) at 1000 mm, with at least one corrected or uncorrected eye and
- b. of at least 6/6 on a Snellen Chart or orthorator.

- 3.2.2 have clinically assessed normal fields of vision.

This proof of visual acuity and clinically assessed field of vision must be supplied on the standard vision test record from supplied with the application.

**N.B.** It has been agreed by the SAQCCP-CP certification scheme committee that credit for practical experience will be granted for a Competent Person-Steam Generators also becoming certified as a Competent Person-Pressure Vessels. This will be based on the first certification being in place and current. Only a further one year of practical experience would then be required for certification regardless of academic qualifications.

#### **4. Examination requirements**

SAQCC-CP approved training courses and examinations are conducted at approved centres. Details of these centres can be obtained from:

The SAIW Training Administrator  
PO Box 527 Crown Mines 2025  
Tel: (011) 298-2111 Fax: (011) 836-4132

The Competent Persons Pressure Vessel examinations for limited certification scope such as air receivers, medical autoclaves, high pressure accumulators etc will consist of:

**Examination E1a:** A Foundation Week examination consisting of a two (2) hour Closed Book paper of fifty multiple choice questions on:

**Basic knowledge of the characteristics and applications of the common arc welding processes, types of welding defects, visual inspection, introduction to NDT, welding procedures and welder qualifications and introduction to materials technology.**

**NB.** Applicants for CP-Pressure Vessels/Boilers who already hold an SAIW L1 Welding Inspectors Diploma or equivalent qualification such as International Welding Practitioner or International Welding Specialist or who have completed the SAIW Five Day Engineers Appreciation course are exempted from attending the Foundation Week training course and will have direct access to the Foundation Week examination.

#### **Examination E1b: Pressure Vessels-Core week**

A Core week examination consisting of a one (1) hour Closed Book paper of thirty five multiple choice questions on general knowledge of statutory inspection and testing of pressure vessels;

**and**

A Core week examination consisting of a one (1) hour Open Book paper of approximately twenty questions on regulations and codes relating to statutory inspection and testing of pressure vessels and steam generators such as the PER and SANS 10227.

The Competent Person-Pressure Vessel examinations for unlimited certification scope will consist of examinations E1a and E1b as well as the following:

**Examination E1c: Process plant modules-Four (4) weeks**

**Week1: API 510, ASME Section VIII/API 510 calculations, ASME Section IX, Drawing and design**

The examinations consist of:

- a) A one (1) hour Open Book paper on ASME VIII & ASME IX
- b) A two (2) hour Closed Book paper on API 510 & Drawing and design

**Week 2: API 574, API 570, B31.3 & API 576**

The examinations consist of:

- a) A one (1) hour Closed Book paper on API 576 & B31.3
- b) A one (1) hour Closed Book paper on API 574
- c) A one (1) hour Closed Book paper on API 570

**Week 3: Process diagrams & recommended repairs, API 571, API 572 & API 580**

- a) A one hour (1) Closed Book paper on Process Diagrams & Recommended Repairs
- b) A one hour (1) Closed Book paper on API 571
- c) A one hour (1) Closed Book paper on API 571
- d) A one hour (1) Closed Book paper on API 580

**Week 4: Advanced NDT, API 579, Tank Inspection a& Report Writing**

- a) A one hour (1) Closed Book paper on Advanced NDT
- b) A one hour (1) Closed Book paper on API 579
- c) A one hour (1) Closed Book paper on Tank Inspection & Report Writing

The Competent Person-Steam Generators examinations for certification will consist of examination **E1a** as well as the following:

## **Examination E2: Steam Generator core course (Two weeks)**

This examination will take place at the end of the second week of the core course and will consist of:

a) A two (2) hour multiple choice Closed Book paper on general knowledge of statutory inspection and testing of steam generators

**and**

b) A two hour (2) Open Book paper on regulations and codes relevant to the statutory inspection and testing of steam generators

### **5. General**

5.1 Application forms may be obtained from:  
The Administration Controller (Certification)  
SAIW Certification  
52 Western Boulevard, Off Main Reef Rd  
CITY WEST  
2092

Tel: (011) 298-2100

Fax: (011) 836-4132

5.2 The applicant must return the application(s), together with the necessary certified supporting documentation, to the SAIW Certification Administration Controller (Certification).

5.3 Applicants may be requested to present themselves for an interview with the SAQCC-CP/IPE Committee and will be advised in writing should such an interview be required.

5.4 Applicants will be advised in writing whether their application has been successful or unsuccessful.

5.5 Unsuccessful applicants may appeal in writing to SAIW Certification on any adverse decision of the Committee concerning their application and may request further information as to the reasons for their unsuccessful application for certification.

5.6 Unless agreed with the applicant, information relating to an unsuccessful application will not be divulged by SAIW Certification to any third party.

## **6. Certification**

- 6.1 Successful applicants will be required to sign a Code of Ethics. On receipt of a signed copy of this Code of Ethics, the SAIW Certification Administration Controller (Certification) will issue the CP certificate.
- 6.2 Certification is subject to periodic renewal and re-certification by SAIW Certification. Renewal will be required at three yearly intervals based on a documentation review and re-certification will be required after nine years and will be subject to a re-examination.  
The certified CP will be required to produce evidence of continuing professional development for each three yearly certification renewal. All CP certificates issued are recorded on the SAQCC-CP National Register on the SAIW website, with expiry dates. Applicants are advised that confirmation of certification and expiry dates can be made available to the general public on request.

**N.B. The SAQCC-CP/IPE certification scheme committee have decided that credit on the practical training requirements will be granted for a certified CP-Steam Generators also becoming a CP-Pressure Vessels and vice versa. This will be based on the first certification being in place and current. Only one further year of practical experience would then be required for certification regardless of academic qualifications.**

## **7. Appendices to this procedure:**

- Application for certification as a Competent Person-Pressure Vessels, Competent Person-Steam Generators
- Table 1: Minimum practical training periods based on academic and trade qualifications.

### **Note:**

**Do not submit the application without proof of attendance at an approved training course and of having passed the SAIW Certification Competent Persons final examinations.**

**NB: Please note that applications will not be processed  
unless proof of payment is received  
Proof of payment needs to be attached to the application**



# SOUTH AFRICAN QUALIFICATION AND CERTIFICATION COMMITTEE

## Competent Persons (Pressure Vessels and Steam Generators)

Photograph of applicant

### Application for certification as a Competent Person

Certification fee payable on submission of the application. R2012-00 incl. VAT for each category

Pressure Vessels

Steam Generators

Mark whichever is applicable

**Note:** A separate application must be submitted for each category.  
Type or print all information in black ink and block letters.

1. Personal

- a. Surname .....
- First name/s .....
- Identity number. / Passport number .....
- b. Postal address for SAQCC-CP correspondence .....
- .....
- ..... Postal code .....

Residential address .....  
 .....  
 ..... Postal code .....

- c. Company name and postal address .....  
 .....  
 Postal Code: .....Company VAT No: .....
- d. Telephone no (H) ..... Telephone no (B) .....  
 Facsimile no ..... Cell. no .....
- e. Date of birth: Year ..... Month ..... Day .....

**2. Secondary and tertiary education, training and qualifications**

- 2.1 Secondary education .....  
 Highest standard passed .....  
 School or technical college attended .....  
 Dates .....
- 2.2 Certified copy of Competent Person course attendance record and examination result to be attached to this application.
- 2.3 Education and qualification record

Name and address of educational institution attended	Dates attended				Qualifications obtained*
	From		To		
	Month	Year	Month	Year	



Enclose certified photocopies of certificates, diplomas, degrees, qualifications, etc, to substantiate the qualifications listed in the table above.

**Note: The certifying stamp must be original. Do not submit photocopied certifying stamps.**

\* Table 1 Minimum practical training periods based on academic and trade qualifications. Please study this table carefully as it clearly indicates the required duration of practical training requirements.

**3. Employment history to show practical training/experience.**

Name and Address of Company	Position Held	Dates Attended				Name and Title of Management Representative	Signature** verifying employment
		From		To			
		Month	Year	Month	Year		

If space is insufficient, attach extra information on separate sheets.

\*\* If it is not possible to obtain these signatures, state reasons why and supplies an affidavit verifying employment

I hereby certify, that the information that I have included on this application is accurate. I give the SAQCC-CP permission to verify this information.

I understand that any false statement or omission may result in this application being rejected.

Signature of applicant: .....

Date: .....



**Qualifying practical training required**

Complete the required information for each employer, where the employment was relevant to your application for certification as a Competent Person.

A. Company name: .....

Dept/Division ..... Supervisor/Personnel Manager .....

Telephone no ..... Fax. no.....

Address .....

..... Code .....

e-mail address .....

Job title ..... from ..... Month Year ..... to ..... Month Year .....

Company name: .....

Dept/Division ..... Supervisor/Personnel Manager .....

Telephone No. .... Fax. No.....

Address .....

..... Code .....

e-mail address .....

Job title ..... from ..... Month Year ..... to ..... Month Year .....

Company name: .....

Dept/Division ..... Supervisor/Personnel Manager .....

Telephone no ..... Fax. no.....

Address .....

..... Code .....

e-mail address .....

Job title ..... from ..... Month Year ..... to ..... Month Year .....

B. Complete the following document in accordance with the training period requirements of Table 1

**Report on practical training/experience for SAQCC-CP**

**Copies of certificates of inspection and test for the ten pressure vessel steam generators listed in the practical training report are to be attached to the application. A Commissioner of Oaths must verify all photocopies as being a true copy of the original document**

Name of applicant:.....

	Pressure Vessel Steam Generators ref. number	Pressure Vessel Steam Generator type	Code of manufacture	M.A.W.P.	Capacity of Pressure vessel in cubic metres	Date of inspection and test	Name of client	Verification
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

I hereby certify that the information included in this application is accurate.

I give the SAQCC- CP permission to verify this information if necessary.

I understand that any false statement or omission may result in the application being rejected.

Signature of applicant ..... Date .....

**Employer verification of practical training/experience:**

Signature of management representative  
or senior company representative:

.....

Name of management representative  
or senior company representative:

.....

Title of management representative  
or senior company representative:

.....

**Checklist for submission of an application as a certified Competent Person with SAQCC-CP**

1. Ensure that the certification application form attached is correctly completed either typed or in black ink and that all practical experience is verified by the employer(s). Ensure that all necessary signatures are in place.
2. Enclose a **verified** copy of your identity document.
3. Enclose **certified** copies of all relevant qualifications/certificates that are being submitted as evidence of having the training and qualification requirements for certification by SAIW Certification.
4. Enclose a certified copy of the vision test record confirming that visual acuity has been tested in the last six months.
5. Do not enclose original certificates. A Commissioner of Oaths, e.g. SAPS, can certify copies.
6. The application for certification must be accompanied by:
  - 6.1 Copies of the ten certificates of inspection and test of pressure vessels or steam generators on which training was received, signed by and stamped by a certified Competent Person and countersigned by the applicant. These certificates must show that the training was carried out over the required training period as shown in this document and should also be signed by the user. In the event that the user signature cannot be obtained, a letter from the user confirming that the trainee was present at the inspection and test and that the user accepted the findings of the inspection will be accepted. A Commissioner of Oaths must verify copies of certificates. A supporting letter from the supervising Competent Person, confirming the applicant's role as a trainee Competent Person, should also be provided. This letter should include the equipment numbers and dates of inspection. If the applicant is employed by an Authorised Inspection Authority, the supporting documentation will be acceptable from the AIA, provided that it is on a company letterhead and signed by the management representative or Chief Executive Officer.

**Note 1**

If training is gained in short intervals (e.g. periodic shutdowns) spread over the required training duration, the applicant will be required to show that the work carried out during intervening period was relevant to the duties of a Competent Person. This can be done by providing a description of your duties to support the employment history in Section 3 of the application form. This description should be verified by the employer organisation.

**Note 2**

It is an SAQCC-CP requirement that in cases where there are less than the required numbers of tests done i.e. no internal inspections (for reasons of exemptions granted etc.); the committee will accept seven out of ten reports with the required number of inspections and tests, as being sufficient. However, the SAQCC-CP/IPE committee requires that on five of the vessels on which internal inspection **was** carried out, the applicant must have performed internal inspection by gaining physical access into the vessel. Hydraulic pressure testing must have been carried out on at least five of the ten vessels submitted.

**Note 3**

It is an SAQCC-CP requirement that the inspection and testing of the vessels submitted as proof of training must have been carried out over the duration of the appropriate training period as shown in Table 1.

**Note 4**

Please note that the SAQCC-CP/IPE committee may require the applicant to provide additional supporting information and may require the applicant to obtain supporting signatures from employers, owners of equipment or certified Competent Persons.



**SOUTH AFRICAN QUALIFICATION AND  
CERTIFICATION COMMITTEE**

for

**Competent Persons  
(Pressure Vessels, Steam Generators)**

Vision testing for Competent Persons

This form to be handed to the medical examiner for completion

**Vision test record**

For.....  
(Name of applicant)

**Visual acuity**

The requirements for visual acuity are:

- a. The ability to read J1 size letters of the standard Jaeger test chart at 300mm and J7 at 1000mm, and
- b. at least 6/6 on a Snellen Chart or orthorator with at least one eye, corrected or uncorrected.

**NB: Please circle where applicable**

TEST	J1 @ 300mm, J7 @ 1000 mm	SNELLEN 6/6
Left	Yes / No	Yes / No
Right	Yes / No	Yes / No

**Field of vision**

The requirements for field of vision are:

TEST	FIELD	REMARKS
Left	Normal / Not normal	
Right	Normal / Not normal	

Date of test .....

Tested by .....  
(Medical Officer / Optometrist)  
Signature and stamp



**Competent  
Persons**

Table 1  
**Required minimum training period based on  
academic and trade qualifications**

Qualifications	Relevant training	Trade test
Mechanical Engineering / Metallurgy or other relevant engineering qualifications.	See Note (1)	E.g.: Boilermaker, Welder, Blacksmith, Fitter, Millwright, and Fitter & Turner. See Note (2)
N2/. Std. 8/Gr.10 or lower	5 years (10 vessels)	1 year credit
N3/Matric/Gr. 12 N4 N5	3 years (10 vessels)	1 year credit
Technikon S4 B Tech. N6/S3 G.C.C. IPE Relevant degree – Qualifications will be reviewed by committee	1 year (10 vessels)	
Note (1)	Training on 10 boilers or 10 pressure vessels over relevant training period*	
Note (2)	Applicants, who have successfully completed a trade test or apprenticeship contract in one of the trades listed, are given a 1-year credit against the training requirements.	

\* Candidates should submit verified copies of inspection and test certificates, as proof of training countersigned and stamped by the certified Competent Person responsible for the inspection and test.

**N.B.** For CP-Steam Generator applications, the supporting ten certificates of inspection and test may (at the discretion of the SAQCC- CP/IPE committee) is as follows:

- a. Ten certificates of inspection and test for steam generators, manufactured to a steam generator construction code recognised by the Pressure Equipment Regulations or,
- b. Ten certificates of inspection and test, with a minimum of five steam generators manufactured to a steam generator code recognised by the Pressure Equipment Regulations, together with a maximum of five “steam generators” manufactured to a pressure vessel code recognised by the Pressure Equipment Regulations and also being registered with the Department of Labour as steam generators. Evidence of such registration, must be submitted with the application.

**N.B.** The SAQCC-CP/IPE certification scheme committee have decided that credit on the practical training requirements will be granted for a CP-Steam Generators also becoming a CP-Pressure Vessels and vice versa. This will be based on the first certification being in place and current. Only one further year of practical experience would then be required for certification regardless of academic qualifications.