



20th January 2015

GUIDE TO REGISTRATION OF AUTHORISED REFRIGERATION PRACTITIONER.

Thank you for taking the time to consider registration under the Pressure Equipment Regulations

The Department of Labour published the “Pressure Equipment Regulations” in the Government gazette in July 2009: is forms part of the Occupational Health and Safety Act Number 85 of 1993. These regulations came into force on 1st October 2009.

The Department of Labour has Mandated SAQCC Gas with the responsibility of registering and maintaining a data base of “Authorised Persons” for handling and working with gases under pressure. SARACCA is an accredited association within SAQCC Gas with the responsibility to register persons in the refrigeration industry.

The Regulations define an authorised person as one who is registered with SAQCC Gas as competent within the scope of work for refrigeration. In the refrigeration and air conditioning industry we have defined 3 basic categories within the scope of refrigeration work as defined in SANS 10147-2014 (Refrigerating systems including plants associated with air-conditioning systems).

Clause 2(1) of the PER says,

Scope of Application: These Regulations shall apply to the design, manufacture, operation, repair, modification, maintenance, inspection, and testing of pressure equipment with a design pressure equal to or greater than 50kPa,.....

Clause 17; Gas reticulation equipment and systems;

1. “No person shall –

- (a) Handle, store, or distribute any gas in any manner, which includes the filling of a container, other than in accordance with the relevant health and safety standard incorporated into these regulations under section 44 of the Act;
- (b) Install or remove an appliance, pressure equipment or system for gas in any manner other than in accordance with the relevant safety standard incorporated into these regulations under section 44 of the Act;
- (c) Install or remove a gas appliance or a gas system or a gas reticulation system unless such a person is an authorised person; or
- (d) Use pressure equipment or systems for gas in any manner other than in accordance with the relevant safety standard incorporated into this regulation under section 44 of the Act.

2. After installation or re-installation, and before commissioning a gas system, the user shall ensure that an external inspection and leak test are performed by an authorised person or an approved inspection authority as applicable in terms of sub regulation 1.c.

3. an authorised person or an approved inspection authority shall issue a certificate of conformity after completion of a gas installation, modification, alteration or change of user or ownership in the form of annexure 1.”

Clause 18; Transportable gas containers;

1. No user shall use, require or permit a transportable gas container to be used, and no user shall fill, place in service, handle, modify repair inspect or test any transportable gas container, other than in compliance with the relevant standards incorporated into these Regulations under section 44 of the Act.

This regulation specifically covers the handling and use of refrigerant cylinders.

The Pressure Equipment Regulations refer to SANS 10147-2014. It is important to note in this Document that all personnel involved in the operation and maintenance of refrigeration shall have been trained on the functioning of the installation and to the handling, charging and recovery of refrigerants used in the refrigeration and air conditioning systems.

The Driven Machinery Regulations, also in the OHS Act, Clause 15 states that:

No user shall use or permit the use of a refrigeration or an air conditioning installation unless it complies with the safety standard with respect to its construction, installation, operation and inspection incorporated for this purpose into these regulations.....

A Disciplinary procedure has been put in place by SAQCC Gas Code of Conduct and is applicable to where an authorised person practicing within his scope of work shows poor or bad performance and workmanship or bad behaviour can be held to account. Doing poor work and operating without registration will be viewed in a serious light and in severe cases of misconduct legal prosecution could be followed. The Code and the Disciplinary procedure can be viewed on the SAQCC Gas web site. (www.saqccgas.co.za)

The application form for an Authorised Refrigeration Practitioner (ARP) is very straight forward in that the information asked for can very quickly be provided such as name, address, contact phone numbers and employer details. The information regarding education and experience must be backed up by supporting certificates and documents. It would be wise to back up experience with letters from employers substantiating you experience profile.

The cost of registration is **R1938.00** inclusive of VAT valid for three years.

A replacement of a lost card or change of employer or an up-grade within the 3 year cycle period is **R400.00** inclusive of VAT.

Examine the category list below to establish where your training and experience qualifies you for registration after training and a competence assessment.

Category O; Handling of Refrigerants and Containers

This category is for those who are handling refrigerant containers, cylinders and transfer refrigerants from storage vessels into service cylinders at the wholesalers and company stores. This is a category outside the SANS 10147-2014 Annex 'C'

MINIMUM UNIT STANDARDS to be covered are US-116334; US-116223 and portion of US116700

Category A; Refrigeration plant operator safety awareness

The person registering here are those who work as operators in plant rooms and in processing factories using refrigeration but are not qualified by trade test in refrigeration. Persons required registering in this category need training in OHS Act and incident safety response, the basics of refrigeration and refrigerants. A plant operator may not sign a Certificate of Conformity.

MINIMUM UNIT STANDARDS required for assessment are US116223, part of US116334 and Ammonia Safety Response Training and portion of US116700 and/or US116704 as may be relevant to plant operation;

Category A; Air Conditioning & Refrigeration Installer - Semi skilled

Installers who are defined as assistant mechanics for NQF level 2, or who have not completed a trade test and are carrying out the installation of small split room air conditioning units and small refrigeration installations up to 18kW cooling capacity under supervision. This category is restricted to the Group A1 refrigerants defined in the new SANS 10147:2014. An installer registered as a category 'A' here is permitted to sign a Certificate of Conformity for equipment up to 18kW cooling capacity.

MINIMUM UNIT STANDARDS to be covered are US116700 and/or US116704; US-116334; US-116223 & US-116355.

Category A; Air Conditioning & Refrigeration Apprentice/Learner

This category is specifically for those mechanics who are in training towards a trade test. After passing a trade test the mechanic may be upgraded to category 3. An apprentice registered as a category 'A' here is permitted to sign a Certificate of Conformity for equipment up to 18kW cooling capacity.

MINIMUM UNIT STANDARDS to be covered are the Core unit standards in NQF level 2, 3 and 4. Including US116700 and/or US116704; US-116334; US-116223 & US-116355.

Category B; Air Conditioning & Refrigeration Practitioner –Skilled Artisan

The vast majority of refrigeration mechanics fall into this category. They must have completed an apprenticeship and trade test and are registered at artisan level. They are able to work on a wide variety of refrigeration and air conditioning installations and systems using Group A1 & A3 refrigerants. Knowledge of safety, the handling of refrigerants, testing and inspection skills is a pre-requisite.

MINIMUM UNIT STANDARDS US116223; US116334; US116355 and US116700 must be covered; it is recommended that knowledge of US116468 be also achieved.

Category B; Ammonia Refrigeration Practitioner

Mechanics working in cold storage and process cooling refrigeration using Ammonia and are registered artisans must apply here. Trades that may be recognised are Refrigeration mechanics in B2 refrigerants, Pipe fitters, Electricians, Mill wrights etc. and who have been assessed as competent after Ammonia refrigeration training.

MINIMUM UNIT STANDARDS to be covered are US116704: US116223: US116355 and US116334 along with Ammonia Safety Response Training.

It is recommended that knowledge of US116468 be achieved

Category B; Motor Vehicle Air Conditioning and Transport refrigeration Practitioner

All motor vehicle air conditioning (cars, buses, vehicle cabs) refrigerated transport is covered by this category. Those who register here are mainly registered motor mechanics, auto electricians and diesel mechanics that have completed the vehicle air conditioning training.

MINIMUM UNIT STANDARDS to be covered are US116223; US116355 and US116700 for registration.

In addition the following are recommended for skills in vehicle air conditioning; US116703, US116705 and US116708.

Unit standards US 9546, US 9266 and US 262158 are recommended as additional skills in refrigerated trucks, trailers and containers.

Category B; Marine Refrigeration Practitioner

The refrigeration on fishing boats and ships and refrigerated container carriers is covered in this category. Those who register here must be refrigeration mechanics with artisan status and who have trained in the marine environment. Knowledge in all types systems and use of refrigerants such as Freon's, Ammonia and CO² is essential.

MINIMUM UNIT STANDARDS to be covered are US116223; US116334; US116355; US116700 and US116704 for registration.

Category C; Inspector – Commercial Air Conditioning & Refrigeration

This registration is for those who by experience and training are well versed in all applications air conditioning, commercial refrigeration and water chillers. Previous registration in Category B is a requirement plus a competent assessment in the inspection of refrigeration plant as per Unit Standard 262159 plus knowledge of SANS10147, SANS347 and the OHS Act and Mechanical Regulations

Category C; Inspector - Industrial Refrigeration & Air Conditioning

This registration is for those who by experience and training are well versed in all applications industrial refrigeration, process cooling and industrial air conditioning. Previous registration in Category B is a requirement plus a competent assessment in the inspection of refrigeration plant as per Unit Standard 262159 plus knowledge of SANS10147, SANS347 and the OHS Act and Mechanical Regulations.

Category C; Designer – Commercial Air Conditioning & Refrigeration

This category is aimed at those who design refrigeration systems at different levels using Freon's and CO² as a refrigerant. It is necessary to define where design expertise gained. Design qualifications in refrigeration theory plus knowledge of SANS10147, SANS347 and the Pressure Equipment Regulations incorporated into the OH&S Act. There is recognition of prior learning and experience. A technical / engineering diploma or degree is necessary.

Category C; Designer - Industrial Refrigeration

This category is aimed at those who design refrigeration and process cooling systems at different levels using Ammonia as a refrigerant. It is necessary to define where design expertise gained. Design qualifications in refrigeration theory plus knowledge of SANS10147, SANS347 and the Pressure Equipment Regulations incorporated into the OH&S Act There is recognition of prior learning and experience. A technical / engineering diploma or degree is necessary.

All applicants must have been assessed as competent in handling refrigerants by a SARACCA recognised training provider in the relevant Unit Standards listed above. A list of training providers is available from SARACCA

Do not forget it is most important to attach all the relevant documentation, copies of certificates, photographs and proof of payment. Failure to do so will delay and stall your application.

It is better to provide more information than too little.

Registration as an “authorised refrigeration gas practitioner” is a legal requirement and any false declaration or working outside of the scope of your registration will result in disciplinary procedures in terms of the SAQCC Gas Disciplinary Code and/or possible prosecution in terms of the OHS Act.

The registered practitioner is required to sign a Certificate of Conformity after completion of an installation, maintenance procedure, repair, relocation or decommissioning of a unit or plant. Category A practitioners may only sign a CoC for units up to 18kW cooling capacity. Category B practitioners may sign a CoC for work in their area of competence and experience any size plant along with Category C Inspectors provided they have done the work or witnessed the commissioning of the plant.

Certificate of Conformity books of 50 certificates are available from SARACCA at R380.00 each inclusive of VAT

You will also be required to sign a Code of Good Refrigeration Practice as part of your registration.

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Rev 9; 21th Feb 2014

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