



Who Qualifies To Operate Or Work On Ammonia Plants?

AUTHORISED GAS PRACTITIONER CONDITIONS TO OBTAIN A CERTIFICATE TO OPERATE OR WORK ON AN AMMONIA PLANT

CATEGORIES OF COMPETENT PERSONS ANNEXURE

- Qualifications in accordance with the requirements of
- SANS 347 and SANS 10147.A certificate will be issued by
- SAQCC GAS if the candidate qualifies.

LEVEL A: Operation personnel

LEVEL B: Installation, maintenance and repair personnel

LEVEL C: Designers, commissioning personnel, Inspectors

LEVEL A: The persons should be able to operate an refrigeration System safely with due regard to environmental requirements and Energy efficiency without braking into the refrigeration plant

LEVEL B: The person should be able to apply given specifications and piping And instrumentation diagrams (P & ID). Should understand and be able to apply requirements in this Standard concerning health, safety, environmental protection and Energy efficiency.

CATEGORIES OF COMPETENT PERSONS LEVEL C:

- **Level C :**

A person with competence in level C should be competent to ensure that A refrigeration system confirms to the:

- **Requirements In SANS 10147**

Concerning health, safety, environmental, protection and energy efficiency. Should have advanced knowledge of legislation and regulations Relating to

- **Refrigerating systems and heat pumps.**

Should be able to design systems, develop and check piping and instrument

- **Diagrams,**

Instruction Manuals etc.

Should be able to give instruction in safety measure and procedure for the used Refrigerants etc.



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TRAINING FOR COMPETENCE

**Unit standard : 116- : 220-223-334-355-468-700-704 and
as per SANS 10147**

- **Level A :** Basic knowledge of legislation concerning health , safety and environmental standards i.e. OHSA , PER , Montreal Protocol.
- Standards. Basic knowledge of this standard SANS 10147
- Sections: 1,2, 3, 4.1, 5.4, 5.5, 5.7.2.6, 5.10.1, 5.11, 5.12, 6.1.6 6.9.3, 6.13, 6.14
- 7.1, 7.2, 7.3, 7.4, 7.5 7.6, 7.8.1, 7.0, 7.10, 7.11, 7.12
- And ANNEX E.

- Handling of refrigerants - only knowledge
- Personnel protective equipment - how to use it.
- Leakage prevention of refrigerants - measures to prevent it
- Basic knowledge of: refrigeration process - refrigerants – refrigeration components and equipment –
- Electrical and control functions – maintenance – piping and instrumentation diagram –
- Refrigeration systems.
- Knowledge of energy conservation
- Practical experience in: installation-operation and maintenance.

- **LEVEL B:**
- **All requirements as under LEVEL A plus:**
- 4.5.1,5.2,5.6,5.7.1,5.7.2,5.7.2.2,5.7.2.3,5.7.2.4,5.7.2.5,5.7.2.7,5.7.3,5.7.4,5.7.5,
- 5.7.6.1,5.7.6.2,5.7.6.3,5.8,5.13,5.14,5.15,6.1.3,6.1.4,6.1.5,6.1.7,6.1.8,6.6,6.7,6.8
- 6.9,6.1.11,6.11.2,6.12,7.8.3.
- PLUS:
- Annex A , Annex B , Annex E , Annex F (knowledge required of the text but no requirements for carrying out calculations).
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TRAINING FOR COMPETENCE

- Handling of refrigerants and detailed knowledge of:
- Refrigeration process – refrigerants – refrigeration components – electrical and control functions –
- Maintenance – piping and instrumentation diagrams – refrigeration systems
- Knowledge of energy conservation and
- Practical experience of: installation, operation, maintenance and repair for a period of three years.

- **LEVEL C:** all above as under level A and level B
- Advanced knowledge of the entire SANS 10147
- (Including design and installation knowledge)
- Knowledge of SANS 347 and PER.