

SAQCC FIRE

D&GS TRAINING SUB COMMITTEE

COURSE CURRICULUM

COURSE	Gas Standards SANS 14520	
ORIGINATOR	Keith Norgate	
DATE	9th January 2014	
Amendment 1	28th January 2014	Outcome changes
Amendment 2	6th February 2014	Outcome changes
Issued	28th May 2014	Issued

EQUIVALENT TRAINING COURSES AVAILABLE		
TITLE	TRAINING SCHOOL	CONTACT DETAILS
SANS 14520	Fire Systems Training	011 450 4706

STATUS OF CURRICULUM - Issued

EQUIVALENT UNIT STANDARD

None

PURPOSE OF TRAINING COURSE

This training course is for learners to gain knowledge of the National standard for clean agent gasses.

Learners who complete this course will obtain a knowledge of the National standard for clean agent gasses.

LEARNING ASSUMED TO BE IN PLACE

This course assumes the learner has already proved competent in:

Gas supplier training 1,2,and 3

Commissioning and servicing of gas systems.

Installation and commissioning of fire detection and gas release panels

OUTCOMES REQUIRED

Topics Covered:

1. The scope of SANS 14520
2. Hazards of gas systems
3. Components of a gas system
4. Pipes and nozzle requirements
5. Operation of gas systems
6. Design of gas systems
7. Commissioning and testing procedures
8. Documentation requirements of gas systems

Outcome 1: Scope of SANS 14520

Learning Outcomes:

To include:

- Scope of SANS 14520
- Parts of SANS 14520
- Listed extinguishants
- Uses, limitations and compatibility of gasses
- Methods of application
- Temperature limitations

Assessment:

Learner to describe the scope of SANS 14520 as well as the pros and cons of gas suppression.

Outcome 2: Gaseous Extinguishing Hazards

Learning Outcomes:

To include:

- Hazards to personnel
- Dangers to installers

- Exposure times
- Electrical hazards

Assessment:

Learner to understand the dangers of gas suppression systems.

Outcome 3: System Components

Learning Outcomes:

To include :

- Extinguishing gas supply
- Storage containers
- Manifolded containers
- Valves and actuators
- Hoses
- Pressure reducers
- Discharge hoses
- Signage

Assessment:

Learner to demonstrate his knowledge of the various components that go to make up a gas suppression system.

Outcome 4: Distribution Pipe work

Learning Outcomes:

To include:

- Pipe grades and ratings
- Pipe fittings
- Pipe supports
- Manifold requirements
- Discharge nozzles

Assessment

Learner to understand the requirement of pipes, fittings, fixings and discharge nozzles..

Outcome 5: Detection Actuation and Control

Learning Outcomes:

To include:

- Operation devices
- Electrical operation
- Manual operation
- Control equipment

Assessment:

Learner to describe the requirements of the fire detection systems to actuate the gas system.

Outcome 6: System Design.

Learning Outcomes:

To include:

- Distribution systems types
- Pipe networks
- System flow calculations
- Design concentrations
- System pressures
- System discharge times
- Hold times
- Altitude adjustment

Assessment:

Learner to describe the requirements for a gas system design

Outcome 7: Commissioning Procedures.

Learning Outcomes:

To include:

- Review mechanical components
- Review electrical components
- Functional tests
- Commissioning requirements

Assessment:

Learner to describe the commissioning procedures for clean agent gas systems.

Outcome 8: Testing and Servicing gas systems

Learning Outcomes:

To include:

- User inspections and tests
- Servicing of gaseous systems

Assessment:

Learner to describe the testing and servicing requirements for gas suppression systems.

Outcome 9: Training and Documentation

Learning Outcomes:

To include:

- Documentation requirements for gas systems
- Training of operators

Assessment:

Learner to describe the documentation requirements and training sessions for the end users.