

SAQCC FIRE

D&GS TRAINING SUB COMMITTEE

COURSE CURRICULUM

COURSE	Safety and Gas suppression principles	
ORIGINATOR	Keith Norgate	
DATE	24th October 2014	
Amendment 1	26th January 2015	Committee changes
Amendment 2	03rd March 2015	Committee changes
Amendment 3	02nd April 2015	Issued for public comment
Issued	30th April 2015	Issued

EQUIVALENT TRAINING COURSES AVAILABLE		
TITLE	TRAINING SCHOOL	CONTACT DETAILS
Nil		

STATUS OF CURRICULUM - Issued

EQUIVALENT UNIT STANDARD

None

PURPOSE OF TRAINING COURSE

This training course is for learners to gain an introductory knowledge of gas suppression systems and the safety aspects of gas suppression systems.

Learners who complete this course will obtain a basic knowledge of gas suppression.

LEARNING ASSUMED TO BE IN PLACE

This course assumes the learner can read, write and understand English and has a basic knowledge of hand tools and pipe fitting theory.

OUTCOMES REQUIRED

Topics Covered:

1. Fire, types of fire and methods of extinguishing
2. History of gas systems and national standards applicable
3. Types Methods of application of gas suppression
4. Components of gas systems
5. Gas system pressures
6. Gas system design and extinguishing concentrations
7. Operation methods of gas systems
8. Dangers and safety procedures for installers
9. Handling and transporting gas cylinders
10. Danger and safety procedures for end users

Outcome 1: Fire and extinguishing of fires

Learning Outcomes:

To include:

- The tetrahedron of fire
- Types of fires
- Methods of extinguishment
- Comparisons with other agents
- Pros and cons of gas systems

Assessment:

Learner to describe the makeup of a fire, types of a fire and methods of extinguishing fires.

Outcome 2: History and national standards

Learning Outcomes:

To include:

- The history of gas suppression
- National standards for gas systems

Assessment:

Learner to understand the history of gas suppressants and the national standards applicable

Outcome 3: Types of gas systems

Learning Outcomes:

To include:

- Types of gas suppressants
- Manufacturers/ distributors of gas systems
- Methods of application of gas systems
- Modular systems and engineered systems

Assessment:

Learner to demonstrate knowledge of different types of gas systems available.

Outcome 4: Components of gas systems

Learning Outcomes:

To include:

- Gas cylinder types
- Valves for gas cylinders
- Actuators of gas cylinder valves
- Gas cylinder hoses
- Manifolds
- Pressure reducers
- Check valves
- Odourisers
- Pipes and supports
- Pipe fittings
- Distribution nozzles
- Distribution valves
- Pressure gauges

Assessment:

Learner to be able to identify the various gas system components.

Outcome 5: Gas system pressures. Design and extinguishing concentrations

Learning Outcomes:

To include:

- Description of different system pressures
- System pressures of the various agents
- Extinguishing concentrations versus design concentrations

Assessment:

Learner to demonstrate knowledge of different gas system pressures and concentrations.

Outcome 6: Operation of gas systems

Learning Outcomes:

To include:

- Operation devices
- Operational methods
- Manual operation
- Automatic operation

Assessment:

Learner to describe the different methods of actuating a gas system.

Outcome 7: Safety procedures for installers.

Learning Outcomes:

To include:

- Transportation of gas cylinders
- Handling and securing gas cylinders
- Handling and securing of pipes

Assessment:

Learner to describe the safety requirements for gas systems

Outcome 8: Safety requirements for end users.

Learning Outcomes:

To include:

- Dangers of gas
- Break down products of gas
- Gas discharge dangers
- Exposure times
- Safety precautions to be provided
- Clearance distances from nozzles
- Use of breathing apparatus

Assessment:

Learner to describe safety precautions to be taken with gas extinguishing systems