

SAQCC FIRE

D&GS TRAINING SUB COMMITTEE

COURSE CURRICULUM

COURSE	Cabling and Conduit	
ORIGINATOR	K Norgate	
DATE	23rd August 2013	
Amendment 1	5th October 2013	Technical changes - Issued
Amendment 2	6th October 2013	Word change

EQUIVALENT TRAINING COURSES AVAILABLE		
TITLE	TRAINING SCHOOL	CONTACT DETAILS
None		

STATUS OF CURRICULUM - Issued

EQUIVALENT UNIT STANDARD

Unit standard 244328 covers cabling and its application but is weak in terms of cables used for fire detection.

PURPOSE OF TRAINING COURSE

This training course is provided for persons requiring knowledge of cables and their application for fire alarm and detection systems.

Types of support methods of cables is presented.

Learners who have completed this course will have a thorough working knowledge of the various types of cables and cable and conduit used for fire detection and understand how to install cables and conduit.

Competency levels should be tested with as much practical exercises as possible minimizing the amount of written tests.

LEARNING ASSUMED TO BE IN PLACE

This course assumes the learner is already proved competent in:
Workshop practice and hand tools.

OUTCOMES REQUIRED

Topics Covered:

1. Cabling
2. Cable support methods

1. CABLES AND CABLING

Outcome 1. Identify different cable types

Learning Outcomes:

The learner should be able to:

Identify different cable types to include:

- Ripcord
- FR20
- PH30
- PH120
- Steel Wire Armoured
- Coaxial
- Telephone cable
- Electrical cables
- Communication cables Cat 5, mylar etc
- Linear heat cable
- Fibre optic cable

Assessment:

The learner should be able to identify:

- The different cable types
- The amount of cores/pairs in the cable
- Colour coding of cores
- The screen wire
- Explain the purpose of the screen wire

Outcome 2. Installation of cables

Learning Outcomes:

The learner should be able to:

- Determine safe cable routes
- Avoidance of electrical cables
- Separation of cables from other services
- Know how to run cables on a tray
- Run cables on cable ladders
- Run cables in trunking
- Run cables in conduit
- Run cables through walls
- Run cables through floors
- Bury cables in the structure of the building
- Pulling cable off of a drum
- Bend radius of cables

Assessment:

The learner should be able to identify:

- Where the best cable routes are
- Use of cable risers
- Different types of cable protection
- Use of draw wires
- Correct method of pulling of cables

Outcome 3. A class and B class wiring

Learning Outcomes:

The learner should be able to:

- Identify the difference of "A" class wiring and "B" class wiring
- Know the difference between zones and loops
- Understand the separation of the outgoing leg and the return leg of the cable

Assessment:

The learner should be able to identify:

- A class and B class circuits
- The separation of outgoing and return cables.
- Loops and zones

Outcome 4. Cable schedules and Labelling of cables

Learning Outcomes:

The learner should be able to:

- Read different cable schedules and cable drawings
- Understand the importance of labelling cables
- Determine the different methods of labelling and identifying cables
- Understand cable numbering

Assessment:

The learner should be able to identify:

- Cable schedules and drawings
- Cable numbering systems

Outcome 5. Cutting and stripping of cables

Learning Outcomes:

The learner should be able to:

- Understand the correct tools for cutting of cables
- Understand the correct tools for stripping of the cables
- Cutting cables to the correct length

Assessment:

The learner should be able to identify:

- The correct tools for cutting of cables
- Safe methods of cable cutting
- Correct method of stripping of insulation from cables

The learner shall demonstrate:

- Correct cutting of cables
- Correct method of stripping cables.
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2. CABLE SUPPORT METHODS

Outcome 1. Identifying cable support methods

Learning Outcomes:

The learner should be able to:

- Identify PVC conduit and trunking
- Identify galvanised steel conduit
- Identify steel trunking

- Identify cable trays, ladders, baskets
- Identifying cable clips and cleats

Assessment:

The learner should be able to identify:

- The different types of conduit
- The conduit fittings, bends, T's, couplings and outlet boxes
- Loading limitation of conduits trays and trunking

The learner shall demonstrate:

- Bending of steel and PVC conduits
- Joining conduit and fittings

Outcome 2. Fixing materials

Learning Outcomes:

The learner should be able to identify:

- Concrete fixings
- Brick fixings
- Dry wall fixings
- Ceiling fixings
- Conduit fixings
- Clips for steel beams
- Different drill bit types
- Correct drill sizing for the fixing

Assessment:

The learner should be able to identify:

- The correct fixing for the correct building construction
- The correct size and type of drill bit for the fixing