

COSVR256 - SQA UNIT Code DY0X 04

Install lightning conductor systems



Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing and installing lightning conductor systems to the structural fabric

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Performance criteria

- You must be able to:*
- P1 interpret the given information relating to the work and resources to confirm its relevance
 - P2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
 - P3 select the required quantity and quality of resources for the methods of work
 - P4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
 - P5 comply with the given contract information to carry out the work efficiently to the required specification
 - P6 complete the work within the allocated time, in accordance with the programme of work

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Knowledge and understanding

You need to know and understand:

Performance Criteria 1

Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

Performance Criteria 2

Safe work practices

You need to know and understand:

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how **personal protective equipment (PPE)** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K9 the characteristics, quality, uses, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

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You need to know and understand:

Performance Criteria 5

Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how **maintenance** of tools and equipment is carried out

You need to know and understand:

Performance Criteria 6

Allocated time

- K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

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Additional Information

Scope/range related to performance criteria

Performance Criteria 1

- 1 interpretation of drawings, method statements, risk assessments specifications, schedules and manufacturers' information related to the work to be carried out

Performance Criteria 2

- 2 avoidance of risk by following the given information relating to the following
 - 2.1 methods of work
 - 2.2 safe use of personal protective equipment (PPE)
 - 2.3 safe use of access equipment
 - 2.4 safe use and storage of materials, tools and equipment

Performance Criteria 3

- 3 selection of resources associated with own work
 - 3.1 materials, components and fixings
 - 3.2 tools and equipment

Performance Criteria 4

- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with legislation

Performance Criteria 5

- 7 demonstration of work skills to clean, dress, measure, form, cut, drill, plug, drive, position, clamp, bond, secure, weld and test
- 8 use and maintain hand tools, powered tools, ancillary equipment and access equipment
- 9 install components to the structural fabric to given working instructions, to include
 - 9.1 air terminations
 - 9.2 down conductors
 - 9.3 earthing
 - 9.4 bonding

Performance Criteria 6

- 10 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

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Scope/range related to knowledge and understanding

Disposal of waste

- 1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
 - 2.1 fires, spillages, injuries
 - 2.2 emergencies relating to occupational activities

Hazards

- 3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Information

- 4 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, standards, regulations and official guidance associated with lightning conductor work

Legislation and official guidance

- 5 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting

Maintenance

- 6 operative care of hand tools, powered tools, ancillary equipment and access equipment

Methods of work

- 7 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
 - 7.1 identify types of structure and the structural fabric
 - 7.2 confirm the means of access to carry out the work
 - 7.3 confirm the type of lightning conductor components and how they are to be installed
 - 7.4 prepare the component parts to be installed
 - 7.5 measure, position, fit and secure the components to specification and requirements
 - 7.6 visually inspect fall protection equipment
 - 7.7 use hand tools, powered tools, test instruments and ancillary equipment
 - 7.8 work at height
 - 7.9 use access equipment
- 8 team work and communication
- 9 needs of other occupations associated with installing lightning conductor systems

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Personal protective equipment (PPE)

10 occupational use, types, purpose of each type and work situations

Problems

11 those arising from information, resources and methods of work

11.1 own authority to rectify

11.2 organisational reporting procedures

Programme

12 types of progress charts, timetables and estimated times

13 organisational procedures for reporting circumstances which will affect the work programme

Protect work

14 protect work against damage from general workplace activities, other occupations and adverse weather conditions

Resources

15 materials, components and equipment relating to types, quantity, quality, sizes and sustainability of standard and/or specialist

15.1 air terminations: stainless metals (plain, sheathed, coated); rods, tapes, cables, clamps, bonds, fixings

15.2 earth terminations: copper and copper clad; rods, tapes, cables, clamps, bonds, fixings, welding materials, riveted joints, earth pits; plastics, adhesives, inhibiting pastes, adhesive tapes, screws, plugs, nuts, bolts

15.3 hand tools, powered tools and ancillary equipment

16 methods of calculating quantity, length, area and wastage associated with the method/procedure to install lightning conductor systems

Security procedures

17 site, workplace, company and operative

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