

Overview

"This standard is for inspecting, testing, and reporting on the operational integrity of lightning protection systems, interpreting information, adopting safe, healthy, and environmentally responsible work practices, selecting and using materials, components, tools and equipment.

This standard is for people working in the occupational area of Lightning Protection and can be used by operatives, supervisors and managers."

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 and healthy 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

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

K4 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 the accident reporting procedures and who is responsible for making the report

K9 why, when, and how health and safety control equipment should be used

K10 how to comply with environmentally responsible work practices to meet current legislation and official guidance

Performance Criteria 3

Selection of resources

K11 the characteristics, quality, uses, sustainability, limitations and defects associated with the resources and how defects should be rectified

K12 how the resources should be used and how any problems associated with the resources are reported

K13 the organisational procedures to select resources, why they have been developed and how they are used

K14 the hazards associated with the resources and methods of work and how they are overcome

Performance Criteria 4

Minimise the risk of damage

K15 how to protect work from damage and the purpose of protection

K16 why disposal of waste should be carried out safely and how it is achieved

Performance Criteria 5

Meet the contract specification

Inspect and test lighting protection systems

K17 how methods of work, to meet the specification, are carried out and problems reported

K18 how maintenance of tools and equipment is carried out

Performance Criteria 6

Allocated time

K19 what the programme is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

Scope/range related to performance criteria

Performance Criteria 1

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

Performance Criteria 2

2 avoid risk by following the given information relating to:

2.1 methods of work

2.2 safe use of health and safety control equipment

2.3 safe use of access equipment

2.4 safe use, storage and handling of materials, tools and equipment

2.5 specific risks to health

Performance Criteria 3

3 select resources associated with own work

3.1 materials, components and fixings

3.2 tools and equipment

Performance Criteria 4

4 protect the work and its surrounding area from damage

5 maintain a clear and tidy workspace

6 dispose of waste in accordance with current legislation

Performance Criteria 5

7 demonstrate work skills to inspect, test, measure, calibrate, calculate, record and report, to meet the specification

8 use, check and maintain hand tools and test instruments in accordance with manufacturer's instructions

9 inspect the components of lightning protection systems in the following ways to given working instructions

9.1 visual

9.2 detailed

Performance Criteria 6

10 complete own work within the estimated, allocated time to meet the needs of other occupations or client

Scope/range related to knowledge and understanding

Disposal of waste

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

Emergencies

2 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

Health and safety control equipment

4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment

4.1 collective protective measures

4.2 personal protective equipment (PPE)

Information

5 lightning protection system layout drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, earth records, regulations and official guidance associated with lightning conductor work

Legislation and official guidance

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

Maintenance

7 care of hand tools, test instruments

Methods of work

8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method and area of work and materials used to:

8.1 identify the lightning protection system (including surge protection)

8.2 confirm the means of access to carry out the work

8.3 survey and carry out visual inspection of the lightning protection system

Inspect and test lightning protection systems

- 8.4 identify the geology (nature of soil, special earthing arrangements)
- 8.5 identify type and position of earth electrodes
- 8.6 use test instruments
- 8.7 carry out tests for continuity, resistances, impedance
- 8.8 measure earth resistance using the dead earth, fall of potential and continuity method of tests
- 8.9 identify deterioration and damage
- 8.10 identify alterations, additions, and repairs to the system
- 8.11 visually inspect fall protection equipment
- 8.12 ensure test instruments and measuring equipment is calibrated
- 8.13 work with, around and in close proximity to plant and machinery
- 8.14 use hand tools and test instruments
- 8.15 complete a detailed report including earth records and lightning protection system drawings
- 9 the importance of teamwork and communication
- 10 needs of other occupations associated with the inspection and testing of lightning protection systems
- 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 the sustainability of standard or specialist:
 - 15.1 test instruments and equipment
 - 15.2 measuring instruments
 - 15.3 hand tools
 - 16 confirm resources and materials conform with the specification

Inspect and test lightning protection systems

17 methods of calculating quantity, length, area and wastage associated with the method and procedure to inspect and test lightning protection systems

Security procedures

18 site, workplace, company, operative and vehicles

Inspect and test lighting protection systems

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Relevant Occupations Engineering Technicians

Suite Accessing Operations and Rigging (Construction)

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