ECIICESE07

Dismantle electrical equipment and systems

Overview

This standard is about dismantling electrical equipment and systems.
You will need to be able dismantle electrical equipment and systems. You will need to ensure that the system is safe prior to dismantling by discharging any residual or stored energy and substances and, carrying out isolations and disconnections using approved methods, whilst adhering to health, safety and environmental legislation, regulations and safe working practices.
In the context of this standard, your responsibility is to interpret and work within given specifications, selecting methods and techniques to achieve the best possible result. In some cases, you may still be expected to refer to others for final authorisation, even though you remain responsible for identifying and implementing decisions.
Who this standard is for:
Electrical installers and others that install electrical systems and equipment

Performance criteria

You must be able to:

1. work safely at all times, complying with health, safety, environmental and other relevant legislation, regulations, guidelines and local rules or procedures
2. ensure that the **work environment**, material, tools and equipment are suitably prepared for the work activities to be undertaken
3. obtain and interpret the required information and specifications using drawings and other relevant sources
4. establish what is being dismantled and match mark, if required, for reassembly
5. identify the correct means of **electrical isolation** or **mechanical isolation** of any service/supply/plant/equipment in your area that poses a hazard to your safety and carry out isolation and lock-off
6. prove-dead any isolated supplies
7. ensure that any stored energy, electrostatic energy or dangerous substances are controlled and discharged safely and correctly in accordance with HSE requirements
8. ensure appropriate temporary support systems are in place, if required, for the task in hand
9. carry out dismantling of the equipment, system, components, cabling systems and cable containment to the specified level using the correct tools and techniques
10. take precautions to ensure the equipment, system and components are protected from potential ingress and potential damage from external influences and the environment
11. For the electrical components that are dismantled:

* identify and record any that need replacing
* dispose of any that are now redundant
* correctly record, label and store those for reuse

1. check that the dismantling is complete and to the required specification, then follow the required handover procedures
2. ensure the **work area is reinstated**
3. deal promptly and effectively with problems within your control and report those that have been and those that cannot be solved

Knowledge and understanding

You need to know and understand:

1. relevant legislative, regulatory and local requirements or procedures and safe working practices including your responsibilities with regards to reporting lines and procedures
2. preparation and reinstatement requirements in respect of the work area, material, and equipment, and the possible consequences of incorrect actions in these areas
3. relevant engineering drawings, related specifications, quality standards and manufacturers' information
4. how to ensure any stored energy, electrostatic energy or dangerous substances are controlled and discharged safely in accordance with HSE requirements
5. safe isolation, lock-off and prove-dead procedures for reasons of safe working
6. techniques for dismantling including:
7. how to check the condition of removed components and equipment and what to do if damage or defects are found
8. how to label and store components and equipment for reuse
9. the correct disposal of waste, redundant and obsolete equipment
10. the techniques used for ingress protection, foreign material exclusion and protection against damage and the environment, and the consequences of these
11. how to check that final dismantling meets requirements and the related handover procedure(s)
12. the correct use of relevant tools and equipment and your individual responsibility for the use, care and security of those you use

Glossary

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A **Work environment** could include:

- engineering construction sites
- controlled operations
- offshore installations
- maintenance sites
- nuclear sites
- repair sites

A **Work environment** may be in open or restricted spaces:

- at height
- confined spaces
- control rooms
- controlled operational and offshore installations
- designated work areas
- potentially explosive atmospheres
- existing plants and structures
- fabrication workshops
- in plant rooms
- inside structures, systems and plant
- on access structures
- on open structures
- onshore and offshore installations
- shafts
- shipyards

- tunnels

Work area is reinstated could include:

- returning the work area to a safe condition
- removing barriers
- sweeping up
- correctly and ethically disposing of waste materials
- storing re-usable materials, consumables and equipment in accordance with appropriate procedures
- completing all necessary documentation

Electrical isolation could include:

- getting appropriate authorisation including Permit to Work
- identifying the correct isolations and disconnections required
- correct sequence of isolations and disconnections
- proving-dead of the electrical supply and implications of GS38
- safety methods for maintaining isolations and disconnections

Mechanical isolation could include:

- getting appropriate authorisation including Permit to Work
- identifying the correct isolations and disconnections required
- correct sequence of isolations and disconnections
- closing a valve or fitting blanks for a service or supply
- checking the mechanical item cannot be moved or move itself
- safety methods for maintaining isolations and disconnections

Cabling systems:

A cabling system is a complete system of cabling and associated hardware, which provides a comprehensive system infrastructure which serves a wide range of uses, such as process control and data or power transmission

Cable containment:

Cable containment systems are used to organise and store cables within a system installation and can include conduit, trunking, ladder, tray and basket systems

Enclosures:

An electrical enclosure is a cabinet for electrical or electronic equipment and provides protection to equipment users and also protects the contents from the environment

Engineering drawings and related specifications:

An engineering drawing is a type of technical drawing that is used to convey information about an item for construction, maintenance or fault-finding purposes

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