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## Overview

This standard is about positioning and installing instrumentation and control equipment and systems in engineering construction plant.

You will need to be able to install and position instrumentation and control equipment and systems by interpreting engineering drawings and specifications, and correctly use approved tools 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 approved 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**

This standard is for instrumentation and control maintenance technicians.

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## 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\*\***, materials, tools and equipment are suitably prepared for the work activities to be undertaken
  3. follow all relevant drawings and specifications for the installation being carried out
  4. ensure any necessary temporary support systems are in place
  5. position, install and secure the instrumentation and control equipment and components in the correct position in accordance with the relevant specification and instructions
  6. undertake ingress protection procedures, as appropriate
  7. ensure that all necessary connections to the equipment are complete
  8. ensure that all instrumentation and control equipment and components are free from damage, as appropriate
  9. ensure that the installation is protected from the environment and potential damage
  10. check that the installation is complete and to the required specification, then follow the required handover procedures
  11. **\*\*reinstate the work area\*\***
  12. 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 regard to reporting lines and procedures 2. preparation and reinstatement requirements in respect of the work area, materials, tools and equipment, and the possible consequences of incorrect actions in these areas 3. relevant engineering drawings, related specifications, quality instructions and manufacturers' information 4. instrumentation and control installation techniques and procedures including how to ensure relevant temporary support systems are put into place 5. the importance of correct installation and the related consequences of incorrect installation 6. the tools used for positioning and installing instrumentation and control systems and components 7. how to check the condition of the installed equipment or system, that it is free from damage and what to do if damage is found 8. the techniques used for ingress protection and protection against damage, and the environment and the importance of these 9. how to check that the final installation meets requirements and the related handover procedure(s) 10. the tools used and your responsibilities for ensuring the care and security of them

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**Scope/range****Work environment**

This could include:

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

Work environments may be open or restricted spaces:

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

**Reinstate the work area**

This term could include:

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

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