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## Overview

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

You will need to be able to position and install mechanical equipment and systems, following relevant engineering drawings and specifications whilst adhering to health, safety and environmental legislation, regulations and safe working practices.

In the context of this standard, your responsibility is to work within detailed specifications and clearly defined procedures. In some cases, you may still be expected to refer to others for final authorisations, even though you remain responsible for identifying and implementing decisions.

### **This standard is for**

This standard is for mechanical fitters and mechanical maintenance technicians.

## 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 appropriate temporary support systems are put in place for the task in hand
5. position, install and secure mechanical components and equipment in their correct positions in accordance with the relevant specification and instructions
6. undertake foreign material exclusion procedures, as appropriate
7. ensure all required connections to the installed equipment are complete
8. ensure that all relevant mechanical components and equipment 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 work area, tools, 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. mechanical installation techniques and procedures including how to ensure temporary support systems are put in place, when required
5. the importance of correct installation and the related consequences of incorrect installation
6. the tools used for positioning and installing mechanical equipment, 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 foreign material exclusion and protection against damage and the environment, and the importance of these
9. how to check that final installation meets requirements and the related handover procedure(s)
10. tool and equipment control: the correct use of relevant tools and equipment and your individual responsibility for the use, care and security of those you use

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## Scope/range

### Work environment

Typical work environments 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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[Links to other NOS](#)    Maintaining Plant and Systems – Mechanical

<b>Developed by</b>	ECITB
<b>Version Number</b>	3
<b>Date Approved</b>	10 Dec 2020
<b>Indicative Review Date</b>	10 Dec 2024
<b>Validity</b>	Current
<b>Status</b>	Original
<b>Originating Organisation</b>	ECITB
<b>Original URN</b>	NIPSMECH8ECRS6.01
<b>Relevant Occupations</b>	Mechanical Fitter, Mechanical Maintenance Technician
<b>Suite</b>	Installing Plant and Systems - Mechanical, Maintaining Plant and Systems - Mechanical
<b>Keywords</b>	engineering; construction; mechanical; maintenance; position and install; mechanical plant, equipment and systems; foreign material exclusion; engineering construction; securing mechanical components