

Overview

This standard is about positioning and erecting steel elements and assemblies in engineering construction.

You will need to be able to position, install and secure the steel assemblies and components in accordance with specification, check the installation is complete and that all components are free from damage whilst adhering to Health and safety legislation, regulations and safe working practices.

In the context of this standard, your responsibility is to interpret and work within given specifications, selecting techniques and making variations 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 steel erectors

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** and materials, are suitably prepared for the work activities to be undertaken
3. assess the **work circumstances** and the related technical implications in relation to the task specification and drawings
4. identify, select and conduct pre-use checks on the tools and equipment for the installation operations
5. attach the appropriate handling equipment securely to the construction elements or assemblies, using approved methods to allow for ease of alignment and connection
6. confirm that the prepared load is secure before moving
7. use approved installation methods and techniques to include:
 - slinging
 - lifting
 - signalling
8. position the moving equipment so that the structural elements or assemblies are appropriately aligned and supported
9. position, install and secure the structural steelwork elements and assemblies as specified securely fix any necessary temporary support facilities
10. release the load safely in its intended final location
11. ensure that all necessary connections are complete
12. check the installation is complete and that all components are free from damage
13. follow quality control documentation procedures
14. take appropriate measures to protect the finished construction
15. **reinstate the work area**
16. deal promptly and effectively with problems 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
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. the types and application of construction elements and assemblies
4. the methods of construction element identification and orientation before assembly
5. the approved installation methods and techniques used to align position and connect construction elements & assemblies
6. methods and techniques for:
 - slinging
 - lifting
 - signalling
7. types of equipment used for holding loads in the required positions
8. methods of providing temporary support during installation and the related limiting factors
9. related quality control documentation procedures
10. tool, equipment and drawing control: the correct use of relevant tools, equipment and drawings and your individual responsibility for the use, care and security of those you use

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

Work circumstances

In the context of this standard, assessing the work circumstances means considering:

- whether or not the site is operational
- the proximity to live plant
- if multiple activities are being undertaken in the same location
- the presence of flammable or explosive atmospheres
- the status of weather conditions
- the proximity to existing structures

Reinstate the work area

This term could include:

- removing barriers
- maintain good housekeeping practices
- correctly disposal of waste materials in accordance with appropriate procedures
- storage of reusable materials, consumables and equipment in accordance with appropriate procedures
- completion of all necessary documentation

Position and erect steel structural elements and assemblies

Developed by	ECITB
Version Number	3
Date Approved	June 2020
Indicative Review Date	November 2024
Validity	Current
Status	Original
Originating Organisation	Engineering Construction Industry Training Board
Original URN	NE03ECSR6.01
Relevant Occupations	Steel Erector
Suite	Constructing Capital Plant Steel Structures - Erecting
Keywords	erecting; steel structures; lifting; position; structural steel loads; prepare; erect; engineering; construction; cranes;