

STEEL CONSTRUCTION

LEARNING OUTCOME

Describe the requirements of the Work Health and Safety legislation and code of practice for steel construction.

ASSESSMENT CRITERIA

- Describe the statutory and minimum requirements relating to steel construction.
- List the hazards that are associated with the processes of steel construction.
- Describe the control measures that are available to minimise or remove the risk associated with these hazards.

REFERENCES

- Steel Construction Code of Practice 2004 (preserved Qld)

ATTACHMENTS

[Steel Construction Code of Practice 2004](#)

STEEL CONSTRUCTION

The purpose of this session in Steel Construction is to provide practical guidance to participants in the obligations of principal contractors, persons conducting a business or undertaking (PCBU), workers and others on meeting the requirements of the Work Health and Safety Act 2011 with respect to the safe erection of structural steelwork.

The information in these student notes is primarily for those directly involved in the erection of structural steel buildings, including PCBU's, those in supervisory positions, clients and their professional design advisers such as engineers and architects, as well as designers and manufacturers of components.

WHAT IS STEEL CONSTRUCTION WORK?

Steel construction is any work to erect assembled portions and single components of structural steel, such as:

- columns;
- beams;
- bracing;
- rafters;
- purlins;
- girts;
- bridging and fly bracing;
- trusses; and
- other related steelwork for example, free standing structures

STATUTORY REQUIREMENTS

Under section 19 of the Work Health and Safety Act 2011 (WHS Act), a person conducting a business or undertaking must ensure, so far as is reasonably practicable, the health and safety of workers and others at the workplace. This includes providing a safe work environment, safe plant and structures and safe systems of work.

Section 17 of the WHS Act requires health and safety risks arising from the work to be effectively managed by eliminating or minimising them so far as is reasonably practicable. Part 3.1 of the Work Health and Safety Regulation 2011 sets out the requirements for duty holders to manage risks, and establishes the hierarchy of control measures that must be followed (section 36).

PLANNING

Detailed planning is necessary for the safe erection of structural steel buildings. The structural engineer should include details of how the building has been designed to be erected and the need during the erection to ensure safe working conditions for those engaged in each stage.

Failure to plan and design for safety at the earliest stages may encourage or lead to unsafe practices on site and to structural instability during erection. To ensure that the design will not present any problems during construction, the structural engineer should consult with an erector as to the practicability of the design being constructed safely.

The health and safety of workers and members of the public is an integral part of the erection process. At the planning stage, the structural engineer, PCBU, principal contractor and the erector should agree on the following:

- the necessary planning to be carried out to enable safe working practices to be employed at all stages of erection;
- the plant, equipment and gear to be used in the erection process should be identified and be suitable for the intended use;
- the training of riggers. Training should include but not be limited to the identification, use and maintenance of suitable personal safety equipment;
- the development of a post-fall recovery plan for prompt recovery of riggers in the event of a fall. The rescue support should be provided in a timely manner to avoid long periods of post-fall suspension;
- the provision and location of welding screens, fire extinguishers, oxygen and acetylene bottle trolleys etc;
- the provision of temporary access that will be required for the erection of the building.

HAZARDS

There are a range of general hazards associated with the erection of structural steel. These include:

- Falling objects
- Falls from heights
- Collapse of structure
- Collapse of cranes.

These issues along with guidance on control measures are discussed in the attached [Steel Construction Code of Practice 2004](#).

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