

Domain

CARPENTRY

Title:

Construct and install straight flight stairs

Level: 4

Credits: 10

Purpose

This unit standard specifies the competencies required to construct and install straight flight stairs. It includes planning and preparing for work, identifying and selecting different types and designs of staircases, manufacturing staircase components, assembling strings and newels of wooden stairs, installing treads and risers of wooden stairs, assembling and install landings of wooden stairs, installing different steel staircases, installing prefabricated concrete staircases, installing handrail and balustrade of staircases and conducting finishing process of different types of stairs.

This unit standard is intended for those who work as carpenters.

Special Notes

1. Entry information:

Prerequisite:

- *1157-Demonstrate basic knowledge of workplace health and safety or demonstrated equivalent knowledge and skills.*

2. To demonstrate competence, at a minimum, evidence is required of constructing and installing one wooden, steel and concrete prefabricated straight flight staircases.

3. Assessment evidence may be collected from a real workplace, or simulated real workplace in which carpentry operations are carried out.

4. Tools, equipment and accessories may include but are not limited to measuring tools, hammers, spirit level, squares, chisels, hand saws, trestles, power saws, power drills, grinder, welding machine, screw drivers, power planer, nail gun, air compressors and hoses, clamps, set squares, template boards, router, wood lathe, power sander, fence and stairs clips.

5. Materials and fixatives may include but are not limited to timber, medium density fibreboard (mdf), plywood, steel beams, tubes, sheet metal, plastics, dowels, nailing, glue and wedging, glue blocks, screws, bolts and nuts, coach screws, hand rails, round threaded bars and wedges.

6. Different types of staircases designs and materials includes but not limited to wooden, steel, bricks, stone, rock, concrete and prefabricated concrete staircases.

7. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' and company guidelines, instructions, and reasonable flat rate time.
8. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act, No.11, 2007 as amended;
 - Occupational Health and Safety Regulations No. 18, 1997 and all subsequent amendments.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority on www.namqa.org and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Plan and prepare for work

Range

Planning and preparation include but are not limited to worksite inspection, equipment and materials defects identification, assessment of conditions and hazards and determination of work requirements.

Performance criteria

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied.
- 1.2 Safety requirements are followed in accordance with safety plans and policies.
- 1.3 Sign and barricade requirements are identified and implemented in line with workplace procedures.
- 1.4 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement of work.
- 1.5 Material quantity requirements are calculated in line with plans and specifications.
- 1.6 Materials appropriate to the work application are identified, obtained, prepared safely handled and located ready for use.
- 1.7 Environmental protection requirements are identified and applied in line with environmental plans and regulatory obligations.

Element 2: Identify and select designs of staircases

Performance criteria

- 2.1 Different types and designs of staircases are identified.
- 2.2 Different types and designs of staircases are selected for given applications.

Element 3: Manufacture staircase components.

Performance criteria

- 3.1 Wood selection explained.
- 3.2 Materials are selected and prepared to design requirements.
- 3.3 Cutting list is prepared in line with specifications.
- 3.4 Templates are produced according to specifications.
- 3.5 Templates are used in the manufacturing process in line with specifications.
- 3.6 Materials are marked off, cut and planed to size in line with specifications.
- 3.7 Mouldings and joints are prepared according to specifications.
- 3.8 Methods for assembling and fixing are determined in accordance with staircase design and location.

Element 4: Assemble strings and newels of wooden stairs

Performance criteria

- 4.1 Position of stairs is identified.
- 4.2 Floor level is checked and adjustments made where applicable to foot of newels and strings.
- 4.3 Strings and newels are assembled to design and fixed to specification.
- 4.4 Strings to be fixed to walls are temporarily supported and fixed in position to specification.

Element 5: Install treads and risers of wooden stairs

Performance criteria

- 5.1 Strings and newels are braced in vertical position.
- 5.2 Treads and risers above newels are fitted and fixed.

- 5.3 Intermediate treads and risers are fitted and wedged according to specification.
- 5.4 Flight is checked for true and square.
- 5.5 Glue blocks of wooded stairs are fitted to treads and risers to specified locations.

Element 6: Assemble and install landings of wooden stairs

Performance criteria

- 6.1 Bearers and joints are fitted and fixed to level to specification for fixing.
- 6.2 Nosing and flooring are fitted and fixed to form landing to specified finish.
- 6.3 Fascia is fitted and fixed to landing to specification for finish.

Element 7: Install different steel staircases

Performance criteria

- 7.1 Location of stair is checked and prepared for installation.
- 7.2 Staircase is positioned in place ensuring that it is level and plumb.
- 7.3 Installation of staircase is conducted according to standard procedures and specifications.
- 7.4 Inspection is conducted against specifications.

Element 8: Install prefabricated concrete staircases

Performance criteria

- 8.1 Location of stair is checked and prepared for installation.
- 8.2 Staircase is positioned in place ensuring that it is level and plumb.
- 8.3 Installation of staircase is conducted according to standard procedures and specifications.
- 8.4 Inspection is conducted against specifications.

Element 9: Install handrail and balustrade of staircases

Performance criteria

- 9.1 Balustrades and intermediate railing and handrails are fitted to form stair balustrade to specification.

- 9.2 Balusters are checked to ensure fitted plumb.
- 9.3 Newels are checked prior to final fixing to ensure plumb.
- 9.4 Hand railings to wall are fitted and fixed in accordance with specifications.

Element 10: Conduct finishing process of different types of stairs

Performance criteria

- 10.1 Finishing products are identified and selected.
- 10.2 Different finishing methods are applied.

Registration Data

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