

Supervise engineering fabrication operations

Level 5

Credits 30

Purpose This unit standard is for supervisors with responsibility for engineering fabrication operations, preparation, personnel, machines, and inspection of products. They would typically have had training in workplace supervision and will have worked in a leading hand or in a similar role in the engineering fabrication industry.

People credited with this unit standard are able to: prepare for engineering fabrication operations as a supervisor; supervise personnel in the performance of engineering fabrication operations; and inspect and document completion of engineering fabrication operations.

Subfield Mechanical Engineering

Domain Engineering - Fabrication

Status Registered

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Entry information Recommended: National Certificate in Engineering - Fabrication (Level 4) with strands in Heavy Fabrication, Light Fabrication, and Steel Construction [Ref: 0122], or demonstrate equivalent knowledge and skills.

Replacement information This unit standard replaced unit standard 2426, unit standard 2427, unit standard 2428, and unit standard 2429.

Accreditation Evaluation of documentation and visit by NZQA and industry.

Standard setting body (SSB) Competenz

Accreditation and Moderation Action Plan (AMAP) reference 0013

This AMAP can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Special notes

1 References

Health and Safety in Employment Act 1992.

Accident Compensation Corporation and Department of Labour. *Metal Industry Guidelines for Safe Work*. Wellington: ACC. Latest edition available at:

<http://www.acc.co.nz>.

2 Definitions

Fabrication operations – may typically involve laying out and marking off, cutting, forming and shaping, assembly, joining, and installation of structural steel.

Job – production of an engineering fabrication in accordance with a job specification, requires time and planning to complete, and for which time and resources are tracked.

Job specifications – instructions relevant to the safe completion of the specific task, such as technical specifications, assembly instructions, drawings, parts lists, standards, codes of practice, test and commissioning procedures, and verbal instructions.

Safety guidelines – guidelines for the safe operation of machinery and tools, such as those listed in the references, as well as guidelines for specific machines in workshops.

Worksite procedures – operational procedures put in place by the candidate's employer. These include site safety procedures, equipment operating procedures, job procedures, quality assurance, and procedures for the handling and disposal of materials and waste.

3 Assessment

For assessment purposes, competence should be established on at least three jobs, involving at least three operations. A job may be part of a larger project.

Elements and performance criteria

Element 1

Prepare for engineering fabrication operations as a supervisor.

Performance criteria

1.1 Job requirements, job specifications, and drawings are assembled, analysed, and confirmed or modified in accordance with worksite procedures.

1.2 Details of engineering fabrication are planned in accordance with worksite procedures.

Range details may include but are not limited to – pattern developments; materials; resources; personnel; timing; availability of tools and machines; machine setting; finishing; operator training; certifications; availability of Computer Numerical Control programs; sequencing and optimisation of fabrication processes; lifting equipment; manufacture of jigs and templates; product storage.

- 1.3 Potential hazards are identified and their management planned in accordance with worksite procedures and safety guidelines.
- 1.4 Inspection procedures are established in accordance with job specifications and worksite procedures.
- 1.5 Details of the engineering fabrication operations required to complete the job are communicated to others in accordance with worksite procedures.

Element 2

Supervise personnel in the performance of engineering fabrication operations.

Performance criteria

- 2.1 Personnel is instructed and supervised to ensure that worksite procedures and safety guidelines are followed.
- 2.2 Supervision of personnel ensures that fabrications are produced to the required standard and on time in accordance with job specifications.
- 2.3 Feedback is provided to personnel where problems are identified and adjustments required.

Element 3

Inspect and document completion of engineering fabrication operations.

Performance criteria

- 3.1 Engineering fabrications are inspected for compliance with job specifications, and arrangements are made for corrections or re-fabrication, if required, in accordance with worksite procedures.
- 3.2 Completion of engineering fabrication operations are documented and communicated to relevant parties in accordance with worksite procedures.

Please note

Providers must be accredited by NZQA, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by NZQA before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact Competenz info@competenz.org.nz if you wish to suggest changes to the content of this unit standard.