

Supervise welding operations

Level 5

Credits 20

Purpose People credited with this unit standard are able to: plan welding operations; supervise welding operations; and control weld quality.

Subfield Mechanical Engineering

Domain Welding

Status Registered

Status date 4 April 2001

Date version published 20 April 2006

Planned review date 31 December 2007

Entry information Open.

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/site/framework/search.html>.

Special notes

- 1 This unit standard is for people seeking the *International Welding Specialist* qualification from the International Institute of Welding (IIW). Details are available from the Heavy Engineering Research Association, P O Box 76 134, Manukau City.
- 2 Codes and standards relevant to this unit standard are:
 - a AS/NZS 1554.1:2004, *Structural steel welding – Welding of steel structures*.
 - b *The 2004 ASME Boiler and Pressure Vessel Code*.
 - c ISO 15607:2003, *Specification and qualification of welding procedures for metallic materials – General rules*.
- 3 A code of safe practice applicable to this unit standard is: *WTIA Technical Note No. 7: Health and Safety in Welding*. Silverwater NSW: Welding Technology Institute of Australia, 2004. Available from the Heavy Engineering Research Association, PO Box 76 134, Manukau City.

- 4 *Company procedures* refer to documented procedures for the worksite.
- 5 *Design specification* refers to client's instructions, drawings, and/or contract.

Elements and performance criteria

Element 1

Plan welding operations.

Performance criteria

- 1.1 Welding requirements determined are in accordance with contract and/or design specification.
- Range welding requirements include but are not limited to – the materials of construction, weld preparations and weld quality, qualification of procedures and personnel, fabrication and inspection requirements.
- 1.2 Material and consumable requirements are verified as meeting the requirements for the welded fabrication.
- Range consumable requirements include but are not limited to – certification, identification, storage, handling, traceability.
- 1.3 Processes and procedures are selected for the planned production.
- Range selection of welding process, equipment, jigs and fixtures, preparation of work instructions, development of welding and assembly sequences.
- 1.4 Welding procedures and personnel are qualified to the codes and standards specified in the contract.
- Range qualification includes but is not limited to – the identification of existing qualified procedures, the development of prequalified procedures, or the development of new procedures by testing.
- 1.5 Welding related health and safety procedures are specified for the job and are in accordance with a code of safe practice.

Element 2

Supervise welding operations.

Performance criteria

- 2.1 Work practice is verified as being in accordance with safety procedures.
- 2.2 Welders are instructed and supervised to ensure that welding procedure specifications and welding sequences are followed, and distortion is controlled.

- 2.3 Monitoring and recording of work progress ensures costs are controlled and quality requirements are maintained in accordance with company procedures.

Element 3

Control weld quality.

Performance criteria

- 3.1 Weld inspection is undertaken in accordance with AS/NZS 1554.1 or equivalent, or customer's quality requirements.

Range includes – undertaking visual and penetrant inspection, arranging for other inspection when inspection requirements are outside delegated authority.

- 3.2 Corrective action undertaken for defective welds is consistent with a review of inspection results and/or report(s).

- 3.3 Documentation is completed in accordance with contract or company requirements.

Range inspection reports, as-built drawings, project reports.

Please note

Providers must be accredited by the Qualifications Authority, 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 the Qualifications Authority 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 the Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.