



Australian Government

Department of Education, Employment and Workplace Relations

SUGSFBS2A Undertake forming, bending and shaping

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to carry out forming, bending and shaping operations. It achieves part of the outcomes of MEM 5.10AA Undertake fabrication, forming, bending and shaping. A person who has achieved competence in this MEM unit is recognised as competent in this sugar milling unit.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare for forming, bending and shaping to meet specifications	1.1 Forming, bending and shaping requirements are identified 1.2 The equipment is set up and adjusted to achieve required outcomes 1.3 Simple templates are prepared to meet outcome specifications 1.4 Pre-operational equipment checks are conducted 1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures
2. Operate forming, bending and shaping equipment to achieve required outcome	2.1 Equipment is started, operated and shut down according to operating procedures and manufacturer's specification 2.2 Materials are accurately positioned in the machine/equipment 2.3 Equipment is adjusted as required to achieve required outcomes 2.4 The workplace meets housekeeping standards
3. Form, bend and shape material	3.1 Material is levelled, straightened, rolled, pressed or bent to achieve required outcomes 3.2 Material is formed and shaped to size to meet specifications 3.3 Final form/shape is checked for compliance to specification 3.4 Non-conforming shapes are identified and corrected as required

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Identify forming, bending and shaping requirements. This may require interpretation of technical drawings or sketches
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm status of equipment, that safety guards are in place, equipment is fit for operation and required services are available
4. Mark out and produce simple templates. This involves producing sheet metal templates developed and cut to the required size
5. Position or feed material according to equipment requirements
6. Set up, adjust, operate and shut down equipment according to workplace procedures
7. Produce formed and/or shaped material to meet job specification
8. Confirm that the formed and/or shaped material meets specification. This may involve the use of templates and simple measuring instruments
9. Take corrective action in response to out-of-tolerance results
10. Maintain work area to meet housekeeping standards

May include ability to:

11. Use process control systems

Knowledge of:

12. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
13. Relevant site operating procedures and practices
14. Purpose and basic operating principles of forming, bending and shaping equipment. This includes awareness of equipment operating capacities
15. The effect of heating materials on the forming and bending process
16. Scope to adjust equipment parameters and related effect on outcome
17. Safe work procedures including awareness of health and safety hazards related to the operation of forming, bending and shaping equipment
18. Housekeeping standards for the work area

May include knowledge of:

19. Basic operating principles of process control where relevant. This includes the relationship between control panels and the physical equipment

Relationship with other standards

Pre-requisite units

The pre-requisites for this competency standard are:

- BCC1004A Carry out measurement and calculations
- BCC1005A Use hand and power tools

Co-assessment of related units

Where heating or thermal cutting is required, select unit MEM5.7A Manual heating, thermal cutting and gouging.

Where mark off/out skills are required, select MEM12.7A Mark off/out structural fabrications and shapes.

Where simple assembly/fabrication by welding is required, select the appropriate welding unit.

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Forming, bending and shaping equipment
- Relevant measuring instrumentation
- Materials to be formed, bent and/or shaped
- Drawings, templates and specifications as required
- Operating procedures and related advice on equipment/instrumentation operation
- Personal protective clothing and equipment
- Housekeeping standards and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice.
- The range of shapes and products formed may include pipes, cylinders, cones, angles, ductwork and tubular shapes including hand rails and pipes
- Materials may include ferrous, non ferrous and non-metallic substances
- Forming processes may be hot or cold
- Tools and equipment may include presses, shapers, benders and drop hammers
- Measuring instrumentation may include dividers, trammels and rulers
- Pre-operational checks include confirming that safety guards are in place, equipment is operational and other pre-start checks as required by workplace procedure
- Work may require the ability to work within a team environment
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Unit Sector(s)

Not applicable.