



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **FDFSUG226A Perform general drilling operations**

**Release: 1**

## **FDFSUG226A Perform general drilling operations**

### **Modification History**

New Unit based on *SUGSPGD2A Perform general drilling operations*.

### **Unit Descriptor**

This unit describes the outcomes required to carry out general drilling operations using a radial arm drill. This unit achieves part of the outcomes of *MEM07005B Perform general machining*. A person who has achieved competence in this MEM unit is recognised as competent in this sugar milling unit.

### **Application of the Unit**

This unit has application in the sugar milling industry.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

There are no pre-requisites units for this competency standard.

### **Employability Skills Information**

This unit contains employability skills.

### **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

| ELEMENT                                   | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Prepare for drilling operations         | <ul style="list-style-type: none"><li>1.1 Drilling requirements are identified</li><li>1.2 Materials to be drilled are collected</li><li>1.3 Drilling equipment is set up for operation</li><li>1.4 Pre-operational equipment checks are conducted</li><li>1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures</li></ul>                                                                                                                              |
| 2 Operate drill to achieve specifications | <ul style="list-style-type: none"><li>2.1 Machining parameters are set to meet job requirements</li><li>2.2 Materials are positioned for drilling operation</li><li>2.3 The drill is started, operated and shut down according to operating procedures and manufacturer's specification</li><li>2.4 Work are checked against specification</li><li>2.5 Non-conforming components are identified and corrected as required</li><li>2.6 Basic routine maintenance is carried out as required</li><li>2.7 The workplace meets housekeeping standards</li></ul> |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

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#### Ability to:

- identify drilling requirements - this may require interpretation of technical drawings or sketches
- select, fit and use personal protective clothing and/or equipment
- collect and prepare materials according to job and equipment requirements - this may involve basic marking out
- confirm status of equipment, that safety guards are in place, equipment is fit for operation and required services are available
- set up, operate and shut down drilling equipment according to workplace procedures to meet job specification
- monitor and adjust process and equipment during operation to stay within specification
- confirm that components meet specification - this may involve the use of measuring instruments
- maintain work area to meet housekeeping standards.

### Required knowledge includes:

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#### Knowledge of:

- relevant state OHS legislation, standards and codes of practice relating to work responsibilities
- relevant site operating procedures and practices
- purpose and basic operating principles of drilling and accessory equipment including awareness of equipment operating capacities
- care, maintenance and storage of drill parts and accessories
- scope to adjust machining parameters and related effect on outcome
- the impact of machining parameters and materials used on tool life
- safe work procedures including awareness of health and safety hazards related to the operation of the drill and related equipment
- housekeeping standards for the work area.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

|                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Overview of assessment                                                                       | Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed.                                                                                                                                                                                                                                                                                                                                                              |
| Critical aspects for assessment and evidence required to demonstrate competency in this unit | <p>Evidence of ability to:</p> <ul style="list-style-type: none"><li>• identify drilling requirements</li><li>• select, fit and use personal protective clothing and/or equipment</li><li>• collect and prepare materials according to job and equipment requirements</li><li>• confirm status of equipment</li><li>• set up, operate and shut down drilling equipment</li><li>• monitor and adjust process and equipment</li><li>• confirm that components meet specification.</li></ul>                                |
| Context of and specific resources for assessment                                             | <p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"><li>• Drill and related equipment</li><li>• Relevant measuring instrumentation</li><li>• Materials to be drilled</li><li>• Drawings, templates and specifications as required</li><li>• Operating procedures and related advice on equipment/instrumentation operation</li><li>• Personal protective clothing and equipment</li><li>• Housekeeping standards and procedures.</li></ul> |
| Method of assessment                                                                         | Other units of competency relevant to the work role should be assessed in conjunction with this unit.                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Guidance information for assessment                                                          | To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.                                                                                                                                                                                                                                                      |

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

|                                  |                                                                                                                                                                                                                                                    |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Policies and procedures</b>   | Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements.                                  |
| <b>Codes of practice</b>         | Codes of practice include the Sugar Milling Operations Industry Code of Practice.                                                                                                                                                                  |
| <b>Drilling operations</b>       | <p>Work is undertaken to pre-determined specifications.</p> <p>Drills are not CNC (Computer Numerical Control) machines.</p> <p>Typical drilling operations include</p> <ul style="list-style-type: none"> <li>• drilling and tapping.</li> </ul>  |
| <b>Machining parameters</b>      | <p>Machining parameters are typically given and include</p> <ul style="list-style-type: none"> <li>• speeds</li> <li>• feeds</li> <li>• stops</li> <li>• coolant</li> <li>• cutting lubricants.</li> </ul>                                         |
| <b>Measuring instrumentation</b> | <p>Measuring instrumentation may include</p> <ul style="list-style-type: none"> <li>• callipers</li> <li>• dividers</li> <li>• verniers</li> <li>• micrometers.</li> </ul>                                                                         |
| <b>Pre-operational checks</b>    | <p>Pre-operational checks may include</p> <ul style="list-style-type: none"> <li>• confirming that safety guards are in place</li> <li>• equipment is operational</li> <li>• other pre-start checks as required by workplace procedure.</li> </ul> |
| <b>Teamwork</b>                  | Work may require the ability to work within a team environment.                                                                                                                                                                                    |

## **Unit Sector(s)**

Sugar Milling