



Australian Government

Department of Education, Employment and Workplace Relations

ICPSU357C Apply quick changeover procedures

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to carry out quick operational changeovers.
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Application of the Unit

Application of the unit	<p>In a typical scenario, an organisation is pursuing quick changeover as one of its competitive manufacturing tools. The operator is also involved in recommending improvements within the scope and authority of their job.</p> <p>This unit is based on the competitive manufacturing initiative competency MCMT220A Apply quick changeover procedures. This unit is from the Competitive Manufacturing Initiative group of competency standards.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for changeover	1.1. Timing of <i>changeover</i> is determined according to production schedule 1.2. All required tools/parts/materials are obtained for changeover 1.3. Process and tools/parts/materials are organised ready for changeover 1.4. Liaison with relevant people is conducted for quick changeover
2. Make quick changeover	2.1. Quick changeover is planned according to quick changeover principles 2.2. Changeover is completed according to enterprise <i>procedures</i> 2.3. Output is checked to meet specifications 2.4. Any steps which cause a problem are noted and changes recommended to problematic steps
3. Improve OHS	3.1. Hazards in all steps/actions are identified 3.2. Risks from each hazard are determined 3.3. Actions which may be performed in a more ergonomic manner are identified 3.4. Changes are recommended to improve OHS

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- OHS in relation to operating machinery such as safely switching off machinery before cleaning is started
- communication of ideas and information by liaising with relevant staff to facilitate changeover
- collecting, analysing and organising information by determining when changeover will be required according to production schedule
- planning and organising activities by planning a quick changeover according to quick changeover principles
- teamwork when working with others to affect a quick changeover
- mathematical ideas and techniques by checking output to ensure that it meets specifications
- problem-solving skills by identifying actions which may be performed in a more ergonomic manner
- use of technology by using required tools/parts/materials for changeover

Required knowledge

- principles of quick changeover
- relevant procedures
- purposes/requirements of changeover
- methods of recommending changes
- quality requirements for products
- minimisation of changeover scrap

Evidence Guide

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

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- routine positive participation in quick changeover procedures
- assessment will need to occur in an organisation using quick changeover or a suitable simulation in say a workshop.

Context of and specific resources for assessment

Assessment must ensure:

- assessment may take place on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment
- machinery for changeover.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

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.

<i>Changeover</i> may include:	<ul style="list-style-type: none"> an exchange of dies/tools (traditional), or a change between batches, or it may be any quantum equipment/process change to produce a different product eg plate changeover, stock change producing only the one product or simultaneous range of products. This is not applicable to a maintenance/PVI shutdown as experienced by continuous process manufacturers.
<i>Procedures</i> may include:	<ul style="list-style-type: none"> procedures includes all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, oral, computer-based or in some other form.
<i>SMED</i> may include:	<ul style="list-style-type: none"> changeover is sometimes referred to as SMED which is a more extreme form where SMED is an abbreviation for Single Minute Exchange of Die; literally, changing a die on a forming or stamping machine in a minute or less; broadly, the ability to perform any set up activity in a minute or less of machine or process downtime. The key to doing this is frequently the capability to convert internal set up time to external set up time. Variations on SMED include: <ul style="list-style-type: none"> single-digit set up performing a set up activity in a single-digit number of minutes, ie fewer than ten OTED: One touch exchange of die; literally, changing a die with one physical motion such as pushing a button; broadly, an extremely simple procedure for performing a set up activity.

RANGE STATEMENT*Set up time* may include:

- set up time - work required to change over a machine or process from one item or operation to the next item or operation. It can be divided into two types:
- internal set up work that can be done only when the machine or process is not actively engaged in production; OR
- external set up work that can be done concurrently with the machine or process performing production duties.

Unit Sector(s)**Unit sector****Competency field****Competency field**

Support

Co-requisite units**Co-requisite units**