



**Australian Government**

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

# **ICPSU482C Troubleshoot and optimise materials and machinery**

**Revision Number: 1**

## ICPSU482C Troubleshoot and optimise materials and machinery

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit describes the performance outcomes, skills and knowledge required to extend the use of materials and adjust and tune machinery to meet efficiency targets.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires the individual to experiment with and extend the use of materials and to undertake non-routine adjustment and tuning of machinery to meet efficiency targets.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	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. Review material behaviour	1.1. Evaluation of material or product structure is conducted to identify options for production 1.2. <b>Material handling options</b> are chosen to ensure best performance of materials during production 1.3. Options are assessed to determine most effective/efficient method of production, ensuring highest quality and yield from the materials 1.4. A test runs confirms correct options or the need for further adjustment or trialling to meet quality standards 1.5. Options and recommendations are documented for future reference according to enterprise procedures
2. Tune and adjust machinery	2.1. Idiosyncrasies of machines are reviewed and adjustments or tuning undertaken to compensate or to exploit the idiosyncrasy, within the manufacturer's specifications 2.2. Options are assessed to determine most effective/efficient method of production, ensuring highest quality and yield from machinery 2.3. A test runs confirms correct options and settings or the need for further adjustment or tuning to meet quality standards 2.4. Options and recommendations are documented for future reference according to enterprise procedures 2.5. Instruction is provided to machine operator or finisher on new practices, if required
3. Troubleshoot machinery and material problems	3.1. Corrective or preventive action is recommended and implemented where appropriate 3.2. Changes are communicated to relevant personnel in a logical and easily understood manner 3.3. Changes are monitored to confirm improvement to production efficiency 3.4. Ongoing problems are reported according to enterprise procedures

## 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 communicating changes to relevant personnel in a logical and easily understood manner
- collecting, analysing and organising information by documenting options and recommendations for future reference according to enterprise procedures
- planning and organising activities by assessing options to determine the most effective/efficient method of production
- teamwork when providing instructions to machine operator or finisher on new practices
- mathematical ideas and techniques by conducting test runs to confirm correct options and settings
- problem-solving skills by evaluating material or product structure to identify options for production
- use of technology by working with relevant equipment and machinery

#### Required knowledge

- need for implementing change
- changes to existing production areas that will have to be made
- integrating the operation into existing organisational processes
- materials that are required in addition to existing ones
- alternatives to the chosen process
- process choice
- review that was conducted to assess the process to suit customer requirements
- different materials used to produce the same results without the production problems
- production plan information that will aid in determining the process
- impact of the process on existing operations
- integrating training into existing process operations
- eliminate existing production problems
- optimising existing machinery or equipment
- special provisions that will be necessary to extend the use of equipment
- expected production life of this equipment and machinery
- technology that could see this equipment outdated
- technology that could improve this equipment or machinery

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>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.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• recommend and implement new practices that extend the every day use of materials and machinery and troubleshoot problems material and machinery</li> <li>• produce a portfolio that demonstrates that each element has been carried out. This should include records of standards and monitoring procedures and evidence that they are being effectively carried out</li> <li>• production efficiencies are confirmed through discussions with senior management and review of workplace documentation</li> <li>• evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• machinery and materials.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

## 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.

<b><i>Material handling options</i></b> may include:	<ul style="list-style-type: none"> <li>• fanning</li> <li>• stacking</li> <li>• drying</li> <li>• moisture</li> <li>• quantities</li> <li>• mixers</li> <li>• glues.</li> </ul>
<b><i>Technical guidance</i></b> may include:	<ul style="list-style-type: none"> <li>• the competencies relate to personnel who provide technical guidance and assistance to work teams.</li> </ul>
<b><i>Data sources</i></b> may include:	<ul style="list-style-type: none"> <li>• may include manual records or reports or computerised production monitoring systems.</li> </ul>
<b><i>Decision making</i></b> may include:	<ul style="list-style-type: none"> <li>• decisions may have a significant effect on the results of a production line/unit/department.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

<b>Competency field</b>	Support
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## Co-requisite units

Co-requisite units		