



Australian Government

Department of Education, Employment and Workplace Relations

MEM08013B Prepare surfaces by abrasive blasting (advanced)

Release: 1

MEM08013B Prepare surfaces by abrasive blasting (advanced)

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers performing an advanced level of skill in surface preparation using abrasive blasting.
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Application of the Unit

Application of the unit	<p>This unit is designed to be used where an advanced level of skill is desired in surface preparation using abrasive blasting.</p> <p>The operation and maintenance of compressed air systems and associated items, including emergency shut-down procedures, is included.</p> <p>Work is undertaken autonomously or as part of a team environment using accepted standards for safety, quality and procedures.</p> <p>All work and work practices are undertaken to regulatory and legislative requirements.</p> <p>Band: A</p> <p>Unit Weight: 4</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM08012B	Prepare surfaces by abrasive blasting (basic)
	MEM08016B	Control blast coating by-products, materials and emissions
	MEM13003B	Work safely with industrial chemicals and materials

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. Determine job requirements	1.1. Work requirements are determined from job sheet, instructions or other specifications in accordance with standard operating procedures. 1.2. Appropriate abrasive blasting process and equipment are selected to meet job specification. 1.3. Appropriate abrasive blasting media and equipment are selected to meet job specification. 1.4. Work site is prepared for surface cleaning activities.
2. Set up equipment	2.1. Appropriate equipment and any required consumables are assembled, set up and prepared correctly and safely in accordance with manufacturers' specifications and standard operating procedures. 2.2. Correct rust inhibitor for use in wet abrasive blast methods is selected where required. 2.3. Pre-operational checks are carried out on equipment and faults and are rectified or reported for further action.
3. Inspect surface prior to cleaning	3.1. Work piece is inspected prior to cleaning in accordance with standard operating procedures. 3.2. Identified faults/defects requiring remedial or pre-treatment action are reported as required.
4. Prepare surfaces using abrasive blasting	4.1. Blasting equipment is operated in accordance with standard operating procedures. 4.2. Emergency shut-down procedures can be carried out. 4.3. Work procedures are undertaken to appropriate environmental requirements. 4.4. Abrasive media disposal is carried out in accordance with standard operating procedures. 4.5. Blasting equipment is cleaned and disassembled and inspected in accordance with manufacturers' specifications and standard operating procedures. 4.6. Equipment faults are recorded and reported in accordance with standard operating procedures.
5. Inspect prepared surface	5.1. Surface preparation is assessed for cleanliness and conformance with specifications. 5.2. Faults or defects are rectified where required and inspection results are recorded and reported in accordance with standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Look for evidence that confirms skills in:

- preparing and sequencing operational work plan
- selecting blasting process and equipment
- selecting appropriate blasting media
- setting up equipment
- undertaking surface inspection prior to cleaning
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures.
- following verbal instructions
- orally reporting routine information
- identifying faults and defects
- checking and clarifying task-related information
- checking for conformance to specifications

Required knowledge

Look for evidence that confirms knowledge of:

- calculations and numerical operations within the scope of this unit
- blasting media features
- equipment for the selected method
- inspection procedures
- procedures for using abrasive blasting equipment
- procedures for abrasive media disposal
- safe work practices and procedures
- hazards and control measures associated with preparing surfaces by abrasive blasting, including housekeeping

Evidence Guide

EVIDENCE GUIDE	
<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>	
<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to prepare surfaces by abrasive blasting (at an advanced level). Competency in this unit cannot be claimed until all prerequisites have been satisfied.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
<p>Context of and specific resources for assessment</p>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with preparing surfaces by abrasive blasting (advanced) or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<p>Method of assessment</p>	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>

EVIDENCE GUIDE

Guidance information for assessment	
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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.

Blasting process

Blasting process	Wet, dry, vacuum automatic rotary, centrifugal and water blasting (including HP and UHP)
Blasting media	Garnet, ilmenite, slags, steel grit, steel shot, water, glass bead and soda
Equipment	Blast nozzles, compressors, blast and helmet ventilation, air hoses, blast pots, nozzles, safety equipment etc.

Blasting media**Equipment****Unit Sector(s)**

Unit sector	
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Surface finishing
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