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| Title | Demonstrate knowledge of and operate abrasive blast pot | | |
| Level | 3 | Credits | 8 |

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| Purpose | People credited with this unit standard are able to: demonstrate knowledge of an abrasive blast pot system and abrasive standards; operate abrasive blast pot; demonstrate blast-cleaning techniques and standards using a blast pot; and clean, maintain, and store abrasive blast pot equipment. |
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| Classification | Manufacturing Skills > Manufacturing Processes |
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| Available grade | Achieved |
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| Prerequisites | Unit 17547, <i>Demonstrate knowledge of health and safety for blaster coating operations</i> , or demonstrate equivalent knowledge and skills. |
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Guidance Information

- 1 Legislation relevant to this unit standard includes but is not limited to the: Health and Safety at Work Act 2015.
- 2 References

ISO 8501-1: 2007 *Preparation of Steel Substrates Before Application of Paints and Related Products – Visual Assessment Of Surface Cleanliness - Part 1*, available at <https://www.iso.org/obp/ui/#iso:std:iso:8501:-1:en>; or *Steel Structures Painting Manual Volumes 1 and 2*, J. D. Keane (Ed.), (Pittsburgh Steel Structures Painting Council, 1995) available at <http://shop.sspc.org/Marketplace/Books/SSPC-Painting-Manuals>.

AS 1627.9-2002 *Metal finishing - Preparation and pretreatment of surfaces - Pictorial surface preparation standards for painting steel surfaces* available at <http://infostore.saiglobal.com/store/Details.aspx?ProductID=234383>.

Ministry of Health and Ministry of Business, Innovation and Employment *Guidelines for the Management of Lead-based Paint* 2013 available at health.govt.nz.
- 3 Definitions

Accepted industry practice refers to codes of practice and standardised procedures accepted by the wider industry as examples of best practice.

Feathering refers to blasting or sanding the edges of a paint area to make the transition smooth with the surrounding paint.

Workplace procedures refer to the procedures used by the organisation carrying out the work and applicable to the tasks being carried out. Examples are – standard operating procedures, safety procedures, equipment operating procedures, codes of

practice, quality management practices and standards, and procedures to comply with legislative and local body requirements.

- 4 Assessment information
- a All activities and evidence on outcomes 2, 3, and 4 must comply with applicable workplace procedures and be consistent with accepted industry practice.
 - b Assessment against this unit standard excludes the use of a vacuum blast system.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of an abrasive blast pot system and abrasive standards.

Performance criteria

- 1.1 Abrasive blasting equipment is identified and described in terms of the construction and function of the system and each of its components.
- Range compressor or air supply, blast pot, hoses and couplings, nozzle sizes, safety equipment.
- 1.2 Blast pot components are described in terms of their function.
- Range moisture separator, air pressure gauge, main air inlet valve, air pressure release valve, abrasive regulator valve, abrasive holding tank, pop-up valve, air-abrasive mixing area, dead man valve, nozzle.
- 1.3 Ratio of inlet hose and nozzle size is explained, and nozzle sizes are described in terms of suitability for specified blasting operations.
- Range two nozzle sizes.
- 1.4 Operation of dead man control switch system is explained in accordance with manufacturer's instructions.
- 1.5 Care of nozzle is explained in terms of brittleness of liner.
- 1.6 Steel grades are identified, and blast cleanliness standards are explained in accordance with AS 1627.9.
- 1.7 Lead paint is identified, and handling procedures are described in accordance with the Ministry of Health guidelines.

Outcome 2

Operate abrasive blast pot.

Performance criteria

- 2.1 Blast pot is filled with abrasive media in accordance with manufacturer's instructions.
- 2.2 Abrasive blast hose is attached to blast pot in accordance with manufacturer's instructions.
- 2.3 Manual or automatic blast pot system is operated in accordance with manufacturer's instructions.
- 2.4 Flow of abrasive media to the nozzle is adjusted in accordance with manufacturer's instructions.
- 2.5 Blast pot is shut off in accordance with manufacturer's instructions.
Range closing the inlet valve before opening the bleed-off valve.

Outcome 3

Demonstrate blast-cleaning techniques and standards using a blast pot.

Range white metal, near-white metal, commercial, brush-off.

Performance criteria

- 3.1 Specified level of cleanliness is achieved in accordance with manufacturer's specifications.
- 3.2 Spot blasting and feathering is demonstrated to achieve specified level of cleanliness on previously painted surface.

Outcome 4

Clean, maintain, and store abrasive blast pot equipment.

Performance criteria

- 4.1 Moisture and oil are drained from pot filters and disposed of in accordance with manufacturer's instructions.
- 4.2 Couplings are attached in accordance with manufacturer's instructions.
- 4.3 Rubber O-rings are checked and replaced in accordance with manufacturer's instructions.
- 4.4 Nozzle is fitted in accordance with manufacturer's instructions.
- 4.5 Abrasive blast pot equipment is stored.

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| Planned review date | 31 December 2025 |
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Status information and last date for assessment for superseded versions

| Process | Version | Date | Last Date for Assessment |
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| Registration | 1 | 28 August 2000 | 31 December 2012 |
| Review | 2 | 20 November 2006 | 31 December 2013 |
| Review | 3 | 18 October 2012 | 31 December 2016 |
| Review | 4 | 16 April 2015 | 31 December 2021 |
| Rollover and Revision | 5 | 13 December 2018 | 31 December 2023 |
| Review | 6 | 26 August 2021 | N/A |

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| Consent and Moderation Requirements (CMR) reference | 0013 |
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.