



Australian Government

CPC CST4007 Construct a fire brick wall and arch using refractory materials

Release: 2

CPCST4007 Construct a fire brick wall and arch using refractory materials

Modification History

- Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.
Elements and Performance Criteria 1.1 rewritten for clarity.
- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and equivalent to CPCBC4042A Construct a fire brick wall and arch using refractory materials. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to construct a brick wall and arch using refractory materials, including castables, bricks and insulation. It covers the application of the unique skills and knowledge relevant to refractory work.

The unit of competency supports specialist and advanced tradespersons working in refractory bricklaying. It may be applied in the construction or repair of various fire resistant structures, including boilers, kilns and industrial furnaces.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Stonemasonry

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

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| 1 | Set out and prepare the base location of work. | 1.1 | Set out location of the brickwork to position in accordance with job specifications and drawings. |
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| | 1.2 | Prepare base location so that the surface is dry, horizontal, clean and flat, and in accordance with job specifications. |
| 2 Lay brickwork. | 2.1 | Apply fire clay to bricks to maintain joints at the specified thickness. |
| | 2.2 | Ensure bricks are in the required bond and set out, method and line, level and plumb in accordance with job specifications and drawings. |
| | 2.3 | Cut bricks to the correct length to maintain the required bond in accordance with manufacturer recommendations and job specifications. |
| | 2.4 | Complete brickwork and remove surplus fire clay to specification requirements. |
| 3 Form a segmental arch. | 3.1 | Identify span and rise of the arch and locate in accordance with job plans and specifications. |
| | 3.2 | Place adjustable props appropriately to support the timber arch centre and adjust as necessary. |
| | 3.3 | Establish and mark position of the central key brick for easy identification. |
| 4 Cut and lay bricks to position around the arch. | 4.1 | Cut and lay bricks on the centre to form an arch to specifications. |
| | 4.2 | Maintain same sized wedge shape brick throughout the construction of the arch. |
| | 4.3 | Monitor and adjust measurements and placement of bricks accordingly to ensure accurate application of job requirements. |
| 5 Complete and review finished work. | 5.1 | Remove props and other support materials. |
| | 5.2 | Finish and clean construction to meet job requirements and professional expectations. |

5.3 Clean intrados of the arch and repoint with mortar as necessary.

Foundation Skills

As well as the foundation skills explicit in the performance criteria of this unit, candidates require:

- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - communicate technical issues
 - communicate with the team
 - consult with architect and stakeholder
 - read and interpret:
 - documentation from a variety of sources
 - plans, specifications and drawings
 - use and interpret non-verbal communication
 - use language and concepts appropriate to cultural differences
- numeracy skills to:
 - apply measurements and calculations
- organisational skills to:
 - plan for and set out work
- teamwork skills and the ability to work with others to:
 - ensure coordination and cooperation between self and others

Unit Mapping Information

Supersedes and equivalent to CPCCBC4042A Construct a fire brick wall and arch using refractory materials.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>