



Australian Government

MSMPMC318 Assemble, fabricate and place reinforcement

Release: 1

MSMPMC318 Assemble, fabricate and place reinforcement

Modification History

Release 1. New unit. Supersedes and is equivalent to PMC552056 Assemble, fabricate and place reinforcement

Application

This unit describes the skills and knowledge required to assemble, fabricate and place reinforcement.

This unit applies to operators who are required to take responsibility for own outputs and follow established procedures to interpret plans (steel drawings), fabricate the reinforcement from pre-cut and bent steel and place and secure reinforcement. Operators are also required to work autonomously and apply their own judgement to interpret information; monitor processes; identify and address routine and non-routine problems and control hazards.

This unit applies to an individual working alone or as part of a team or group and in liaison with other shift team members, team leader and supervisor.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil

Competency Field

Operations

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for fabrication	1.1 Check quantities, type, size and shape of reinforcement supplied against drawings, tags and schedules 1.2 Prepare jigs and/or other assembly aids
2. Assemble and fabricate reinforcement	2.1 Assemble reinforcement using appropriate fixing method 2.2 Check final dimensions are to specification 2.3 Insert lifting devices, lugs, fittings, bar chairs and nibs according to standard operating procedures (SOPs)

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	2.4 Check minimum lap sizes are observed 2.5 Complete cage to enable lifting if assembled outside the mould 2.6 Report any non-compliance 2.7 Follow all work health and safety (WHS) procedures and work instructions
3. Rectify routine problems	3.1 Identify and rectify faults and equipment failure 3.2 Maintain records and log books of equipment operations 3.3 Identify non-routine problems and report to designated person
4. Control hazards	4.1 Identify reinforcement work hazards 4.2 Assess the risks arising from those hazards 4.3 Implement measures to control those risks

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Numeracy skills to:

- do basic arithmetical manipulations, including additions, subtractions, divisions, fractions and percentages
- make calculations from steel drawings
- measure reinforcement to specification

Other foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Release 1. New unit. Supersedes and is equivalent to PMC552056 Assemble, fabricate and place reinforcement

Links

Companion Volume Implementation Guides are available at VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>

Assessment Requirements for MSMPMC318 Assemble, fabricate and place reinforcement

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- assembled, fabricated and fixed reinforcement on at least 1 occasion, including:
 - monitoring the following key variables to ensure product integrity and conformance to specification:
 - shape
 - dimensions
 - dimensional tolerance
 - grade of steel
 - placement of fittings and lifting lugs
 - steel coverage
 - security and stability of fixing reinforcement in place
 - minimum lap sizes
 - recognising possible causes of the following routine problems:
 - raw material variations
 - equipment malfunctions
 - design problems
 - fabrication errors.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- common types and application of reinforcement
- reinforcement equipment, including:
 - functions, limitations
 - principles of operation
 - the potential effects of equipment operation in relation to quality of product
- predicting final shape and dimension based on bar size and type and bend radius
- design factors
- fabrication methods
- validation of test certificates

- reinforcement design drawings
- reinforcement tags
- the potential effects of variations in raw materials in relation to quality of product
- routine problems and factors which may affect product quality or production output, their probable causes and relevant corrective actions
- work health and safety (WHS) requirements relevant to work outcome
- hazards when working with reinforcements and:
 - their possible causes
 - potential consequences
 - risk control procedures.
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Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - reinforcement equipment and ancillary equipment
 - specifications, procedures and job sheets
- modelling of industry operating conditions, including:
 - routine and non-routine problems.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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