



**Australian Government**

# **PMBPROD303E Produce cable and tape lay-up cables**

**Release: 1**

# PMBPROD303E Produce cable and tape lay-up cables

## Modification History

Release 1. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMBPROD303 Lay up and tape cables.

## Application

This unit covers the skills and knowledge required to operate, control and optimise cable lay-up, taping and armouring equipment. It applies to processing of armoured cable, screened cable or similar wires and cables.

This unit applies to an individual working alone or as part of a team.

The unit principally refers to the practical, theoretical and technical knowledge and well-developed skills in situations that require some discretion and judgement.

This unit may be contextualised and applied to similar processes using rotating plant and equipment that are not covered by specific units.

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

Production – Cable Production

## Elements and Performance Criteria

| Elements                                  | Performance Criteria                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element.                                                                                                                                                                                                                                                                                             |
| 1. Plan work requirements                 | <p>1.1 Identify materials required, including additives, from job specifications</p> <p>1.2 Identify equipment and processes required for production process and upstream and downstream operations from job specifications</p> <p>1.3 Perform pre-operational checks including checking for and controlling hazards</p> <p>1.4 Identify and check emergency stops, guards and controls</p> |

| <b>Elements</b>                                   | <b>Performance Criteria</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elements describe the essential outcomes.         | Performance criteria describe the performance needed to demonstrate achievement of the element.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                   | <p>1.5 Identify checks and testing processes required for materials, quality, production management and equipment to meet job requirements</p> <p>1.6 Identify housekeeping needs and waste management strategies to collect excess, discarded or nonconforming materials to be disposed of, recycled or reprocessed according to workplace procedures</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2. Perform pre-production tasks                   | <p>2.1 Verify equipment requirements against job specifications</p> <p>2.2 Set production process according to equipment specifications and work requirements, and adjust process to optimise output based on selected materials</p> <p>2.3 Verify materials are correct against job specifications</p> <p>2.4 Check that tensions, tape lay-up or tensions of armouring materials are suitable for work requirements</p> <p>2.5 Check rotating plant and equipment settings and adjustments, including tensions, lay length, attachments to spools and threading path adjustments, against job specifications</p> <p>2.6 Attach wire to spools and fit appropriate taping materials</p> <p>2.7 Set up date, batch and materials markings according to workplace procedures</p> <p>2.8 Undertake other pre-startup checks according to equipment specifications and workplace procedures</p> |
| 3. Operate and adjust lay-up and taping equipment | <p>3.1 Check and load materials using correct manual handling methods</p> <p>3.2 Start up and operate equipment, and make adjustments to settings to meet job specifications</p> <p>3.3 Ensure process is operating according to equipment specifications and workplace procedures</p> <p>3.4 Assess if output meets job specifications and quality standards, and apply strategies for managing nonconforming outputs</p> <p>3.5 Maintain continuity of process to support production</p> <p>3.6 Accurately complete logs and records</p> <p>3.7 Apply waste management strategies according to workplace procedures</p> <p>3.8 Clean, adjust and lubricate equipment according to equipment instructions and workplace procedures</p> <p>3.9 Pause or stop equipment in normal and abnormal circumstances</p>                                                                              |

| <b>Elements</b>                                   | <b>Performance Criteria</b>                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elements describe the essential outcomes.         | Performance criteria describe the performance needed to demonstrate achievement of the element.                                                                                                                                                                                                                                                               |
|                                                   | according to workplace procedures                                                                                                                                                                                                                                                                                                                             |
| 4. Shut down equipment to procedures              | 4.1 Shut down equipment according to equipment instructions and workplace procedures<br>4.2 Complete equipment clean-up and post-production adjustments according to equipment instructions and workplace procedures<br>4.3 Put guards, locks and notices in place to prevent inadvertent startup<br>4.4 Accurately complete workplace shutdown documentation |
| 5. Anticipate and solve process control variances | 5.1 Recognise existing or potential process control variances and their causes<br>5.2 Determine, prioritise and implement remedial and preventative actions based on identified issues and causes<br>5.3 Monitor process control variances and corrective actions taken until resolved<br>5.4 Accurately maintain records and logbooks                        |

## Foundation Skills

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

- Numeracy skills to interpret technical information and equipment readings.
- Reading skills to interpret specifications and workplace procedures.
- Writing and oral communication skills to record and report on cable production operations.

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

## Unit Mapping Information

Supersedes and is equivalent to PMBPROD303 Lay up and tape cables.

## Links

Companion Volume implementation guides are found in VETNet –

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=932aacef-7947-4c80-acc6-593719fe4090>

# Assessment Requirements for PMBPROD303E Produce cable and tape lay-up cables

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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 demonstrated the ability to

- produce cable and tape lay-up cables at least once to meet job specifications.

## Knowledge Evidence

There must be evidence the candidate has knowledge of:

- function and operating principles of lay-up, taping and armouring equipment, equipment components and ancillary equipment
- lay-up and taping manufacturing processes
- products, materials and material characteristics
- behaviour of materials in relation to key process variables
- behaviour of materials in relation to speed, temperature and tension
- the criteria for overall process/equipment readiness for the process or equipment being used
- impact of machine operating parameters on product quality and production output
- cable properties and their interactions with process conditions
- impact of variations in raw materials and equipment operation in relation to final product
- typical quality standards required at each stage of production
- key variables that may affect product quality and production output, including:
  - operating temperatures
  - operating speed pressure
  - time
  - tension
  - wind off speed
  - product integrity and general conformance to specification
- typical and atypical process and product problems, including early warning signs, possible causes and corrective actions
- organisational procedures relevant to the work environment or job role, including procedures for the emergency shutdown of equipment
- hazards that may arise in the job or work environment, and:

- their possible causes
- potential consequences
- appropriate risk controls.

## Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies.

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

## Links

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