



Australian Government

PMBPROD302E Bunch and strand wire

Release: 1

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Modification History

Release 1. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMBPROD302 Bunch and strand wire.

Application

This unit covers the skills and knowledge required to operate wire bunching and stranding equipment.

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 required in situations that require some discretion and judgement.

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 – Generic

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	1.1 Identify materials required from job specifications 1.2 Identify equipment and processes required for production and upstream and downstream operations from job specifications 1.3 Perform pre-operational checks including checking for and controlling hazards 1.4 Identify and check emergency stops, guards and controls 1.5 Identify checks and testing processes required for materials, quality, production management and equipment to meet job requirements 1.6 Identify housekeeping needs and waste management strategies to

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	collect excess, discarded or nonconforming materials to be disposed of, recycled or reprocessed according to workplace procedures
2. Perform pre-production tasks	2.1 Verify equipment requirements against work requirements 2.2 Set production process according to equipment specifications and work requirements, and adjust process to optimise output based on selected materials 2.3 Select appropriate dies (number and sizes) and arrange in correct production sequence 2.4 Check wire bunching and stranding equipment settings and adjustments, including tension, die number, sizes and threading arrangements against job specifications 2.5 Verify materials are correct against job specifications 2.6 Set up date, batch and materials markings according to workplace procedures 2.7 Undertake other pre-startup checks according to equipment specifications and workplace procedures
3. Operate and adjust wire bunching and stranding process	3.1 Set up wire bunching and stranding equipment to support production requirements 3.2 Check and load materials according to equipment instructions 3.3 Start up equipment and operate process, and make adjustments to settings to meet job specifications 3.4 Ensure process is operating according to equipment specifications and workplace procedures 3.5 Follow checking and testing processes to assess if output meets job specifications and quality standards, and apply strategies for managing nonconforming outputs 3.6 Maintain continuity of process to support production 3.7 Accurately complete logs and records 3.8 Apply waste management strategies according to workplace procedures 3.9 Clean, adjust and lubricate equipment according to equipment instructions 3.10 Pause or stop equipment in normal and abnormal circumstances according to workplace procedures

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
4. Shut down equipment	4.1 Shut down equipment according to equipment instructions and workplace procedures 4.2 Complete equipment cleanup and post-production adjustments according to equipment instructions and workplace procedures 4.3 Put guards, locks and notices in place to prevent inadvertent startup 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 5.2 Determine, prioritise and implement remedial and preventative actions based on identified issues and causes 5.3 Monitor process control variances and corrective actions taken until resolved 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 bunching and stranding wire 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 PMBPROD302 Bunch and strand wire.

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 PMBPROD302E Bunch and strand wire

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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:

- bunch and strand wire at least once to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- function and operating principles of wire bunching and stranding equipment, equipment components and ancillary equipment
- products, materials and material characteristics
- wire bunching and stranding manufacturing processes
- the criteria for overall process/equipment readiness for the process or equipment being used
- production workflow sequences and materials demand
- behaviour of materials in relation to key process variables, and speed, temperature and tension
- wire properties and their interactions with process conditions
- typical quality standards required at each stage of production
- impact of machine operating parameters on product quality and production output
- impact of variations in raw materials and equipment operation in relation to final product
- key variables that may affect product quality and production output, including:
 - equipment operating speed
 - 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:
 - processing problems, including incorrect diameters, ovality, surface appearance, colour, inclusions, elongation, tensile strength, weight and wrap
 - equipment malfunctions, including wire breaks, issues caused by raw material contamination, die wear and build-up, faulty capstan bands and faulty wire welds

- materials problems, including raw material contamination and incorrect quantities of materials
- 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.

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