



Australian Government

PMBPROD261E Operate continuous vulcanising equipment

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 PMBPROD261 Operate continuous vulcanising equipment.

Application

This unit covers the skills and knowledge required to operate continuous vulcanising equipment typically used in the manufacture of conveyor belts and similar products.

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

The unit principally refers to operators who are required to carry out pre-startup, startup and shutdown procedures, maintain feed to the process, monitor and adjust the vulcanising equipment, remove and store product, and recognise and respond to process control variances.

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 – Conveyor Belts

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. Check work requirements	1.1 Identify requirements from job specifications 1.2 Perform housekeeping tasks to prepare for work to be undertaken 1.3 Perform pre-operational checks including checking for and acting on hazards
2. Conduct pre-startup checks	2.1 Check safety gates and guards are in position and working according to equipment specifications 2.2 Check green products/belts are correct according to job specifications 2.3 Undertake other pre-startup checks according to equipment

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	specifications and workplace procedures
3. Operate equipment	3.1 Start up and operate vulcaniser according to equipment instructions 3.2 Check process is operating according to equipment specifications and work requirements 3.3 Remove products or belt and store or coil as required according to equipment instructions 3.4 Ensure output meets job specifications and quality standards 3.5 Monitor and maintain supply of green product to support ongoing operation of equipment 3.6 Accurately complete logs and records 3.7 Apply waste management strategies to collect and segregate scrap, trim and other materials according to workplace procedures 3.8 Clean equipment and work area according to equipment specifications and workplace procedures 3.9 Pause or stop machine cycle in normal and abnormal circumstances according to workplace procedures
4. Respond to process control variances	4.1 Recognise and log process control variances and their causes 4.2 Determine, prioritise and implement remedial and preventative actions based on identified issues and causes 4.3 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 continuous vulcanising equipment 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 PMBPROD261 Operate continuous vulcanising equipment.

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 PMBPROD261E Operate continuous vulcanising equipment

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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:

- operate continuous vulcanising equipment at least once to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- the function of vulcanising equipment, machine components and guides, and ancillary equipment
- principles of operation of the equipment
- the role of retarders, fillers and extenders, processing aids and protective agents commonly used in rubber compounds
- the influence of the mechanical, hydraulic, pneumatic, electrical and electronic principles on vulcanising equipment operation and product curing
- the criteria for overall process/equipment readiness for the process or equipment being used
- the potential effects of variations in raw materials and equipment operation on quality of product
- impact of chemical reactions/mechanical processes on the state, form and condition of the vulcanised materials
- processing behaviour of polymers and the role of additives
- production workflow sequences and materials demand
- key variables that may affect product quality and production output, including:
 - speed
 - pressure
 - temperature
 - tension
 - clamp/press cycle
 - feed rate
 - output rate
 - product integrity and general conformance to specification/sample

- the role of heat and pressure in relation to providing strength, stiffness, resistance to deformation, fatigue and abrasion
- typical 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.

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