



Australian Government

PMBPROD431E Trial a new production mould assembly

Release: 1

PMBPROD431E Trial a new production mould assembly

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 PMBPROD431 Trial a new, advanced or complex mould.

Application

This unit covers the skills and knowledge required to trial new moulds used in rotomoulding, thermoforming and composites manufacturing.

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

The unit principally refers to the standard mould trialling procedure, which may involve manual assembly of the mould parts or assembly into an operating mechanism for a production trial and evaluation.

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 – Reinforced Plastics, Rotational Moulding, Thermoforming

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. Determine trial requirements	1.1 Gather and interpret all relevant, available information including job sheets from workplace and equipment documentation 1.2 Confirm machine or equipment suitability to meet trial requirements 1.3 Confirm mould state in readiness for set-up to commence 1.4 Confirm readiness of raw materials for use in trial
2. Set mould and machine	2.1 Follow safe working practices according to workplace procedures 2.2 Fit and set up mould according to trial requirements and workplace procedures

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	2.3 Set up process conditions and machinery to meet product specifications and safe operational requirements 2.4 Dry cycle machine and mould according to workplace procedures
3. Perform mould trial	3.1 Start trial process according to workplace procedures 3.2 Identify and record variations from specifications according to workplace procedures 3.3 Monitor control panel and interpret test results for fluctuations, variations and trends 3.4 Determine process limitations with respect to product and production specifications 3.5 Adjust controls to maintain parameters to job specifications based on interpretation of trial performance 3.6 Store equipment, materials and product from trial according to workplace procedures
4. Anticipate and solve process control variances	4.1 Identify potential range of process control variances that may occur and their impact on product and production specifications 4.2 Make adjustments to tooling and equipment and accurately record action taken according to workplace procedures 4.3 Identify and respond to actual process control variances and their causes 4.4 Assess tooling for wear or damage and apply service procedures as required 4.5 Monitor process control variances and corrective actions taken until resolved 4.6 Accurately maintain records and logbooks
5. Complete trial	5.1 Shut down equipment in normal and abnormal circumstances according to workplace procedures 5.2 Accurately record and report on trial results 5.3 Return machine to normal service according to production requirements and advise relevant personnel

Foundation Skills

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

- Reading skills to interpret and apply workplace information to the trial.
- Numeracy skills to record and report on data received from the trial process.
- Writing and oral communication skills to record and report on the trial results and process control variances that arose.

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 PMBPROD431 Trial a new, advanced or complex mould.

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 PMBPROD431E Trial a new production mould assembly

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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:

- trial a new production mould assembly at least once to meet trial requirements.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- the functions of advanced or complex moulds, and production equipment capability
- criteria for the selection and readiness of equipment, materials, processes and procedures for trialling
- production workflow sequences and materials demand
- types of materials suitable for use in the mould assembly and their characteristics, and the impact of incorrect or faulty materials on the process and output
- the range of products that can be made, the different processes used to make them, and the advantages and disadvantages of each process
- changes to raw materials that can be expected during the moulding process
- typical quality standards required at each stage of the trial and production processes
- key variables that may affect mould suitability, output quality and production output, and the importance of process conditions
- typical and atypical process and product problems, including early warning signs, possible causes and corrective actions
- the distinguishing characteristics of causes of problems as being either based on the properties of materials or caused by process variables
- 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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