



Australian Government

PMBTECH602 Develop a new die or tool

Release: 1

PMBTECH602 Develop a new die or tool

Modification History

Release 1. Supersedes and is equivalent to PMBTECH602B Develop a new die or tool

Application

This unit of competency covers the skills and knowledge required to develop a new die or tool to meet a specified end use.

This unit of competency applies to advanced technologists, technical experts or those in similar roles who are required to apply significant depth and breadth of theoretical polymer, product and process knowledge in order to confirm die/tool design requirements; design the die/tool; liaise with toolmaker to make the die; coordinate trials and ensure the die is functioning to specifications.

The technologist will perform a lead technical role, typically as part of a die/tool design, development and implementation team, and is not required to demonstrate 'hands on' operation of equipment as part of this competency.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

PMBTECH506 Analyse the design of products and tools

MEM09003B Prepare basic engineering drawing

Competency Field

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Confirm die requirements	1.1	Communicate with customer and other key stakeholders and agree on product technical specification, product aesthetic requirements, timelines, cost, usage and other requirements
		1.2	Identify tool design/product design/process issues which may be in conflict and resolve
		1.3	Develop design brief, including relevant drawings, to meet needs
		1.4	Obtain 'sign off' on total design brief from all relevant persons
2	Develop concept design specification of new die	2.1	Select materials of construction or range of materials and grades
		2.2	Select finish requirements for die/tool
		2.3	Design die/tool using mathematical techniques
		2.4	Validate die design specifications against die requirements and design brief
3	Liaise with toolmaker on die manufacture	3.1	Discuss design brief and concept design with toolmaker
		3.2	Verify understanding of die/tool requirements and ability to meet requirements
		3.3	Negotiate contract to make die according to company policy and procedures
		3.4	Continue to liaise with toolmaker
4	Trial new die and determine modifications (if any) required	4.1	Design trialling procedure to deliver required information
		4.2	Ensure health, safety and environment (HSE) requirements are stringently observed

- 4.3 Coordinate the trialling of the new die/tool
 - 4.4 Interpret die/tool trial results and guide die trial process
 - 4.5 Tune process to optimise use of new die/tool
- 5 **Bring new die into standard production**
 - 5.1 Monitor initial production and adjust die, process and conditions to make the process a smooth operation
 - 5.2 Ensure process specifications reflect the optimised operation developed
 - 5.3 Ensure standard operating procedures (SOPs) are correct for the new product
 - 5.4 Ensure equipment and other hardware records are updated to reflect additions/changes
 - 5.5 Ensure project records are complete and all required reports have been completed and submitted
 - 5.6 Archive records according to company procedure

Foundation Skills

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

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

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used.

Applicable legislation, regulations, standards and codes of practice include:

- HSE legislation, regulations and codes of practice relevant to the workplace, materials and processes being used and products being made
- Australian/international standards relevant to the materials being used and products being made
- any relevant licence and certification requirements.

All operations to which this unit applies are subject to stringent HSE requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and such requirements the legislative requirements take precedence.

Procedures All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, and include one or any combination of:

- test procedures
- technical specifications
- technical drawings
- emergency procedures
- work instructions
- SOPs
- safe work method statements (SWMS)
- formulae/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant.

Unit Mapping Information

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Links

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>