

Australian Government

PMA20116 Certificate II in Process Plant Operations

Release: 5

PMA20116 Certificate II in Process Plant Operations

Modification History

Release	Comments
5	Elective units updated.
4	10 PMASMELT coded units reinstated into the elective group. Equivalent.
3	16 low use units removed from elective bank as determined at December 2020 AISC meeting in response to Skills Ministers' objectives. Equivalent.
2	Elective unit codes and titles updated. Supersedes and equivalent to PMA20116 Certificate II in Process Plant Operations (Release 1). Release 1. Supersedes and is equivalent to PMA20113 Certificate II in Process Plant Operations.
1	This qualification was first released in PMA Chemical, Hydrocarbons and Refining Release 1.0.

Qualification Description

The PMA20116 Certificate II in Process Plant Operations is a technical qualification for operators in the hydrocarbons, petrochemical, chemical, metal/ore processing and related process manufacturing industry sectors. It is intended for competent operators who operate production equipment or undertake similar roles directly producing products. The operator would apply a breadth and depth of knowledge to a defined range of situations and would be expected to apply this knowledge to solve a defined range of problems by applying known solutions to a limited range of predictable problems.

Other non-technical Certificate II qualifications are available for production support employees at this level, such as MSM20116 Certificate II in Process Manufacturing.

Licensing/Regulatory Information

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

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Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To be awarded the PMA20116 Certificate II in Process Plant Operations competency must be achieved in **sixteen** (**16**) units of competency:

- **five** (**5**) core units of competency
- **eleven** (**11**) elective units of competency, chosen as specified below:
  - a minimum of **four** (**4**) units of competency from Group A
  - the remainder may be chosen from Groups A, B and C (with a maximum of **five** (**5**) from Group C) to bring the total number of electives to **eleven** (**11**).

Note: Three (**3**) of the Group C units can be chosen from other qualifications in this Training Package, other endorsed Training Packages and accredited courses, where those units are packaged in a Certificate II.

Note: Where prerequisite units are identified they must be counted in the total number of units required for achievement of the qualification.

Core units of competency

Complete all **five (5)** units from the following list.

Unit code	**Unit title**
MSMENV272	Participate in environmentally sustainable work practices
MSMSUP100	Apply workplace context to own job
MSMSUP102	Communicate in the workplace
MSMWHS110	Follow emergency response procedures
MSMWHS200	Work safely

ELECTIVE UNITS

Group A – Technical electives

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Unit code	**Unit title**	**Prerequisites**
FBPPHM3020	Apply Good Manufacturing Practice requirements	
MEM04001	Operate melting furnaces	*
MSMOPS200	Operate equipment	
MSMOPS212	Use organisation computers or data systems	
PMAOPS201	Operate fluid flow equipment	
PMAOPS202	Operate fluid mixing equipment	
PMAOPS204	Select and use utilities and services	
PMAOPS205	Operate heat exchangers	
PMAOPS208	Operate chemical separation equipment	
PMAOPS210	Operate solids handling equipment	
PMAOPS213	Package product/material	
PMAOPS216	Operate local control system	
PMAOPS217	Operate wet milling equipment	
PMAOPS220	Monitor chemical reactions in the process	
PMAOPS221	Operate and monitor prime movers	
PMAOPS222	Operate and monitor pumping systems and equipment	*

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PMAOPS223	Operate and monitor valve systems	
PMAOPS224	Provide fluids for utilities and support	
PMAOPS226	Monitor and operate flare systems	
PMAOPS230	Monitor, operate and maintain pipeline stations and equipment	
PMAOPS231	Control gas odourisation	
PMAOPS232	Operate filtration equipment	
PMAOPS233	Monitor wells and gathering systems	
PMAOPS234	Monitor and operate low pressure compressors	
PMAOPS236	Monitor continuous process plant	
PMAOPS240	Store fluids in bulk	
PMAOPS241	Operate Joule-Thomson effect device	
PMAOPS246	Operate separation equipment	
PMAOPS247	Operate powered separation equipment	
PMAOPS260	Conduct screening operations	
PMAOPS261	Operate bulk solids loading equipment	
PMAOPS262	Operate digestion equipment	
PMAOPS264	Operate solvent extraction equipment	

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PMAOPS280	Interpret process plant schematics	
PMAOPS331	Operate and troubleshoot gas turbine system	
PMASMELT260	Form carbon anodes	
PMASMELT261	Bake carbon anodes	
PMASMELT262	Clean and strip anode rods	
PMASMELT263	Spray carbon anodes	
PMASMELT264	Start up reduction cells	
PMASMELT265	Operate reduction cells	
PMASMELT266	Deliver molten metal	
PMASMELT267	Cast ingots	
PMASMELT268	Operate vertical direct casting process	
PMASMELT269	Operate cell tending equipment	
PMASMELT270	Supply product from reduction cells	
MSMPMC302	Operate equipment to blend/mix materials	
MSMPMC303	Operate grinding equipment	
MSMPMC324	Move materials	
UEPOPS098	Operate and monitor gas production plant	
One (**1**) unit may be chosen from Group A in PMA30116 Certificate III in Process Plant Operations		

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Group B –Support electives		
Unit code	**Unit title**	**Prerequisites**
HLTAID011	Provide first aid	
MEM05012	Perform routine manual metal arc welding	*
MEM09002	Interpret technical drawing	*
MEM16005	Operate as a team member to conduct manufacturing, engineering or related activities	*
MSL952003	Collect routine site samples	
MSMPER200	Work in accordance with an issued permit	
MSMPER201	Monitor and control work permits	
MSMPER202	Observe permit work	
MSMPER205	Enter confined space	*
MSMSUP200	Achieve work outcomes	
MSMSUP204	Pack products or materials	
MSMSUP205	Transfer loads	
MSMSUP210	Process and record information	
MSMSUP240	Undertake minor maintenance	
MSMSUP273	Handle goods	
MSMSUP280	Manage conflict at work	
MSMSUP291	Participate in continuous improvement	

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MSMSUP292	Sample and test materials and product	
MSMWHS201	Conduct hazard analysis	
MSMWHS205	Control minor incidents	
MSMWHS210	Undertake first response to non-fire incidents	
MSMWHS212	Undertake first response to fire incidents	
MSMWHS216	Operate breathing apparatus	
MSMWHS217	Gas test atmospheres	
MSMWHS218	Control the risks of falls	
MSS402004	Sustain process improvements	
MSS402032	Interpret cost and waste in terms of customer value	
MSS402042	Apply 5S procedures	
MSS402054	Monitor process capability	
MSS402055	Apply quality standards	
MSS402084	Undertake root cause analysis	
MSS402085	Contribute to the application of a proactive maintenance strategy	
MSS402086	Use planning software systems in operations	
MSS402087	Apply cost factors to work practices	
PMAOMIR210	Control evacuation to muster point	

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PMASUP236	Operate vehicles in the field	
PMASUP237	Undertake crane, dogging and load transfer operations	
PMASUP241	Maintain pipeline easements	
PMASUP242	Monitor pipeline civil works	
PMASUP243	Monitor and maintain pipeline coatings	
PMASUP244	Prepare and isolate plant	
PMASUP245	Break and make flanged joints using hand tools	
PMASUP246	Disconnect and reconnect non-flared tube fitting joints	
PMAWHS211	Prepare equipment for emergency response	
PMAWHS213	Undertake fire control and emergency rescue	
PMAWHS214	Undertake helicopter safety and escape	
PMAWHS215	Apply offshore facility abandonment and sea survival procedures and practices	
TLID0016	Operate a forklift	
Group C – Other electives		
Unit code	**Unit title**	**Prerequisites**

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FBPPHM2001	Follow work procedures to maintain Good Manufacturing Practice requirements	
MEM11011	Undertake manual handling	*
MSMENV172	Identify and minimise environmental hazards	
MSMOPS100	Use equipment	
MSMOPS102	Perform tasks to support production	
MSMSUP101	Clean workplace or equipment	
MSMSUP106	Work in a team	
MSMWHS100	Follow WHS procedures	
PMAOPS101	Read dials and indicators	
PMAOPS105	Select and prepare materials	
Up to **three** (3) relevant units may be chosen from this Training Package, other endorsed Training Packages and accredited courses where those units are packaged in a Certificate II.		

Pre-requisite Requirements

Unit of competency	Prerequisite requirement
MEM04001 Operate melting furnaces	MEM11011 Undertake manual handling MEM13004 Work safely with molten metals/glass MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information

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MEM05012 Perform routine manual metal arc welding	MEM11011 Undertake manual handling MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM09002 Interpret technical drawing	MEM12023 Perform engineering measurements MEM12024 Perform computations MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM11011 Undertake manual handling	MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM16005 Operate as a team member to conduct manufacturing, engineering or related activities	MEM11011 Undertake manual handling MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MSMPER205 Enter confined space	MSMPER200 Work in accordance with an issued permit
PMAOPS222 Operate and monitor pumping systems and equipment	PMAOPS221 Operate and monitor prime movers PMAOPS324 Operate a gas turbine

Qualification Mapping Information

Current Code and Title	Previous Code and Title	Comments	Equivalence
PMA20116 Certificate II in	PMA20113 Certificate II in	Supersedes and is equivalent to PMA20113	Equivalent

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Process Plant Operations	Process Plant Operations	Certificate II in Process Plant Operations. Equivalent	

Links

Companion volumes, including implementation guides, are found on the national training register - https://training.gov.au/training/details/PMA.

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