

PMA 4 01 08

Certificate IV in Process Plant Technology



This qualification is defined in the nationally endorsed Chemical, Hydrocarbons and Oil Refining Training Package (PMA 08).

A Training Package links workplace competencies with qualifications under the Australian Qualifications Framework.

- ◆ Have your existing skills and knowledge recognised
- ◆ Gain a qualification or have a single competency recognised
- ◆ Contextualised to your workplace
- ◆ Flexible training delivery

- ◆ ABN 38 010 041 835
- ◆ ACN 010 041 835
- ◆ National RTO No 105800
- ◆ Registered to deliver training and issue qualifications from the following national training packages:
 - ◆ PMA 08 Chemicals, Hydrocarbons & Oil Refining
 - ◆ PMC 04 Manufactured Mineral Products
 - ◆ PML 04 Laboratory Operations
 - ◆ BSB 07 Business Services
- ◆ Corporate Member Association of Geotechnical Testing Authorities

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Certificate IV in Process Plant Technology

This qualification is suitable for senior on-the-job plant technicians responsible for problem solving, making improvements to the process, working in liaison with engineers to make plant modifications, or trailing new products.

The nominal duration of the training programme is up to **48 months**, although with recognition of current competency and self-paced learning, it can be completed appreciably sooner.

The **Chemical Industry Technician Level IV** observes and controls the operation of continuous or batch processing plant, (often automated or governed by control panels), to produce a wide range of products.

They will operate controls to regulate machinery, temperature, pressure and rate of flow and control the preparation, measuring, feeding of raw materials and processing agents. They will also be responsible for product quality and quantity, and are also required to diagnose and rectify a range of problems, including materials and equipment settings.

Entrants may be without prior qualifications, or have completed a Certificate I, II or III which will provide direct credits in this programme.

Entry may be through an **existing worker traineeship** or **fee-for-service**.

Five compulsory core units:

- MSAPMOHS110A Follow emergency response procedures
- MSAPMSUP100A Apply workplace procedures
- MSAPMSUP102A Communicate in the workplace
- MSAPMSUP172A Identify and minimise environmental hazards
- MSAPMOHS200A Work safely

Select at least one unit from this list:

- MSAPMOPS400A Optimise process/plant area
- MSAPMOPS401A Trial new process product
- PMAOPS402A Respond to abnormal process situations (P)
- PMAOPS405A Operate complex control systems
- PMAOPS410B Monitor remote production facilities
- PMAOPS411B Manage plant shutdown and restart
- PMAOPS450B Solve colour problems

Select the balance of units (up to 20) from Groups 3A and 3B below, with a maximum of 18 from Group 3B.

Group 3A

- MSAPMOHS400A Contribute to workplace OHS management system
- MSAPMOHS401A Assess risk
- PMAOHS420B Develop First Aid procedures and manage resources
- PMAOMIR407B Audit incident preparedness and established response system

- PMAOMIR418B Coordinate incident response
- PMAOMIR424B Develop and maintain community relationships
- PMAOMIR430B Conduct and assess incident exercises
- PMAOMIR444B Develop incident containment tactics
- PMAOMIR449B Monitor legal compliance obligations during incidents
- MSAPMPER400A Coordinate permit process
- MSAPMSUP400A Develop and monitor quality systems
- PMASUP410A Develop plant documentation
- PMASUP420B Minimise environmental impact of process
- PMASUP432B Coordinate pipeline projects
- PMASUP440B Commission/recommission plant
- PMASUP441C Decommission plant
- PMASUP445A Participate in HAZOP studies (P)
- PMLSAMP400B Obtain representative samples in accordance with a sampling plan
- MSACMS401A Ensure process improvements are sustained
- MSACMC411A Lead a competitive manufacturing team
- MSACMC413A Lead team culture improvement
- MSACMT430A Improve cost factors in work practices
- MSACMT440A Lead 5S in a manufacturing environment
- MSACMT441A Facilitate continuous improvement in manufacturing
- MSACMT450A Undertake process capability improvements

Programme Structure – 26 units of competency:

- MSACMT451A Mistake proof a production process
 - MSACMT452A Apply statistics to processes in manufacturing
 - MSACMT460A Facilitate the use of planning software systems in manufacturing
 - MSAENV472A Implement and monitor environmentally sustainable work practises
 - MSACMT481A Undertake proactive maintenance analyses
 - MSACMT482A Assist in implementing a proactive maintenance strategy
 - MSAPMOPS404A Co-ordinate maintenance
 - MSAPMOPS405A Identify problems in fluid power system
 - MSAPMOPS406A Identify problems in electronic control systems
 - TAAASS401A Plan and organise assessment
 - TAAASS402A Assess competence
 - TAAASS404A Participate in assessment validation (partial equivalence)
- Group 3B*
- MSAPMOHS300A Facilitate the implementation of OHS for a work group
 - PMAOHS310B Investigate incidents
 - PMAOHS311B Lead emergency teams
 - PMAOHS312B Command the operation of survival craft (P)
 - PMAOHS320C Provide advanced First Aid response (P)
 - PMAOHS321B Provide First Aid response in remote and/or isolated area (P)
 - PMAOMIR301B Undertake initial rescue (P)
 - PMAOMIR302B Respond to a helideck incident
 - PMAOMIR317B Facilitate search and rescue operations
 - PMAOMIR320B Manage incident response information
 - PMAOMIR321B Manage communication systems during an incident
 - PMAOMIR346B Assess and secure an incident site
 - MSAPMPER300B Issue work permits (P)
 - MSAPMSUP300A Identify and implement opportunities to maximise production efficiencies
 - MSAPMSUP301A Apply HACCP to the workplace
 - MSAPMSUP303A Identify equipment faults
 - PMASUP305A Operate Offshore Cranes
 - MSAPMSUP309A Maintain and organise workplace records
 - MSAPMSUP310A Contribute to development of plant documentation
 - PMASUP311A Operate communications hub
 - MSAPMSUP330A Develop and adjust a production schedule
 - PMASUP341B Monitor and maintain instrument and control systems (P)
 - PMASUP342B Monitor and maintain electrical systems (P)
 - PMASUP343B Monitor and maintain cathodic protection systems
 - PMASUP344B Monitor and control repairs and modifications on operational pipe
 - PMASUP345A Perform equipment condition monitoring
 - PMASUP346A Control corrosion
 - PMASUP347A Undertake corrosion inspection in a petrochemical environment
 - MSAPMSUP382A Provide coaching/mentoring in the workplace
 - MSAPMSUP383A Facilitate a team
 - MSAPMSUP390A Use structured problem solving tools
 - PMLTEST300B Perform basic tests
 - MEMO9003B Prepare basic engineering drawing (P)
 - PSPGOV308B Work effectively with diversity
 - PUAFIR306A Render hazardous materials safe
 - PUASAR003A Undertake technical rescue
 - PUASAR004A Undertake vertical rescue
 - PUASAR005A Undertake Confined Space Rescue
 - TAAASS301A Contribute to assessment
 - TAADEL301A Provide training through instruction and demonstration of work skills
 - PMAOPS300B Operate a production unit
 - PMAOPS301B Produce product by distillation (P)
 - PMAOPS302B Operate reactors and reaction equipment
 - PMAOPS303B Operate furnaces to induce reaction
 - PMAOPS304B Operate and monitor compressor systems and equipment (P)
 - PMAOPS305B Operate process control systems
 - PMAOPS307B Transfer bulk fluids into/out of storage facility (P)
 - PMAOPS308B Organise storage and logistics of general materials
 - PMAOPS309B Operate particulates handling/ storage equipment
 - PMAOPS312B Undertake ship loading/ unloading operations
 - PMAOPS319A Adjust batch
 - PMAOPS320B Conduct artificial lift
 - PMAOPS321B Undertake well management
 - PMAOPS323A Operate and monitor heating furnace
 - PMAOPS324A Operate a gas turbine
 - PMAOPS325B Generate electrical power
 - PMAOPS326B Produce product using gas absorption
 - PMAOPS327B Produce product using fixed bed dehydration
 - PMAOPS329B Produce product using liquid extraction
 - PMAOPS330B Communicate pipeline control centre operations
 - PMAOPS335A Conduct pipeline pigging
 - PMAOPS340B Operate cryogenic processes
 - PMAOPS350B Match and adjust colour
 - PMAOPS390B Operate a biochemical process
 - FDFPHGMP3B Monitor the implementation of Good Manufacturing Practice procedures
 - MEMO7033B Operate and monitor basic boiler
 - MEMO7034A Operate and monitor intermediate class boiler (P)
 - MEM18011C Shutdown and isolate machines/equipment
 - UEPOPS340A Operate and monitor a steam turbine
 - MSAPMOHS205A Control minor incidents
 - MSAPMOHS210B Undertake first response to non-fire incidents
 - PMAOHS211B Prepare equipment for emergency response
 - MSAPMOHS212A Undertake first response to fire incidents
 - PMAOHS213B Undertake fire control and emergency rescue
 - PMAOHS214B Undertake helicopter safety and escape

- PMAOHS215B Apply offshore facility abandonment and sea survival procedures
- MSAPMOHS216A Operate breathing apparatus
- MSAPMOHS217A Gas test atmospheres
- MSAPMOHS220A Provide initial First Aid response
- PMAOHS221B Maintain First Aid supplies and records
- PMAOMIR210A Control evacuation to muster point
- MSAPMPER200B Work in accordance with an issued permit
- MSAPMPER201A Monitor and control work permits
- MSAPMPER202A Observe permit work
- MSAPMPER205B Enter confined space
- MSAPMSUP200A Achieve work outcomes
- MSAPMSUP201A Receive or dispatch goods
- MSAPMSUP204A Pack products or materials
- MSAPMSUP205A Transfer loads
- MSAPMSUP210A Process and record information
- PMASUP236B Operate vehicles in the field
- PMASUP237B Undertake crane, dogging and load transfer operations
- MSAPMSUP240A Undertake minor maintenance
- PMASUP241B Maintain pipeline easements
- PMASUP242B Monitor pipeline civil works
- PMASUP243B Monitor and maintain pipeline coatings
- MSAPMSUP280A Manage conflict at work
- MSAPMSUP291A Participate in continuous improvement
- MSAPMSUP292A Sample and test materials and product
- PMLSAMP200A Collect routine site samples
- MSACMS201A Sustain process improvements
- MSACMT230A Apply cost factors to work practices
- MSACMT231A Interpret product costs in terms of customer requirements
- MSACMT240A Apply 5S procedures in a manufacturing environment
- MSACMT250A Monitor process capability
- MSACMT251A Apply quality standards
- MSACMT260A Use planning software systems in manufacturing
- MSACMT270A Use sustainable energy practices
- MSACMT271A Use sustainable environmental practices
- MSACMT280A Undertake root cause analysis
- MSACMT281A Contribute to the application of a proactive maintenance strategy
- MNMC205A Conduct Local Risk Assessment
- MNMG237A Work safely at heights
- MSAENV272A Participate in environmentally sustainable work practices
- MEMO5012C Perform routine manual metal arc welding
- MEMO9002B Interpret technical drawing
- MEM16005A Operate as a team member to conduct manufacturing, engineering or related activities
- TLID1007C Operate a forklift
- MSAPMOPS200A Operate equipment
- PMAOPS201B Operate fluid flow equipment
- PMAOPS202B Operate fluid mixing equipment
- PMAOPS203B Handle goods
- PMAOPS204B Use utilities and services
- PMAOPS205B Operate heat exchangers
- PMAOPS206B Operate separation equipment
- PMAOPS207B Operate powered separation equipment
- PMAOPS208B Operate chemical separation equipment
- PMAOPS210B Operate particulates handling equipment
- PMAOPS211B Operate manufacturing extruders
- MSAPMOPS212A Use enterprise computers or data systems
- PMAOPS213B Package product/ material
- PMAOPS216B Operate local control system
- PMAOPS217B Operate wet milling equipment
- PMAOPS220B Monitor chemical reactions in the process
- PMAOPS221B Operate and monitor prime movers
- PMAOPS222B Operate and monitor pumping systems and equipment (P)
- PMAOPS223B Operate and monitor valve systems
- PMAOPS224B Provide fluids for utilities and support
- PMAOPS230B Monitor, operate and maintain pipeline stations and equipment
- PMAOPS231B Control gas odourisation
- PMAOPS232B Produce product by filtration
- PMAOPS240B Store liquids in bulk
- PMASMELT260B Form carbon anodes
- PMASMELT261B Bake carbon anodes
- PMASMELT262B Clean and strip anode rods
- PMASMELT263B Spray carbon anodes
- PMASMELT264B Start up reduction cells
- PMASMELT265B Operate reduction cells
- PMASMELT266B Deliver molten metal
- PMASMELT267B Cast aluminium ingots
- PMASMELT268B Vertical direct casting
- PMASMELT269A Operate cell tending equipment
- PMASMELT270A Supply product from reduction cells
- PMAOPS280A Interpret process plant schematics
- PMAOPS290B Operate a biotreater
- FDFPHGMP2A Implement Good Manufacturing Practice procedures
- UEPOPS319A Operate and monitor gas production plant
- MSAPMOHS100A Follow OHS procedures
- MSAPMSUP101A Clean workplace or equipment
- MSAPMSUP106A Work in a team
- MEM11011B Undertake manual handling
- MSAPMOPS100A Use equipment
- PMAOPS101C Read dials and indicators
- MSAPMOPS102A Perform tasks to support production
- PMAOPS105C Select and prepare materials
- FDFPHGMP1A Follow work procedures to maintain Good Manufacturing Practice

Up to five relevant units packaged at Certificate III or above may be chosen from other endorsed Training Packages or from other qualifications in this Training Package.