



Australian Government

MSMPMC401 Set up and tune a process

Release: 1

MSMPMC401 Set up and tune a process

Modification History

Release 1. New unit. Supersedes and is equivalent to PMC553000 Set up and tune a process

Application

This unit describes the skills and knowledge required to set up and tune a process as typically required for start-up, job change and equipment changes in preparation for production.

This unit applies to experienced operators, leading hands, supervisors or those in similar roles who are required to shut down and isolate equipment, prepare and set up equipment, adjust to remedy faults and non-conformity and solve problems within area of responsibility.

This unit applies to an experienced operator demonstrating broad theoretical and technical knowledge and well-developed skills in situations that require some discretion and judgement. The experienced operator may work alone or as part of a team or group and in liaison with other shift team members, team leader and supervisor.

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

Operations

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for equipment installation or change parts	1.1 Identify all safety and emergency procedures 1.2 Shut down equipment in accordance with procedures and manufacturer specifications 1.3 Isolate equipment 1.4 Remove ancillary equipment 1.5 Complete records and logs for removal of equipment or change parts

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Prepare the process for production	2.1 Consult the production schedule to determine the product to be manufactured 2.2 Ensure that the raw materials are available 2.3 Ensure that the equipment or change parts, ancillaries and fixtures are available 2.4 Perform pre-installment equipment preparation according to procedures 2.5 Check that the equipment is in a safe condition for use
3. Set up process	3.1 Perform checks and tests to product and equipment specifications 3.2 Check alignment of all equipment according to product specifications and procedures 3.3 Check that process or equipment is set up as required for the production schedule
4. Tune the process	4.1 Monitor operation and compare with standard operating procedures (SOPs) 4.2 Identify any deviation from standard performance 4.3 Identify the cause of the deviation and act 4.4 Adjust the equipment settings, process conditions or raw materials to bring production into specification 4.5 Continue monitoring operation and adjusting until product or equipment is within specification
5. Respond to problems	5.1 Identify routine and non-routine problems in the equipment or process 5.2 Rectify problem using appropriate solution within area of responsibility 5.3 Report problems outside area of responsibility to designated person
6. Control hazards	6.1 Identify hazards associated with the equipment or process 6.2 Assess the risks arising from those hazards 6.3 Implement measures to control those risks

Foundation Skills

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

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

Unit Mapping Information

Release 1. New unit. Supersedes and is equivalent to PMC553000 Set up and tune a process

Links

Companion Volume Implementation Guides are available at VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>

Assessment Requirements for MSMPMC401 Set up and tune a process

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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:

- set up and tuned a process on at least 1 occasion, including:
 - monitoring the following key variables to ensure product integrity and conformance to specification:
 - operating temperatures
 - pressure
 - material flow
 - discharge rates
 - material properties and chemical reactions
 - cycle time
 - output rate
 - recognising possible causes of the following problems:
 - wrong reading
 - instrument failure or malfunction
 - electrical or mechanical failure or malfunction
 - raw material variations or contamination
 - process abnormality
 - procedural error.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- equipment used in the process, including:
 - functions, limitations
 - start-up, operation and shutdown processes
 - impact of equipment settings on product quality and production output
- impact of variations in process conditions and raw materials on product quality and production output
- characteristics of materials being processed and their behaviour in relation to process conditions and stages of production

- quality requirements at each stage of production
- common adjustments in process variables and their impact on product quality and production output
- routine and non-routine problems that may arise, the range of possible causes and appropriate actions
- hierarchy of control
- work health and safety (WHS) requirements relevant to work outcome
- hazards relating to equipment and/or process:
 - their possible causes
 - potential consequences
 - risk control procedures.
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Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies, as well as, using suitable facilities, equipment and resources.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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