



Australian Government

PMAOPS210 Operate solids handling equipment

Release: 1

PMAOPS210 Operate solids handling equipment

Modification History

Release 1. Supersedes and is equivalent to PMAOPS210B Operate particulates handling equipment

Application

This unit of competency covers the skills and knowledge required to operate equipment used to store and convey solids.

This unit of competency applies to operators who are required to manage storage and transfer of solids in required quality and quantity, monitor equipment, carry out minor maintenance according to procedures, and recognise problems and take appropriate action.

This unit of competency applies to an individual who may work alone although under routine direction and supervision. They may work as part of a team or group and will work in liaison with other shift team members and the control room operator, as appropriate.

The unit of competency applies to solids handling equipment, including:

- mechanical conveyors/feeders (e.g. belt, vibrating, screw and flight; and feeders, such as screw, star, slide, volumetric and weight)
- pneumatic conveyors, including aspects, such as dense phase, disperse phase, pressure and vacuum
- storage (e.g. silos and hoppers, purging hoppers and stockpiles)
- bulk tankers, transportable containers and intermediate storage.

In a typical scenario the operator would control the conveyor systems transporting solids into or out of storage (e.g. silos, stockpiles). This means setting up, starting and stopping mechanical or pneumatic conveyor systems and their feeder systems (if any) to convey the materials from one point to another (e.g. between storage units, from storage to packing area, between processes). During the process the operator would monitor the operations and take appropriate action to keep solids moving correctly. This could include removing blockages and preventing rat holing or bridging in hoppers/silos.

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

Pre-requisite Unit

Nil

Competency Field

Operations

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

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

- | | | | |
|---|---|-----|---|
| 1 | Prepare for work | 1.1 | Receive and give shift handover |
| | | 1.2 | Identify work requirements |
| | | 1.3 | Identify and control hazards |
| | | 1.4 | Coordinate with appropriate personnel |
| | | 1.5 | Check for recent work undertaken on plant item |
| | | 1.6 | Note any outstanding/incomplete work |
| | | 1.7 | Check operational status of equipment |
| | | | |
| 2 | Operate conveyors/ feeders in accordance with procedures | 2.1 | Identify the type of conveyor/feeder |
| | | 2.2 | Operate ancillary equipment |
| | | 2.3 | Adjust rate of transfer as appropriate to type of solids handling equipment and duty |
| | | 2.4 | Complete routine checks, logs and paperwork, taking action on unexpected observations, readings and trends |
| | | | |
| 3 | Transfer solids | 3.1 | Check source, destination and route of planned transfer |
| | | 3.2 | Check quality, quantity and location of stored solids |
| | | 3.3 | Transfer solids into, out of and between storage units as required |
| | | 3.4 | Supply customers with correct quality and quantity in a timely manner |
| | | | |
| 4 | Recognise and take action on abnormal | 4.1 | Monitor solids handling equipment frequently and critically throughout shift using measured/indicated data and senses |

	situations in accordance with procedures	4.2	Identify impacts of any changes upstream and downstream
		4.3	Recognise situations which may require action
		4.4	Resolve routine problems
		4.5	Take actions on other abnormal situations to make safe and have the situation resolved
5	Isolate and de-isolate equipment	5.1	Complete any required prestart checks
		5.2	Start up/shut down/changeover solids handling equipment according to the plant type and duty in liaison with other personnel
		5.3	Isolate plant
		5.4	Make safe for required work
		5.5	Check plant is ready to be returned to service
		5.6	De-isolate and prepare plant for return to service

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.

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, and include one or more of the following: • legislative requirements, including work health and safety (WHS) • industry codes of practice and guidelines • environmental regulations and guidelines
-----------------------------	---

- Australian and other standards
- licence and certification requirements

All operations to which this unit applies are subject to stringent health, safety and environment (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 HSE requirements, the HSE requirements take precedence.

Procedures All operations must be performed in accordance with relevant procedures. Procedures may be written, verbal, visual, computer-based or in some other form. They include one or any combination of:

- emergency procedures
- work instructions
- standard operating procedures
- safe work method statements
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant

Hazards Hazards include one or more of the following:

- material falling from conveyor
- pinch points and entanglement
- electricity
- gas
- gases and liquids under pressure
- structural hazards
- structural collapse
- equipment failures
- industrial (machinery, equipment and product)
- equipment or product mass
- noise, rotational equipment or vibration
- plant services (steam, condensate and cooling water)
- limited head spaces or overhangs
- working at heights, in restricted or confined spaces, or in environments subjected to heat, dusts or vapours
- flammability and explosivity
- hazardous products and materials
- unauthorised personnel

- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks
- extreme weather
- other hazards that might arise

Routine problems

Routine problems must be resolved by applying known solutions.

Routine problems are predictable and include one or more of the following:

- damage to solids
- damage to conveyor and structures
- cleanliness of conveyor
- contamination of stored stock
- rat holing and bridging in silos
- routing issues

Known solutions are drawn from one or more of the following:

- procedures
- training
- remembered experience

Non-routine problems must be reported according to according to relevant procedures.

Start up/shut down as required

Start up/shut down as required includes the following:

- start up and shut down to/from normal operating conditions
- start up and shut down to/from isolated, cold or empty
- start up and shut down to/from other conditions/situations experienced on the plant

Action

Action in accordance with procedures includes all of the following:

- determining problems needing action
- determining possible fault causes
- rectifying problem using appropriate solution within area of responsibility
- following through items initiated until final resolution has occurred
- reporting problems outside area of responsibility to designated person

Resolve routine problems	Resolving routine problems includes one or more of the following: • making adjustments • carrying out minor maintenance • identifying and reporting problems outside operator's scope of responsibility • identifying and controlling hazards related to equipment
Operate	Operate is to monitor, adjust/change the plant item/unit/system to meet specifications, by one or more of the following: • manually in the plant • using local controller in the plant • using the process control system in the control room
Ancillary equipment	Ancillary equipment includes one or more of the following: • fans/blowers • pulley/drum drives • hydraulic devices • chutes and bins

Unit Mapping Information

Release 1. Supersedes and is equivalent to PMAOPS210B Operate particulates handling equipment

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>