Australian Government

PMASUP540 Analyse equipment performance

Release: 1

PMASUP540 Analyse equipment performance

Modification History

Release 1. Supersedes and is equivalent to PMASUP540B Analyse equipment performance

Application

This unit of competency covers the skills and knowledge required to analyse performance of plant, equipment and equipment components and recommend improvements. It applies to all work environments and sectors within the chemical, hydrocarbons and refining industry.

This unit of competency applies to senior technicians or those in similar roles who are required to apply in-depth knowledge of process and plant in order to calculate the theoretical performance of an item of equipment, gather data to determine the actual performance of the item of equipment, calculate actual versus theoretical performance, and make recommendations based on the performance verification results.

The technician will have detailed operational and process knowledge but is not required to demonstrate ‘hands on’ operation of equipment as part of this unit of competency.

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

Pre-requisite Unit

Nil

Competency Field

Support

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	**Determine theoretical performance**	1.1	Identify item of plant or equipment to be analysed
		1.2	Locate and interpret design specification
		1.3	Identify process materials being, or to be, processed during verification trial
		1.4	Determine process material properties under process conditions

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		1.5	Calculate theoretical performance of components with that material under those conditions
2	**Conduct trial**	2.1	Design verification trial to be compatible with theoretical analysis
		2.2	Determine measurements needed from trial to yield required data
		2.3	Select equipment suitable to give required measurements
		2.4	Arrange for verification trial with relevant process personnel
		2.5	Set up required measurement equipment
		2.6	Supervise trial and ensure trial conditions are appropriate
		2.7	Collect trial data for analysis
3	**Verify performance of plant/equipment**	3.1	Compare theoretical with actual performance
		3.2	Determine significance of variation between theoretical and actual performance
		3.3	Investigate any suspicious results and take action
4	**Recommend required action**	4.1	Determine action to bring performance to desired level
		4.2	Initiate the corrective action in accordance with company procedures
		4.3	Determine measures to increase equipment productivity
		4.4	Re-check performance after corrective action is implemented

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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 are written, verbal, visual, computer-based or in some other form, include one or more of the following:

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

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Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875

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