



Australian Government

Department of Education, Employment and Workplace Relations

MSS402081A Contribute to the application of a proactive maintenance strategy

Release: 1

MSS402081A Contribute to the application of a proactive maintenance strategy

Modification History

New unit, superseding MSACMT281A Contribute to the application of a proactive maintenance strategy - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to make a positive contribution to proactive maintenance strategies, including actions that contribute to equipment uptime and overall equipment effectiveness (OEE).

Application of the Unit

This unit applies to an individual in an organisation which is following a predictive, preventative or reliability-centred maintenance strategy and which requires commitment from all employees. The employee should 'own' their equipment/plant and take an active part in the implementation of the strategy within the scope of their authority.

This unit requires the application of skills associated with accessing and maintaining equipment/plant documentation, It also requires problem solving, initiative and enterprise to continually monitor and maintain operational performance of equipment/plant used in work role.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

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| 1 | Maintain equipment/plant | 1.1 | Keep equipment/plant within area of responsibility clean |
| | | 1.2 | Ensure equipment/plant is serviced and adjusted, as required, in accordance with procedures and own level of responsibility |
| | | 1.3 | Access manufacturer manuals and specifications, where required, to expand knowledge on the maintenance of equipment/plant |
| | | 1.4 | Access and update documentation on equipment/plant operation and maintenance as appropriate to workplace procedures |
| 2 | Monitor operation of equipment/plant | 2.1 | Regularly check key conditions of the equipment/plant as defined in workplace procedures |
| | | 2.2 | Regularly check equipment/plant OEE |
| | | 2.3 | Note any deviation from conditions specified in procedures |
| | | 2.4 | Identify any previous occurrences of this deviation |
| 3 | Identify deviations and patterns | 3.1 | Identify any previous occurrences of a deviation |
| | | 3.2 | Identify any related deviations which have occurred |
| | | 3.3 | Identify any unusual occurrence which may be related to a deviation |

- 4 Take action appropriate to competency and authority on deviation
 - 4.1 Liaise with relevant people regarding the deviation and the solution
 - 4.2 Implement solution and/or assist with the implementation of the solution, as appropriate

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- reading and interpreting electronic and hard copy plant, equipment, and process instructions and documents, including where used:
 - work instructions
 - standard operating procedures
 - workshop manuals and instructions from equipment manufacturers in regards to plant or equipment operation, regular maintenance, troubleshooting, and record of use or production
 - production and batch sheets
 - temporary instructions
 - other provided operating instructions
- examining equipment procedures, products and processes for possible causes of deviations from patterns of normal use
- interpreting OEE rates
- servicing and maintaining plant and equipment consistent with area of responsibility and own technical skills

Required knowledge

Required knowledge includes:

- normal behaviour of the equipment/plant
- indicators of abnormal performance
- principles of operation of plant and equipment sufficient to recognise problems and propose solutions
- appropriate cleaning and adjusting for the equipment/plant/area as required by procedures
- concept of OEE as: *availability x performance x quality rate*

where:

- availability takes into account losses due to breakdown, set up and adjustments
- performance takes into account losses due to minor stoppages, reduced speed and idling
- quality rate takes into account losses due to rejects, re-works and start-up waste

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

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| <p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p> | <p>A person who demonstrates competency in this unit must be able to provide evidence of the ability to:</p> <ul style="list-style-type: none"> • recognise deviations from normal performance patterns and deal with them appropriately • undertake operational service and maintenance on plant and equipment according to instructions. |
| <p>Context of and specific resources for assessment</p> | <p>Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices.</p> <p>Access may be required to:</p> <ul style="list-style-type: none"> • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies. |
| <p>Method of assessment</p> | <p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed by using a combination of the following to generate evidence:</p> <ul style="list-style-type: none"> • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge.</p> |

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| | Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. |
| Guidance information for assessment | Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed. |

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

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| Competitive systems and practices | <p>Competitive systems and practices may include, but are not limited to:</p> <ul style="list-style-type: none"> • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • OEE • takt time • process mapping • problem solving |
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| | <ul style="list-style-type: none"> • run charts • standard procedures • current reality tree <p>Competitive systems and practices should be interpreted so as to take into account:</p> <ul style="list-style-type: none"> • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector |
| Uptime | <p>Uptime refers to:</p> <ul style="list-style-type: none"> • the overall availability of the plant – it is the inverse of downtime or the unavailability of the plant. Ideal uptime is 100% |
| Procedures | <p>Procedures may include:</p> <ul style="list-style-type: none"> • work instructions • standard operating procedures • formulas/recipes • batch sheets • temporary instructions and similar instructions provided for the smooth running of the plant • good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and responsible care) • government regulations <p>Procedures may be:</p> <ul style="list-style-type: none"> • written, verbal, computer-based or in some other format |

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.