



Australian Government

MSS403051 Mistake proof an operational process

Release: 1

MSS403051 Mistake proof an operational process

Modification History

Release 1. Supersedes and is equivalent to MSS403051A Mistake proof an operational process

Application

This unit of competency applies to an individual who needs to analyse a process that a team is responsible for and determine methods of mistake proofing it (e.g. ensuring it only produces product within an acceptable range or error-free transport and storage). The person will typically be a technical expert, team leader or be in a role where they have sufficient technical understanding of processes in their own work and that of others to be able to mistake proof the production process in their area. After improvement activities have been undertaken these improvements need to be sustained.

This unit requires the application of skills associated with information gathering and analysis. Initiative, enterprise and problem solving are also required to identify mistakes and determine strategies for eliminating them. This unit also requires communication and teamwork skills to ensure mistake proofing strategies are implemented and self-management and learning skills to continually reflect on and integrate feedback about the effectiveness of strategies.

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

Pre-requisite Unit

Nil

Competency Field

Competitive systems and practices

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

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

- | | | | |
|---|------------------------|-----|---|
| 1 | Analyse process | 1.1 | Identify sources of variability/non-conformance in the process. |
| | | 1.2 | Identify critical control points in process. |

		1.3	Analyse causes of variability/non-conformance.
2	Develop preventative techniques/systems	2.1	Liaise with team members and other people to develop mistake proof options for performing operation.
		2.2	Test and validate mistake proofing options.
3	Implement permanent fix	3.1	Liaise with relevant people to have systems/procedures changed to implement solution.
		3.2	Liaise with relevant people to implement the solution.
		3.3	Liaise with relevant people to ensure self and others in the team or work area have an appropriate skills set.
		3.4	Follow through to ensure implementation occurs.
4	Monitor implementation	4.1	Critically observe the implementation.
		4.2	Compare the results of the implementation against the expected outcomes.
		4.3	Modify solution to improve outcomes.
		4.4	Ensure procedures reflect change.
		4.5	Ensure training/assessment reflects change.
		4.6	Audit change at agreed period/cycle.
		4.7	Take action on any observed deviation.
5	Seek improvements	5.1	Observe changes.
		5.2	Analyse process again, if required, to ensure improvements are sustained.

Foundation Skills

This section describes those required skills (language, literacy and numeracy) 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.

- | | |
|---|---|
| Competitive systems and practices include one or more of: | <ul style="list-style-type: none">• lean operations• agile operations• preventative and predictive maintenance approaches• 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• overall equipment effectiveness (OEE)• takt time• process mapping• problem solving• run charts• standard procedures• current reality tree. |
| Mistake proofing (baka-yoke or poka-yoke) includes one or more of: | <ul style="list-style-type: none">• eliminating the possibility of an error occurring• reducing the occurrence of errors and/or to minimise their impact• eliminating the possibility of the error via changes to the process• preventing the error from occurring via physical or virtual barriers• reducing likelihood of the error by encouraging correct action (e.g. through warning systems)• mitigating the impact of the error if it does occur. |

Prioritising options for mistake proofing includes one or more of:

- success rate in eliminating errors
- feasibility
- skills required by employees
- cost
- capacity to reduce waste.

Procedures (written, verbal, visual, computer based, etc.) include one or any combination of:

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

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS403051A Mistake proof an operational process

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

Assessment Requirements for MSS403051 Mistake proof an operational process

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include the ability to mistake proof (apply baka yoke or poka yoke) on one (1) or more occasions and to:

- analyse causes of variability and non-conformity
- develop and validate baka yoke or poka yoke options
- implement most appropriate option
- monitor the change and seek further improvements.

Knowledge Evidence

Must provide evidence that demonstrates knowledge relevant to their job role sufficient to fulfil their job role independently, including:

- baka yoke and poka yoke approaches
- factors causing variability in the process and methods of controlling it
- analyse error causes and determine control options
- analyse benefit/cost, feasibility, regulatory compliance and perceived value to the customer
- validation of baka yoke and poka yoke proposals.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence shall be based on a holistic assessment of the evidence.
- The collection of performance evidence is best done from a report and/or folio of evidence drawn from:
 - a single project which provides sufficient evidence of the requirements of all the elements and performance criteria
 - multiple smaller projects which together provide sufficient evidence of the requirements of all the elements and performance criteria.
- A third-party report, or similar, may be needed to testify to the work done by the individual, particularly when the project has been done as part of a project team.
- Assessment should use a real mistake proofing project in an operational workplace.

- Knowledge evidence may be collected concurrently with performance evidence or through an independent process such as workbooks, written assessments or interviews (provided a record is kept).
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- The assessor must demonstrate both technical competency and currency.
- Technical competence can be demonstrated through:
 - relevant VET or other qualification/Statement of Attainment AND/OR
 - relevant workplace experience
- Currency can be demonstrated through:
 - performing the competency being assessed as part of current employment OR
 - having consulted with an organisation providing relevant environmental monitoring, management or technology services about performing the competency being assessed within the last twelve months.

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