



Australian Government

MSMOPS301 Treat corrosion

Release: 1

MSMOPS301 Treat corrosion

Modification History

Release 1. Supersedes and is equivalent to MSAPMOPS301A Treat corrosion

Application

This unit of competency covers the skills and knowledge required to examine an object for corrosion, confirm the appropriateness of any corrosion treatment and monitor the treatment process.

The object may be any type of plant, equipment or structure in any service environment, such as a plant/factory area, a well head, an item of major infrastructure or a pipeline covering thousands of kilometres. This unit applies to situations where the corrosion is treated using a surface coating.

Corrosion typically refers to any electrochemical process leading to the decay of metal but also includes decay processes in non-metals.

This unit of competency applies to technicians. The technician will be required to examine substrates and the design of the object to be treated to determine the preparation and protection which might need to be applied and confirm that the treatment specification is appropriate and to monitor that treatment process.

This unit of competency applies to an individual working alone or as part of a team or group and working in liaison with other shift team members and the control room operator as appropriate.

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 | Determine nature of corrosion | 1.1 | Inspect object |
| | | 1.2 | Observe service environment and note likely causes of, and vulnerability to, corrosion |
| | | 1.3 | Identify the type of corrosion present or likely to occur |
| 2 | Interpret surface preparation and coating specification | 2.1 | Examine specified surface preparation method |
| | | 2.2 | Examine specification for prepared surface |
| | | 2.3 | Examine specified surface protection method |
| | | 2.4 | Examine specification for finished surface protection |
| | | 2.5 | Identify critical aspects of specifications |
| 3 | Confirm appropriateness of surface preparation and coating specification | 3.1 | Compare specification with existing or likely corrosion situation |
| | | 3.2 | Confirm that the specification is appropriate for the situation |
| | | 3.3 | Clarify any discrepancies between specification and expected treatment and take appropriate action |
| | | 3.4 | Complete any required documentation |
| 4 | Monitor treatment process | 4.1 | Identify hazards arising from the preparation and protection treatments |
| | | 4.2 | Specify appropriate hazard controls and ensure they are implemented |
| | | 4.3 | Monitor the progress of the treatment |
| | | 4.4 | Recognise situations which might require a change to hazard controls or specifications |
| | | 4.5 | Take the required actions to resolve the identified situations |

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, and include one or more of the following:

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

Hazards Hazards include one or more of the following:

- heat, smoke, dust or other atmospheric hazards
- structural hazards

- industrial (machinery, equipment and product)
- limited head spaces or overhangs
- working at heights, in restricted or confined spaces, or in environments subjected to heat, noise, dusts or vapours
- fire and explosion
- 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

Appropriate actions

Appropriate actions include one or more of the following:

- determining problems needing action
- determining possible fault causes
- developing solutions to problems which do not have a known solution
- following through items initiated until final resolution has occurred
- reporting problems outside area of responsibility to designated person

Non-routine problems

Non-routine problems are unexpected problems, or variations of previous problems and include one or more of the following:

- plant/process condition makes intended approach inappropriate
- weather affects intended approach
- surface preparation reveals hidden issues
- work is not conforming to specification
- permit conditions change or are inappropriate for work to be undertaken

Operational knowledge

Operational knowledge includes one or more of:

- procedures
- training
- technical information, such as journals and engineering specifications
- remembered experience
- relevant knowledge obtained from appropriate people

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSAPMOPS301A Treat corrosion

Links

Companion Volume implementation guides are found in VETNet -

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