



Australian Government

PMASUP347 Undertake corrosion inspection on process plant

Release: 1

PMASUP347 Undertake corrosion inspection on process plant

Modification History

Release 1. Supersedes and is equivalent to PMASUP347A Undertake corrosion inspection in a petrochemical environment

Application

This unit of competency covers the skills and knowledge required to undertake corrosion inspection on process plant.

This unit of competency applies to operators who are required to identify the corrosion inspection techniques and equipment, undertake inspections, document the results, identify problems and take appropriate action.

This unit of competency applies to corrosion inspections on any structural and equipment items which form part of a process plant facility. Examples include:

- valves
- pumps
- prime movers
- compressors
- separators
- piping, tubing or ducting within facility
- transmission and distribution piping, such as sub-sea or overland piping which may fall under the SAA Gas Pipeline Code
- storage tanks or cylinders
- vessels, columns
- structural steelwork
- wellheads.

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

Support

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

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

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| 1 | Identify corrosion inspection equipment | 1.1 Identify corrosion inspection equipment that meets site-specific requirements |
| | | 1.2 Locate corrosion inspection equipment according to site-specific applications |
| 2 | Use corrosion inspection equipment | 2.1 Assess conditions to determine the need to use corrosion inspection equipment |
| | | 2.2 Select corrosion inspection equipment related to site-specific conditions in accordance with site requirements and equipment suitability |
| | | 2.3 Operate corrosion inspection equipment in accordance with operating principles, plant procedures and manufacturer instructions |
| | | 2.4 Identify and apply safety procedures relating to corrosion inspection techniques according to site requirements |
| 3 | Use documentation and reporting procedures | 3.1 Use documentation and standards for corrosion inspection equipment reporting according to regulatory and site requirements |
| | | 3.2 Use general equipment documentation and relevant information to site-specific requirements |
| | | 3.3 Complete records and documents according to site procedures |
| 4 | Control hazards | 4.1 Identify hazards in the use of the equipment |
| | | 4.2 Assess the risks arising from those hazards |
| | | 4.3 Implement measures to control those risks in line with |

procedures and duty of care

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| 5 | Resolve problems | 5.1 | Identify possible problems in equipment or process |
| | | 5.2 | Determine problems needing action |
| | | 5.3 | Determine possible fault causes |
| | | 5.4 | Rectify problem using appropriate solution within area of responsibility |
| | | 5.5 | Follow items initiated through until final resolution has occurred |
| | | 5.6 | Report problems outside area of responsibility to designated person |

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.

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| Regulatory framework | <p>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:</p> <ul style="list-style-type: none">• 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 |
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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

Hazards Hazards include one or more of the following:

- industrial (machinery, equipment and product)
- 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
- extreme weather
- remoteness
- other hazards that might arise

Routine problems Problems at this level includes both routine and non-routine problems.

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

- pitting and scaling
- internal and external wall thinning
- crack formation

Non-routine problems Non-routine problems are unexpected problems, or variations of previous problems and must be resolved by applying operational knowledge to develop new solutions, either individually or in collaboration with relevant experts, to:

- determine problems needing action
- determine possible fault causes
- develop solutions to problems which do not have a known solution
- follow through items initiated until final resolution has occurred
- report problems outside area of responsibility to designated person

Operational knowledge includes one or more of the following:

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

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>