



Australian Government

UEGNSG046 Coat metallic pipelines

Release: 1

UEGNSG046 Coat metallic pipelines

Modification History

Release 1. This is the first release of this unit of competency in the UEG Gas Industry Training Package.

Application

This unit involves the skills and knowledge required to inspect and test coating, coat metallic pipelines in a utilities industry workplace, and complete work and relevant documentation in accordance with relevant legislations, codes of practice, regulations and workplace procedures.

It includes the use of testing and application equipment, applying the coating, undertaking coating defect assessment surveys and safe handling of chemicals/flammable liquids.

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

Pre-requisite Unit

Not applicable

Competency Field

Utilities

Unit Sector

Utilities Industry

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to coat metallic pipelines

PERFORMANCE CRITERIA

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

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|------------|---|
| 1.1 | Workplace safety, environmental and sustainable energy practices for the site are identified, obtained and understood |
| 1.2 | Job requirements are obtained and interpreted from plans, specifications and instructions |

- 1.3** Relevant job requirements and workplace procedures for work activities are discussed with relevant person/s, including third parties, to determine and confirm work schedule and respective responsibilities
 - 1.4** Hazards are identified, workplace safety and environmental risks are assessed, and control measures are prioritised, implemented and monitored in accordance with workplace procedures
 - 1.5** Scope of responsibility under the relevant job requirements, including all work permits and/or relevant notifications, is determined and confirmed to access the services and perform work in accordance with job requirements and workplace procedures
 - 1.6** Equipment, tools and personal protective equipment (PPE) needed to carry out work activities are identified, obtained and checked for correct operation and safety in accordance with workplace procedures and manufacturer instructions
 - 1.7** Materials, plans, diagrams, drawings and resources required for work are confirmed and obtained in accordance with workplace procedures
- 2 Coat metallic pipelines**
- 2.1** Workplace safety and environmental risk control measures, schedule of work and workplace procedures for carrying out work are followed
 - 2.2** Appropriate materials, tools and equipment are selected and used safely in accordance with manufacturer instructions and workplace procedures
 - 2.3** Work is completed within agreed timeframe and to industry standards in accordance with job requirements and workplace procedures
 - 2.4** Hazardous activities are conducted safely in accordance with regulatory requirements and workplace procedures
 - 2.5** Existing pipeline coatings are visually inspected to determine condition in accordance with workplace procedures
 - 2.6** Pipeline coating is tested using correct equipment to determine its condition in accordance with job requirements and workplace procedures

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| | 2.7 | Pipeline is prepared for coating in accordance with workplace procedures |
| | 2.8 | Pipeline is coated using correct equipment and materials in accordance with workplace procedures |
| | 2.9 | Alarms, codes and hazard warnings are correctly recognised, and the correct response strategy is selected and applied in accordance with workplace procedures |
| | 2.10 | Faults and operational conditions of the components are identified, repaired or replaced, and reported in accordance with organisational job requirements |
| | 2.11 | Unplanned events are referred to the relevant person/s for directions in accordance with workplace procedures |
| 3 | Complete work and relevant documentation | |
| | 3.1 | Workplace safety risk control measures for work completion are followed |
| | 3.2 | Quality and safety checks of the work are conducted in accordance with job requirements, workplace procedures and community and industry standards |
| | 3.3 | Worksite is cleaned, reinstated and made safe in accordance with workplace procedures |
| | 3.4 | Tools, equipment and any surplus resources/materials are cleaned, checked and securely stored in accordance with workplace procedures |
| | 3.5 | Incidents are reported and followed up as required in accordance with workplace procedures |
| | 3.6 | Relevant person/s is notified of work completion in accordance with workplace procedures |
| | 3.7 | Work completion documentation is completed accurately and provided to relevant person/s in accordance with workplace procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEG Gas Industry Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEGNSG330 Coat metallic pipelines.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6a6c032e-ffcb-4f3d-8063-415efbd261e8>

Assessment Requirements for UEGNSG046 Coat metallic pipelines

Modification History

Release 1. This is the first release of this unit of competency in the UEG Gas Industry Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least two separate occasions and include:

- applying controls for stray, static and induced electrical faults
- applying relevant workplace safety requirements, including:
 - actioning and reporting accidents and incidents
 - following environmental legislative requirements associated with the use, application and disposal of coating materials
 - identifying and reporting hazards
 - implementing risk control measures
 - recognising and assessing hazard warnings and safety signs
 - safe handling procedures for a range of dangerous and toxic chemicals and compounds
 - selecting and using the correct personal protective equipment (PPE)
 - undertaking hazardous activities in a safe manner
- applying relevant industry standards, guidelines, codes of practice and regulations
- applying sustainable energy and environmental principles and practices
- assessing coating and application defects
- coating metallic pipelines
- communicating effectively with relevant person/s
- completing work and relevant documentation
- dealing with unplanned events/situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- following manufacturer instructions
- following workplace procedures
- minimising and disposing of waste correctly
- obtaining and interpreting relevant plans, drawings, maps, diagrams and schedules
- obtaining job requirements, work instructions, safety plan and work schedule
- performing quality checks
- performing visual inspection of pipeline coatings
- preparing to coat metallic pipelines
- referring third-party issues

- rehabilitating and maintaining a clean and safe worksite
- selecting and using relevant materials and measuring devices
- selecting and operating correct tools, plant and equipment, including:
 - abrasive blast comparators
 - abrasive blasting equipment
 - densitometers
 - heating torch
 - low voltage (LV)/high voltage (HV) holiday detectors
 - paint thickness coating gauges and meters
 - pipe wrapping machines
 - spray painting equipment
- testing pipeline coatings.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- cathodic protection, including:
 - faults and effects
 - stray electrical currents
 - damage to coatings
- controls for stray, static and induced electrical faults
- effective communication techniques
- environmental and sustainable energy principles and practices
- first aid, emergency and safety procedures for incidents
- pipeline coating application
- pipeline coating defect assessment methods
- pipeline coating irregularities, deviations or problems
- pipeline preparation/stripping
- pipeline coating types and applications, including:
 - petroleum based wraps
 - epoxy
 - paints
 - polyethylene (PE) jackets and sleeves
 - coal tar enamel
 - rock (protection) jacket
- problem-solving techniques
- quality checks
- relevant industry standards, legislation, guidelines, codes of practice and regulations
- relevant manufacturer instructions
- relevant materials, plans, diagrams, drawings and resources
- relevant safe work method statements (SWMS)/job safety analysis (JSA) or risk mitigation processes
- relevant safety and environmental hazards and mitigation measures, including:
 - requirements of coating substance
 - safety issues of working in trenches, excavations and confined spaces
 - safety data sheets (SDS)
 - hazards and risk assessments
 - hazardous activities in the workplace
 - emergency control measures
 - hazard warnings and safety signs
- relevant tools, equipment, measuring devices and PPE
- relevant workplace safety requirements, including:
 - legislated work health and safety (WHS)/occupational health and safety (OHS) requirements
 - legislated industry/technical specific requirements
 - workplace safety procedures
 - manufacturer requirements

- relevant work permits/notifications
- relevant workplace documentation
- relevant workplace policies and procedures
- site preparation, safety plans, job requirements and work schedules
- techniques to minimise waste
- testing pipeline coatings
- third-party issues
- worksite rehabilitation.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

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.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and PPE currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

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