



Australian Government

UEEHA0016 Assess the fitness-for-purpose of explosion-protected equipment

Release: 1

UEEHA0016 Assess the fitness-for-purpose of explosion-protected equipment

Modification History

Release 1. This is the first release of this unit of competency in the Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to assess the fitness-for-purpose of explosion-protected aspects of equipment that has no certificate of conformity available (or the origin of a certificate cannot be verified), consistent with the requirements of AS/NZS60079.17.

It includes: gathering, establishing and evaluating technical information on relevant explosion-protection types; and, reporting on evaluations and findings, including recommendations based conditions of control, sound engineering, safety requirements and economic considerations.

This unit applies to personnel involved in engineering functions or maintenance (e.g. end users) when considering the continued use and/or refurbishment of legacy plant. It applies also to those personnel involved in the reclamation and/or repair and overhaul of equipment.

Site-specific work permits may be required to work in the hazardous environment. In addition, other permits may be required, such as confined space and to operate specific pieces of equipment such as elevated work platforms in various jurisdictions.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

This unit is adopted from clause 2.12 of AS/NZS 4761.1:2018 Competencies for working with electrical equipment for hazardous areas (EEHA). There may be differences between the content of this unit and AS/NZS 4761.1:2018, so the Standard must be checked to ensure compliance with it. Clause 2.12 of AS/NZS 4761.1:2018 includes the following precondition for assessment:

- “A candidate seeking assessment in this unit shall have been deemed competent to assess the compliance of general electrical and control equipment at AQF level 7 and NZQF level 7 (BD) or equivalent.”

Pre-requisite Unit

UEEHA0019 Conduct a conformity assessment review of explosion-protected equipment

Competency Field

Hazards

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to assess fitness-for-purpose of equipment and systems

PERFORMANCE CRITERIA

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

1.1 WHS/OHS policies and safe work methods are obtained and reviewed

1.2 Equipment or system to be assessed is determined from instructions and in consultation with authority of the owner

1.3 Equipment specification is obtained from site records or equipment/system manufacturer (where available)

1.4 Authenticity of obtained documentation is verified with the issuing organization or the assessor

1.5 Applicable standards and codes of practice the equipment or systems are to be assessed against are obtained and reviewed

1.6 If equipment specification is unavailable, arrangements are made to establish the specification of the equipment to determine the normal operating and explosion-protection performance parameters of the equipment or system

1.7 Tools and certified measuring and testing devices needed to carry out field measurements and testing are obtained and checked for correct operation and safety

2 Gather technical information to assess fitness-for-purpose of equipment and systems

2.1 Safe work methods for hazardous areas and assessment tasks are accepted and followed

2.2 Measurements and tests are carried out to verify the specification and operating parameters of the equipment or system

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| | 2.3 | Data relevant to the specification is gathered to assess and verify the equipment or system according to the applicable standards and codes of practice |
| 3 Assess equipment/systems against standards | 3.1 | Equipment or system details are assessed, including measurement, tests, 'alternative' tests and calculations and the design specifications, for compliance with each relevant clause in the applicable standard |
| | 3.2 | Differences between the equipment or system assessment and standards requirements are identified and documented |
| | 3.3 | Recommendations are developed as to whether remedial work is viable for equipment or systems that are not initially assessed as fit-for-purpose |
| | 3.4 | Specifications are recommended for the remediation of equipment or systems to be suitable as fit-for-purpose |
| 4 Develop and submit a fitness-for-purpose report | 4.1 | Assessment results concerning the integrity of explosion-protected electrical equipment or systems are documented in a fitness-for-purpose report that includes the processes taken and justification for the outcomes |
| | 4.2 | Fitness-for-purpose report and all required appended documentation is forwarded to the person responsible for maintaining compliance records |

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 Electrotechnology Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This is a new unit.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEEHA0016 Assess the fitness-for-purpose of explosion-protected equipment

Modification History

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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:

- preparing to assess fitness-for-purpose of equipment and systems including:
 - obtaining and reviewing WHS policies and safe work methods.
 - obtaining design documentation for the equipment or systems to be assessed from site records or the manufacturer and verifying their authenticity with issuing organization or assessor
 - obtaining the standards and codes of practice against which the equipment or system are to be assessed
 - arranging for the equipment or system specifications and normal operating parameters to be established, given design documentation is not available
 - obtaining required tools and certified measuring and testing devices and checking them for correct operation and safety
- gathering technical information to assess equipment and systems including:
 - accepting and following safe work methods
 - carrying out measuring and testing to verify equipment or system specifications and parameters
 - gathering all data relevant to the specification to assess and verify the equipment or system according to the applicable standards and codes of practice
- assessing equipment/systems against standards including:
 - assessing equipment or system details, including calculations, measurements, test results and design specifications, for compliance with each relevant clause in the applicable standard
 - identifying and documenting differences between the equipment or system assessment and standards requirements
 - developing a recommendation as to whether remedial work is viable for equipment or systems that are not initially assessed as fit-for-purpose
 - developing specifications, as a recommendation, for the remediation of equipment or systems to be suitable as fit-for-purpose
- developing and submitting a fit-for-purpose report including:
 - documenting a fit-for-purpose report that includes assessment results concerning

explosion-protection integrity of the equipment or system, the processes taken and justification for the outcomes

- forwarding the fit-for-purpose report and all appended documents to the person responsible for maintaining compliance records.

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:

- standards and codes of practice including:
 - compliance requirements in standards/codes applicable to the equipment or system at the time of installation
 - compliance requirements in current standards applicable to the equipment or system
 - means of accessing older and redundant standards and design documentation
- explosion-protected equipment and systems including:
 - explosion-protection aspects specified in current and redundant standards
 - equipment or system specifications and parameters relevant to the assessment
 - scope for developing a specification given design documentation is unavailable
- measurement and testing including:
 - measurements and tests specified in standards
 - alternate 'equivalent' tests or calculations
 - measuring and testing procedures including:
 - calibration and certification of required devices
 - safe work methods
 - availability and use of third party testing facilities
- assessment process including:
 - data and information required
 - comparing information gathered with requirement in standards
 - limits of remedial work
 - content of a fit-for-purpose report.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

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 tools and testing devices and PPE currently used in industry
- safe work methods
- compliance records (verification dossier) for the site.
- equipment subject to the assessment:
 - single items
 - packaged equipment
- certification documentation and related hazardous area compliance standards for which the certification was granted
- standards against which compliance is sought
- relevant measurement and testing equipment or facility.

Links

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