



Australian Government

Assessment Requirements for UETDRSB011 Maintain high current d.c. equipment and switchgear

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package Release 4.0.

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 (2) separate occasions and include:

- applying relevant legislation, regulations, standards, codes of practice and organisational workplace requirements including:
 - work health and safety (WHS)/occupational health and safety (OHS) requirements
- identifying hazards, assessing risks, and identifying, applying and monitoring control measures
- obtaining, inspecting and using relevant personal protective equipment (PPE)
- dealing with an unplanned event on at least one (1) occasion
- obtaining and signing relevant work permits in accordance with workplace requirements
- completing relevant work records, reports and documentation
- using at least five (5) of the following testing equipment on at least one (1) occasion:
 - ammeter
 - voltmeter
 - insulation resistance tester
 - micro-ohm tester
 - multimeter
 - drop-out tester
- using drawings and diagrams including all of the following:
 - building layouts
 - cable block diagrams
 - cable schedules
 - operating and substation arrangement diagrams
 - wiring diagrams and schematic drawings
- maintaining high current direct current (d.c.) equipment and switchgear on at least six (6) of the following types:
 - d.c. circuit breaker
 - rectifier transformer
 - rectifier

- isolator and link
- harmonic filter
- negative reactor
- energy dissipation resistor
- maintaining high current d.c. associated equipment on at least ten (10) of the following:
 - d.c. feeder
 - surge arrester
 - isolating link
 - busbar
 - cable
 - cable support
 - pit and enclosure
 - protection/alarm system
 - control wiring
 - metering
 - supervisory interface
 - cabinet
 - rail earth contactor (REC)
- maintaining protection using at least three (3) of the following types:
 - buchholz
 - frame leakage
 - overcurrent
 - earth leakage
 - reverse current
 - delta I
 - diode protection.

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:

- relevant legislation, regulations, standards, codes of practice and organisational workplace requirements, including WHS/OHS requirements
- hazard, risk assessment and risk control requirements, including potential hazards
- types and application of PPE
- safe use of plant, tools and equipment
- application, purpose and types of permits
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident
- workplace records, reports and documentation

- work on energised systems
- diagrams, drawings, and manuals, including:
 - electrical and mechanical drawings
 - operating and substation arrangement diagrams
 - manufacturers' manuals
- specialised tools, including:
 - types, construction and function
 - calibration
 - care and maintenance
- testing equipment, including:
 - types, construction and function
 - calibration
 - care and maintenance
- high current d.c. equipment, associated equipment and switchgear, including:
 - types, construction and function
 - maintenance procedures
 - procedures for checking maintenance tasks for compliance
- high current d.c. protection equipment:
 - types, construction and function
 - maintenance procedures
 - checking maintenance tasks for compliance.

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 conditions involving realistic and authentic activities that replicate operational 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:

- relevant and appropriate materials, tools, equipment and PPE currently used in industry
- applicable documentation, including workplace requirements, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>