



Australian Government

UEEHA0024 Inspect, maintain and fit plugs/couplers for reeling, trailing and flexible cables - coal mining

Release: 1

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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 inspect, maintain by component replacement, and fit plugs/couplers on reeling, trailing and flexible cables used in coal mining. It includes: working safely and to standards; evaluating the condition of plugs/couplers; identifying correct core and pin configurations; applying maintenance techniques; and documenting repair/replacement work.

It is adopted from clause 2.19 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.

This unit applies to electrical equipment overhaul and repair job functions.

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.

Pre-requisite Unit

UEEHA0036 Test reeling, trailing and flexible cables and their attachments used in coal mining

Competency Field

Hazards

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to inspect and fit plugs/couplers

PERFORMANCE CRITERIA

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

1.1 Safe work methods to inspect and fit plugs/couplers are obtained and interpreted

1.2 Cable plugs/couplers to be inspected are confirmed with supervising personnel

1.3 Types of plugs/couplers are identified by marking and explosion-protection certification documentation

1.4 Special tools, equipment and testing devices needed to carry out the plugs/couplers work are obtained and checked for correct operation and safety

2 Inspect plugs/ couplers

2.1 Safe work methods to carry out inspecting plugs/couplers are applied

2.2 Knowledge of the explosion-protection types and features for plugs and couplers is applied to the inspection process

2.3 Plugs/couplers are dismantled and inspected for damage to housings, pins and sockets and defects to explosion-protection parts/components

2.4 Damage to plugs/coupling housings, pins and sockets and defects to explosion-protection parts/components is documented in accordance with quality assurance procedures

2.5 Knowledge of explosion-protected equipment certification is applied to obtaining replacement parts required for the repair and in accordance with quality assurance procedures

2.6 Arrangements are made for maintenance by replacement only of defective items of explosion-protective enclosures/housings in accordance with quality assurance procedures

3 Fit and connect plugs/couplers

3.1 Safe work methods to carry out the fitting of plugs/couplers are applied

- 3.2 Replacement parts/components are identified as being authorized by the plugs/couplers manufacturer and complying with certification documents
 - 3.3 Correct phasing for voltage, current and pin configurations are identified
 - 3.4 Cable is prepared and plugs and couplers fitted ensuring correct termination length, sheath protrusion and clamping are maintained
 - 3.5 Cable cores are prepared and terminated to correct polarity using compliant connection methods maintaining required creepage and clearances
 - 3.6 Cable tails, leads and terminations are inspected to ensure they are correct and sound
 - 3.7 Safe work methods for the care and storage of tools and equipment at the completion of work are applied
- 4 **Complete and document repair work**
 - 4.1 Plug and coupling repair history records are updated in accordance with quality assurance procedures
 - 4.2 Responsible supervisor is notified of the completion of the work in accordance with established quality 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 Electrotechnology Training Package Companion Volume Implementation Guide.

This unit must include these conditions in relation to inspecting and fitting of plugs/couplers certified for each explosion-protection technique of flameproof (Ex ‘d’), increased safety (Ex ‘e’) intrinsically safe (Ex ‘i’) and encapsulation-dusts (Ex ‘mD’). Among the cables for which competency is required all of the following features shall be included:

Cable features	AS/NZS designated cable type
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- Standard conductor construction 209; 210; 240; 241; 260; 275; 409; 412.1; 440; 441.1; 441; 450; 455.
- Super flexible 245.
- XR-EP-90 insulated compound 441; 450; 455.
- Semi conductive extruded screens 241; 245; 441.1; 441; 450; 455.
- Metal braided screens 209; 210; 240; 260; 409; 440; 450.
- Interstitial earths 241; 245; 275; 412.1; 441.1; 441; 450; 455.
- Interstitial pilots 240; 260; 440; 450; 455.
- Central pilot 209; 210; 241; 245; 275; 409; 441.1; 441.
- Pliable armour 260; 412.1.
- Sheath reinforcement 241; 245; 274; 441.1; 441; 450; 455.

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>