



**Australian Government**

# **UEEHA0030 Repair reeling, trailing and flexible cables used in coal mining**

**Release: 1**

# UEEHA0030 Repair reeling, trailing and flexible cables used in coal mining

## 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 repair the sheathing, insulation and conductors of reeling, trailing and flexible cables. It includes: working safely and to standards; following repair instructions; applying repair techniques; and documenting the repair work.

It is adopted from clause 2.17 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

Not applicable

## Competency Field

Hazards

## Unit Sector

Electrotechnology

## Elements and Performance Criteria

### ELEMENTS

### PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

## **1 Prepare to repair cable**

- 1.1** Safe work methods to repair cables are obtained from workshops, standards and original manufacturer's instructions and understood
- 1.2** Knowledge of mining cable types, features, component functions, typical applications and how they are stored is applied to preparing for the work
- 1.3** Cable to be repaired and instructions on the extent of repairs are received and confirmed with supervising personnel
- 1.4** Materials required for the repair are obtained and checked against received instructions
- 1.5** Tools and equipment needed to carry out the cable repair work are obtained and checked for correct operation and safety

## **2 Carry out cable repair**

- 2.1** Safe work methods to carry out cable repair work are accepted and followed
- 2.2** Knowledge of cable repair methods and procedures are applied and instructions for the extent of repair are followed
- 2.3** Damaged cable material is removed and cables prepared for joining
- 2.4** An acceptable method is applied to splicing and joining armoring, screens and conductive materials
- 2.5** Insulation, insulation screening and covering is replaced on all cores and outer sheaths correctly using materials specified in the work instructions
- 2.6** The correct method is used to join pliable cable armour
- 2.7** Cable sheath is repaired using the correct sheath tape and vulcanized at the required temperature and timed to ensure as new electrical and mechanical properties are retained
- 2.8** Cable repair is done in a manner that does not reduce the operating parameters for the cable type

- |                                     |            |                                                                                                                  |
|-------------------------------------|------------|------------------------------------------------------------------------------------------------------------------|
|                                     | <b>2.9</b> | Safe work methods for ‘house-keeping’ at the completion of cables repair work are followed                       |
| <b>3 Document cable repair work</b> | <b>3.1</b> | Cable repair work completion sheets are filled out in accordance with quality assurance procedures               |
|                                     | <b>3.2</b> | Responsible supervisor is notified of the completion of the work in accordance with quality assurance 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 pre and post repair testing of at least four separate cables. Among the cables for which competency is required, all of the following features shall be included:

| Cable features                     | AS/NZS designated cable type                                         |
|------------------------------------|----------------------------------------------------------------------|
| • 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>