

AS/NZS 1747:2022



Australian/New Zealand Standard™

Reeling, trailing and feeder cables used for mining — Repair, testing and fitting of accessories



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AS/NZS 1747:2022

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- Australian Cablemakers Association
- Australian Chamber of Commerce and Industry
- Australian Industry Group
- Aviation and Marine Engineers Association
- Better Regulation Division (Fair Trading, Safework NSW, TestSafe)
- Construction Forestry Miners and Energy Union
- Department of Mines, Industry Regulation and Safety WA
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- Engineering New Zealand
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- Engineers Australia / Mining Electrical and Mining Mechanical Engineering Society
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Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-023-03, Cables, Couplers and Receptacles, to supersede AS/NZS 1747:2003, *Reeling, trailing and feeder cables used for mining—Repair and testing*.

The objective of this document is to provide standard procedures for the repair and testing of reeling, trailing and feeder cables used in mining applications, and to establish requirements for the repair of cables which will ensure that the repaired cable is returned to a condition as near as possible to the original design. It also sets out requirements for the fitting of accessories to these cables.

This document differs from the previous edition in the following significant ways:

- (a) Reference to AS/NZS 60079 standards has been included.
- (b) Definitions for Competent Person, Responsible Person, Insulation Earth Screens, Insulation Stress Relief Screens and Twist Test have been included.
- (c) The reference to Spark test has been changed to Sheath Test throughout this standard.
- (d) *Details of cable to be recorded*, AS/NZS 1747:2003 section 2.3, has been deleted.
- (e) A new [Clause 2.5](#), *Inspection of cable accessories*, has been included.
- (f) A new [Clause 3.7](#), *Joining pilot conductors and control conductors other than reeling cables*, has been included.
- (g) A new [Clause 3.11](#), *Joining of PILSWA and XLPE armoured cables*, has been included.
- (h) A new [Clause 3.19](#), *Replacement of outer rubber sheath only*, has been included.
- (i) A new [Clause 3.20](#), *Replacement/repair of PVC outer sheath*, has been included.
- (j) Plug inspections have been divided into [Clauses 4.2](#), *Plug inspection external*, 4.3, *Plug inspection internal*, 4.4, *Flamepath inspection*, and 4.5, *Tail inspection*.
- (k) The phase rotation of power conductors in plugs has been defined.
- (l) Flameproofing has been changed to explosion protection.
- (m) A new [Clause 5.2](#), *HV Connections*, has been included.
- (n) The high voltage proof test voltage for 1.1kV cables has been increased from 3.5kV DC to 5kV DC.
- (o) A new [Clause 5.3](#), *Discharge times*, has been included.
- (p) The application of fault location pulses has been changed.
- (q) A test time has been included to the High voltage proof test table.
- (r) A new [Table 5.8](#) *Test voltages for high voltage proof test on PILSWA and XLPE cable*, has been included.
- (s) New connection diagrams have been included for insulation tests and proof testing.
- (t) The minimum insulation resistance value for 1.1kV cables has been increased to 250 m Ω .
- (u) Testing of pilot conductors now includes control cores.
- (v) Test times have been included to the minimum insulation resistance table.
- (w) The practicability of symmetrical load and Partial break testing has been included.

- (x) New marking codes for outer sheath repair, single ferrule and long hand splice have been included in [section 6](#).
- (y) AS/NZS 1747:2003 section 7, *Temporary sheath repairs*, has been deleted.
- (z) A new [Section 7](#), *Responsible person*, has been included.
- (aa) [Appendix A](#) has been expanded and a rating matrix has been included in [Appendix G](#).
- (bb) [Appendix F](#) has been amended.
- (cc) Discharge stick and earth bridging leads have been included in [Appendices H](#) and [I](#).
- (dd) AS/NZS 1747:2003 Appendix J, *Combined resistance of earth conductors*, has been deleted.
- (ee) New [Appendix J](#) has been included for measuring equipment.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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