

Australian/New Zealand Standard™

**Electrical equipment for coal mines—
Introduction, inspection and
maintenance**

Part 1: For hazardous areas



AS/NZS 2290.1:2014

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-023, Electrical Equipment for Mines and Quarries. It was approved on behalf of the Council of Standards Australia on 3 December 2013 and on behalf of the Council of Standards New Zealand on 12 December 2013. This Standard was published on 11 February 2014.

The following are represented on Committee EL-023:

Australian Cablemakers Association
Australian Chamber of Commerce and Industry
Australian Coal Association
Australian Industry Group
Aviation and Marine Engineers Association
Consult Australia
Department of Mines and Petroleum, WA
Department of Natural Resources and Mines, Qld
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AS/NZS 2290.1:2014

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Electrical equipment for coal mines— Introduction, inspection and maintenance

Part 1: For hazardous areas

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-023, *Electrical Equipment for Mines and Quarries*, to supersede AS/NZS 2290.1:2005, *Electrical equipment for coal mines—Introduction and maintenance, Part 1: For hazardous areas*.

The objective of this Standard is to facilitate the safe, efficient and productive use of electrical explosion-protected equipment and cables in underground coal mine hazardous areas, by specifying requirements and recommendations for the inspection and maintenance of such equipment.

This Standard is part of a series of standards on the maintenance and overhaul of electrical equipment used in association with underground mining machines. The series is as follows:

- (a) AS/NZS 2290.1, *Electrical equipment for coal mines—Introduction and maintenance, Part 1: For hazardous areas* (this Standard).
- (b) AS 2290.3, *Electrical equipment for coal mines—Maintenance and overhaul, Part 3: Maintenance of gas detecting and monitoring equipment*.

In addition, this Standard aligns with AS/NZS 3800:2012, *Electrical equipment for explosive atmospheres—Repair and overhaul*.

The principal differences between this edition and the 2005 edition are as follows:

- (i) Life-cycle management of explosion-protected equipment has been embraced.
- (ii) The range of inspections has been expanded to include initial and periodic inspections.
- (iii) A risk-based process is required for the identification of ‘readily accessible components’ and the determination of ‘inspection frequency’; however, recommended inspection schedules for individual explosion-protection techniques have been retained.
- (iv) An electrical engineering manager has been specified as the process owner and responsible decision maker.
- (v) General inspection requirements that are applicable to all explosion-protection techniques have been included.
- (vi) The range of explosion-protection techniques has been expanded to address currently installed equipment.
- (vii) This Standard has been aligned with the AS/NZS 60079 series, where compatible with Group I requirements.
- (viii) An alternate risk assessment method encompassing equipment protection levels (EPLs) for Ex equipment is discussed in an informative appendix.

NOTE: See Appendix M.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

Statements expressed in mandatory terms in footnotes to tables are deemed to be requirements of this Standard.

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