

Australian/New Zealand Standard™

**Remote control systems for mining  
equipment**

**Part 2: Operation and maintenance for  
underground metaliferous mining**



## **AS/NZS 4240.2:2009**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-023, Electrical Equipment in Mines. It was approved on behalf of the Council of Standards Australia on 4 August 2009 and on behalf of the Council of Standards New Zealand on 26 June 2009.

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The following are represented on Committee EL-023:

Australian Chamber of Commerce and Industry  
Australian Coal Association  
Australian Industry Group  
Aviation and Marine Engineers Association, New Zealand  
Department of Mines and Energy, (Qld)  
Department of Primary Industries, Mine Safety NSW  
Electrical Apparatus Service Association  
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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-023, Electrical equipment in mines.

It is based on document MDG 5002, *Guidelines for the use of remote controlled mining equipment—Underground metalliferous mines*, which was developed for the Mine Safety Operations Division of the NSW Department of Primary Industries by a working group consisting of representatives from major underground metalliferous mines operating remote controlled mining equipment along with equipment suppliers, maintenance personnel and regulators.

The objective of this Standard is to provide mine sites with the information to assist in the management of risks associated with the use of remote controlled mining equipment in underground metalliferous mines.

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.

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## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE**

This Standard specifies requirements for the work system design, equipment operation, maintenance, equipment, personnel and environment of remote controlled mining equipment in underground metalliferous operations. Technical requirements for the design of remote control equipment are given in AS/NZS 4240.1.

**1.2 APPLICATION**

This Standard applies to remote controlled mining equipment used in underground metalliferous mines and focuses on load haul dump (LHD) equipment. It applies to both line of sight and teleremote systems.

This Standard does not apply to the following equipment:

- (a) Automatic conveyor and shuttle systems.
- (b) Gantry cranes.
- (c) Shaft and drift winders.
- (d) Machines that are isolated from personnel.

It is important to note that—

- (i) adherence to the Standard does not itself assure compliance with the general duty of care; and
- (ii) mine operators deviating from the Standard should document a risk assessment supporting the alternative arrangements.

**1.3 REFERENCED DOCUMENTS**

AS	
2187	Explosives—Storage and use
2187.2	Part 2: Use of explosives
40.4	Safety of machinery
5032	Fire protection of mobile and transportable equipment
61508	Functional safety of electrical/electronic/programmable electronic safety-related systems