HB 242—2007
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HB 242—2007

Handbook

High voltage mining equipment for use underground

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This Australian Handbook was prepared by Committee EL-023, Electrical Equipment in Mines. It was approved on behalf of the Council of Standards Australia on 31 October 2007. This Handbook was published on 31 December 2007.

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- Australian Chamber of Commerce and Industry
- Australian Coal Association
- Australian Industry Group
- Department of Natural Resources and Mines, Qld
- Department of Primary Industries, Mine Safety, NSW
- Electrical Apparatus Service Association
- Electrical Regulatory Authorities Council
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- Regulatory Interests, New Zealand
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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee.

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RECONFIRMATION

OF
HB 242—2007
High voltage mining equipment for use underground

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PREFACE

This Handbook was prepared by a Working Group, chaired by Mr. Greg Briggs, on behalf of the Joint Standards Australia/Standards New Zealand Committee EL-023, Electrical Equipment in Mines.

The objective of this Handbook is to provide practical guidance for the health and safety of personnel when using high voltage equipment in underground mines. It outlines engineering principles to control the risks associated with high voltage equipment in underground mines that will protect the safety of people and property.

This Handbook is applicable to equipment and practices in both underground coal and metaliferous mines.

The Handbook has been written to assist designers, manufacturers, and users of HV equipment in underground mines.

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SECTION 1 SCOPE AND GENERAL

1.1 PURPOSE

This Handbook provides practical guidance for electrical equipment and practices associated with underground high voltage (HV) installations and HV mining equipment in order to protect the safety of people and property in mines.

1.2 SCOPE

This Handbook outlines safety guidelines for electrical mining equipment where the voltage of the supply system is above 1200 V and covers non-hazardous and hazardous area applications. It contains provisions relating to equipment design, commissioning, operation, and maintenance of such equipment.

This Handbook should be read in conjunction with the joint Australian and New Zealand Standard AS/NZS 4871.

NOTE: Recommendations for plant Standards are contained in Appendix B, while useful publications are noted in Appendix C. Appendix D provides examples of safety alerts involving HV equipment.

1.3 REFERENCED STANDARDS

The following documents are referred to in this Handbook:

AS	
3007	Electrical installations—Surface mines and associated processing plant
3007.2	Part 2: General protection requirements
4024	Safety of machinery (all Parts)
60529	Degrees of protection provided by enclosures (IP Code)
AS/NZS	
1747	Reeling, trailing and feeder cables used for mining—Repair, testing and fitting of accessories
1802	Electric cables—Reeling and trailing—For underground coal mining purposes
1972	Electric cables—Underground coal mines—Other than reeling and trailing
2081	Electrical equipment for coal and shale mines—Electrical protection devices (all Parts)
2290	Electrical equipment for coal mines—Introduction and maintenance
2290.1	Part 1: For hazardous areas
3000	Electrical installations (known as the Australian/New Zealand Wiring Rules)
4360	Risk management
4801	Occupational health and safety management systems—Specification with guidance for use

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