



Mining—Winding equipment

Part 2: Braking systems



AS 4730.2:2018

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- Australian Chamber of Commerce and Industry
- Australian Industry Group
- Construction and Mining Equipment Industry Group
- Department of Mines, Industry Regulation and Safety, WA
- Department of Natural Resources, Mines and Energy, Qld
- Engineers Australia
- Minerals Council of Australia
- Mining Electrical and Mining Mechanical Engineering Society
- NSW Department of Industry, Skills and Regional Development

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Preface

This Standard was prepared by the Standards Australia Committee ME-018, Mining Equipment.

The objective of this Standard is to assist designers, manufacturers and managers of winder braking systems, including shaft sinking winder braking systems, by providing control measures for the purpose of protecting the safety of people in the workplace and property.

This Standard is Part 2 of a new series of Standards for mine winding equipment. This series comprises the following:

AS 4730.1, *Mining — Winding equipment, Part 1: Winder control systems*

AS 4730.2, *Mining — Winding equipment, Part 2: Braking systems* (this Standard)

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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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Australian Standard®

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Part 2: Braking systems

Section 1 Scope and general

1.1 Scope

This Standard specifies requirements for systems used for service and safety braking functions on drum and friction winder drum assemblies, used for moving persons, minerals or materials in vertical and inclined shafts in mines.

NOTE [Appendix E](#) describes typical hazardous events that can arise during the operation of winding systems, and the associated actions that may be used to address the hazards.

This Standard applies to all powered winding systems, whether vertical or inclined, where the travel distance is more than 40 m, and to powered winding systems carrying more than two people if the travel distance is less than 40 m.

This Standard does not cover retardation provided by the drive system.

1.2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents for informative purposes are listed in the Bibliography.

AS 2671, *Hydraulic fluid power — General requirements for systems (ISO 4413:1998, MOD)*

AS 2788, *Pneumatic fluid power — General requirements for systems (ISO 4414:1998, MOD)*

AS 3791, *Hydraulic hose*

AS 3990, *Mechanical equipment — Steelwork*

AS 4100, *Steel structures*

AS 61508, *Functional safety of electrical/electronic/programmable electronic safety-related systems (all parts)*

AS 62061, *Safety of machinery — Functional safety of safety-related electrical, electronic and programmable electronic control systems*

AS IEC 61511, *Functional safety — Safety instrumented systems for the process industry sector (all parts)*

AS/NZS 4024.1503, *Safety of machinery, Part 1503: Safety-related parts of control systems — General principles for design*

1.3 Terms and definitions

For the purpose of this Standard the following terms and definitions apply.