

Australian Standard[®]

**Underground mining—Shaft
equipment**

**Part 6: Guides and rubbing ropes
for conveyances**

This Australian Standard was prepared by Committee ME/18, Mining Equipment. It was approved on behalf of the Council of Standards Australia on 14 September 1992 and published on 14 December 1992.

The following interests are represented on Committee ME/18:

Australasian Institute of Mining and Metallurgy
Australian Chamber of Commerce and Industry
Australian Coal Association
Australian Mining Industry Council
Bureau of Steel Manufacturers of Australia
Chamber of Mines of Western Australia
Department of Manufacturing and Industry Development, Vic
Department of Mineral Resources, N.S.W.
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Department of Resource Industries, Qld
Institution of Engineers, Australia
Institution of Mining Electrical and Mining Mechanical Engineers
Queensland Coal Association
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Mining companies
Mining consultants
Mining equipment manufacturers and suppliers

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PREFACE

This Standard was prepared by the Standards Australia Committee on Mining Equipment.

It is one of a series of Standards on shaft equipment for underground mines. The other Standards in the series are as follows:

- AS 3785.1 *Underground mining—Shaft equipment, Part 1: Drum winding overwind safety catch systems.*
- AS 3785.2 *Underground mining—Shaft equipment, Part 2: Friction winding arresting systems.*
- AS 3785.3 *Underground mining—Shaft equipment, Part 3: Drum winding gripper systems.*
- AS 3785.4 *Underground mining—Shaft equipment, Part 4: Conveyances for vertical shafts.*
- AS 3785.5 *Underground mining—Shaft equipment, Part 5: Headframes.*
- AS 3785.7 *Underground mining—Shaft equipment, Part 7: Sheaves.*

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FOREWORD

Guides, either rigid or flexible, are incorporated in vertical shafts to limit the lateral movement of a conveyance in service in the shaft or skyshaft (or both), so maintaining an unhindered passage.

Flexible steel rubbing ropes are installed and suspended between rope-guided conveyances to prevent collision at the passing point.

STANDARDS AUSTRALIA

Australian Standard

Underground mining—Shaft equipment

Part 6: Guides and rubbing ropes for conveyances

1 SCOPE This Standard specifies requirements for guides and rubbing ropes used in vertical mine shafts. It does not cover the variations in the physical arrangements possible of the guides and rubbing ropes.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

1720 SAA Timber Structures Code

1720.1 Part 1: Design methods

3569 Steel wire ropes

3637 Underground mining—Winding suspension equipment

3637.1 Part 1: General requirements

3990 Steelwork for engineering applications

4100 Steel structures

O22 Grading rule for mine guides

3 DEFINITIONS For the purpose of this Standard, the definitions below apply.

3.1 Approved and approval—approved by or approval of the statutory authority.

3.2 Bunton/dividers—horizontal structural members installed in some shafts, to support rigid guides.

3.3 Chairing—the operation of supporting a conveyance at some point in its normal vertical path by means other than the winding rope or gripper system.

3.4 Conveyance—any car, carriage, cage, skip, kibble or stage in which persons, minerals or materials are wound through a shaft, and any counterweight.

3.5 Conveyance guide assemblies—consist of guide wheels, guide shoes or guide slippers, fixed to the conveyance and operate in conjunction with the guides in the shaft.

3.6 Dead loads—the load due to the mass of all permanent components of the guides.

3.7 Gripper system—a mechanism mounted on a conveyance which is designed to engage with the guides in response to a loss of winding rope tension.

3.8 Guides—stiff structural members or suspended steel wire ropes located in a mine shaft or sky shaft or both, to limit lateral movement of the conveyance.

3.9 Live load—the load resulting on the guides from the operation of the conveyance.

3.10 Overwind—unintentional travel of either an ascending or descending conveyance beyond its normal operating limits.

3.11 Rope break force—the minimum breaking force of a rope, as given by the rope manufacturer's catalogue or specification.

3.12 Rubbing ropes—suspended steel wire ropes, installed between closely spaced rope-guided conveyances.

3.13 Shall—indicates that a requirement is mandatory.

3.14 Should—indicates a recommendation.