

Australian Standard™

Underground mining—Shaft equipment

Part 3: Drum winding gripper systems



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RECONFIRMATION

OF

AS 3785.3—2005

**Underground mining—Shaft equipment
Part 3: Drum winding gripper systems**

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Technical Committee ME-018 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

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NOTES

Australian Standard™

Underground mining—Shaft equipment

Part 3: Drum winding gripper systems

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PREFACE

This Standard was prepared by the Standards Australia Committee ME-018, Mining Equipment, to supersede AS 3785.3—1990.

The objective of this Standard is to provide requirements for the safe application of gripper systems used in vertical mine shafts where timber conveyance guides and drum winders are used.

This Standard is Part 3 in a series of Standards on shaft equipment for underground mines, as follows:

- AS 3785 Underground mining—Shaft equipment
- AS 3785.1 Part 1: Drum winding overwind safety catch system
- AS 3785.2 Part 2: Friction winding arresting systems
- AS 3785.3 Part 3: Drum winding gripper systems (this Standard)
- AS 3785.4 Part 4: Conveyances for vertical shafts
- AS 3785.5 Part 5: Headframes
- AS 3785.6 Part 6: Guides and rubbing ropes for conveyances
- AS 3785.7 Part 7: Sheaves
- AS 3785.8 Part 8: Personnel conveyances in other than vertical shafts

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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FOREWORD

Gripper systems are used in vertical hoisting installations that incorporate a drum winder and timber guides.

A gripper system is designed to engage on the guides and support the conveyance when either—

- (a) the conveyance is unintentionally impeded while descending; or
- (b) the hoist rope or suspension equipment fails while the conveyance is ascending.

In either case the grippers will engage with the guides at relatively low speeds.

The design and testing of the gripper system may be subject to the review of the relevant statutory authority.

STANDARDS AUSTRALIA

Australian Standard Underground mining—Shaft equipment

Part 3: Drum winding gripper systems

1 SCOPE

This Standard specifies requirements for gripper systems fitted to conveyances used in vertical mine shafts that have timber conveyance guides and drum winders.

This Standard does not apply to the following:

- (a) Vertical shaft friction winding installations.
- (b) Vertical mine shafts that have steel conveyance guides or rope guides.

NOTES:

- 1 Guidelines on information to be provided by the purchaser are given in Appendix A.
- 2 Guidelines on information to be provided by the supplier are given in Appendix B.

2 REFERENCED DOCUMENTS

The following document is referred to in this Standard:

AS

3785 Underground mining—Shaft equipment

3785.6 Part 6: Guides and rubbing ropes for conveyances

3 DEFINITIONS

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

3.1 Conveyance

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

3.2 Dead load

The load due to the mass of all permanent conveyance structures, ropes and attachments.

3.3 Gripper system

A mechanism that is mounted on a conveyance and which is designed to engage with the timber guides in response to a loss of hoist rope tension.

3.4 Guides

Structural timber members arranged and secured in a shaft to limit lateral movement of the conveyance.

3.5 Shall

Indicates that a statement is mandatory.

3.6 Should

Indicates a recommendation.