

Australian Standard™

Underground mining—Shaft equipment

Part 3: Drum winding gripper systems

STANDARDS
Australia



This Australian Standard was prepared by Committee ME-018, Mining Equipment. It was approved on behalf of the Council of Standards Australia on 20 July 2005.
This Standard was published on 31 October 2005.

The following are represented on Committee ME-018:

Australian Chamber of Commerce and Industry
Australian Coal Association
Australian Industry Group
Department of Consumer and Employment Protection, WA
Department of Labour New Zealand
Department of Mineral Resources NSW
Department of Natural Resources and Mines (Qld)
Engineers Australia
South Australian Chamber of Mines and Energy

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia, GPO Box 476, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 05167.

STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 3785.3—2005

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

RECONFIRMATION NOTICE

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.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 26 February 2017.

The following are represented on Technical Committee ME-018:

Australasian Institute of Mining and Metallurgy
Australian Chamber of Commerce and Industry
Australian Industry Group
Construction and Mining Equipment Industry Group
Department of Industry, Skills and Regional Development (NSW)
Department of Mines and Petroleum (WA)
Department of Natural Resources and Mines (QLD)
Engineers Australia
Minerals Council of Australia
Mining Electrical and Mining Mechanical Engineering Society
Solid Energy New Zealand
Straterra

NOTES

Currently in preview, click buy full vers.

Australian Standard™

Underground mining—Shaft equipment

Part 3: Drum winding gripper systems

First published as AS 3785.3—1990.
Second edition 2005.

COPYRIGHT

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 6961 6

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.

CONTENTS

	<i>Page</i>
FOREWORD.....	4
1 SCOPE.....	5
2 REFERENCED DOCUMENTS.....	5
3 DEFINITIONS.....	5
4 MATERIALS.....	6
5 DESIGN.....	6
6 TESTING.....	7
7 TEST CERTIFICATES.....	7
APPENDICES	
A INFORMATION TO BE PROVIDED BY THE PURCHASER.....	9
B INFORMATION TO BE PROVIDED BY THE SUPPLIER.....	10

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, tub or stage in which persons, minerals, or materials are wound through a shaft or by 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.