

Australian Standard[®]

Fibre ropes

Part 1: Care and safe usage

This Australian Standard was prepared by Committee TX/4, Ropes and Cordage. It was approved on behalf of the Council of Standards Australia on 9 August 1993 and published on 22 November 1993.

The following interests are represented on Committee TX/4:

Australian Chamber of Commerce and Industry
Australian Chamber of Manufactures
Australian Lightweight Vertical Rescue Instructors
Australian Maritime Safety Authority
Department of Defence
Emergency Management Australia
New South Wales Fire Brigades
Police Department, N.S.W.
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PREFACE

This Standard was prepared by the Standards Australia Committee on Ropes and Cordage to supersede Appendix D of AS 1504—1983, *Fibre rope—Three-strand, hawser laid* and Appendix D of AS 1752—1983, *Fibre rope—Eight-strand plaited*.

The Standard has been greatly expanded to include information related to the handling of large ropes on ships.

This Standard is part of a series on fibre ropes. Other Standards in the series include—

- (a) AS 4142.2 *Fibre ropes, Part 2: Three-strand hawser-laid and eight-strand plaited*;
- (b) AS 4142.3 *Fibre ropes, Part 3: Man-made fibre rope for static life rescue lines*; and
- (c) AS 4143 *Methods of test for fibre ropes*

The term 'informative' has been used in this Standard to define the application of the appendices. An 'informative' appendix is only for information and guidance.

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CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	4
1.2 REFERENCED DOCUMENTS	4
1.3 DEFINITIONS	4
1.4 CLASSIFICATION	4
SECTION 2 CAUSES OF DAMAGE TO ROPES	
2.1 GENERAL	5
2.2 CHEMICAL DAMAGE	5
2.3 PHYSICAL DAMAGE AND DEGRADATION	6
SECTION 3 SELECTION OF ROPES AND FITTINGS	
3.1 SELECTION OF ROPES	12
3.2 SELECTION OF FITTINGS	12
SECTION 4 USE OF ROPES	
4.1 REMOVAL OF ROPE FROM A COIL	13
4.2 REMOVAL OF ROPE FROM A TURNTABLE OR CHANGED REEL	13
4.3 ROPE STORAGE AND STOWAGE	13
4.4 PROTECTION FROM ABRASION	13
4.5 PROTECTION IN THE CASE OF SLUNG LOADS	13
4.6 KINKS IN LAID ROPES	14
4.7 COUPLING LAID ROPES	14
4.8 SHARP BENDS IN ROPES	14
4.9 FIBRE AND WIRE ROPES	14
SECTION 5 MAINTENANCE	
5.1 INSPECTION	17
5.2 ACTION FOLLOWING INSPECTION	18
SECTION 6 SAFE WORKING	
6.1 MATERIAL AND LOAD	19
6.2 DANGER FROM SNAPPING ROPES	19
6.3 RECOMMENDATIONS ON THE USE OF ROPE ON DRUM ENDS	19
6.4 PERSONAL PROTECTION	20
6.5 ROPE CONTAMINATION	20
6.6 STRENGTH LOSS DUE TO KNOTS AND SPLICES	21
6.7 TERMINATING ROPE ENDS	22
APPENDICES	
A METHOD OF CALCULATING SAFE WORKING LOADS	23
B EQUIVALENT DEADWEIGHT BREAKING LOADS FOR THREE-STRAND HAWSER-LAID AND EIGHT-STRAND PLAITED ROPES	24

STANDARDS AUSTRALIA

Australian Standard

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard gives guidelines on the care, inspection and maintenance of fibre ropes, and recommendations on safe use of ropes.

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

AS

1380 Fibre rope slings (of natural or synthetic rope)

2089 Sheave blocks (including ships' cargo blocks) of maximum lift 60 t

4142 Fibre ropes

4142.2 Three-strand hawser-laid and eight-strand plaited

4142.3 Man-made fibre rope for static life rescue lines

Admiralty Manual of Seamanship, Vol. II.

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

1.3.1 Safe working load (SWL)—the maximum working load which should be applied to a rope consistent with the factor of safety recommended for the conditions under which the rope is to be used.

1.3.2 Twist—twist is defined as S twist (left-hand lay) or Z twist (right-hand lay), according to which of these letters has its centre inclined in the same direction as the surface elements of a given twisted yarn (or strand).

NOTE: When applying this rule it is essential that the yarn (or strand) axis be parallel with the major axis of the letter as shown in Figure 1.1.

1.3.3 Shall—indicates that a statement is mandatory.

1.3.4 Should—indicates a recommendation.

1.3.5 May—indicates the existence of an option.

1.4 CLASSIFICATION Fibre ropes are divided into two basic classes: natural fibre ropes and man-made fibre ropes. Each class is subclassified according to the specific material used. The classification system is shown in Table 1.1.