Australian Standard®

Methods of test for fibre ropes

Method 1: Dimensions, linear density, breaking force and elongation

PREFACE

This Standard was prepared by the Standards Australia Committee on Ropes and Cordage to supersede Appendices B and C of AS 1504—1983, *Fibre rope—Three-strand, hawser laid*, and Appendices B and C of AS 1752—1983, *Fibre rope—Eight-strand plaited*. The methods have been expanded to allow for the testing of man-made fibre ropes for static life rescue lines. This Standard is based on ISO 2307, *Ropes—Determination of certain physical and mechanical properties*.

METHOD

1 SCOPE This Standard sets out methods for measuring the diameter, length of lay, linear density, breaking force and elongation of fibre rope.

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

AS

2193 Methods for calibration and grading of force-measuring systems of testing machines

4142 Fibre ropes

4142.1 Part 1: Care and safe usage

4142.2 Part 2: Three-strand hawser-laid and eight-strand plaited

4142.3 Part 3: Man-made fibre rope for static life rescue lines

3 DEFINITIONS For the purpose of this Standard, the definitions given in AS 4142.1, AS 4142.2 and AS 4142.3 and those below apply.

3.1 Breaking elongation—the elongation of a specimen at the instant the breaking force is reached.

3.2 Breaking force—the maximum force recorded in breaking a test specimen.

NOTE: This is also the minimum force needed to break a test specimen.

3.3 Elongation—the increase in the length of the rope between two specified tensions.

3.4 Reference tension—a force specified in the Tables in AS 4142.2 for the ropes covered by that Standard, otherwise it is the force, in newtons, numerically equal to $1.25 \times d^2$, where d is the nominal diameter of the rope or the rope size number, as appropriate.

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