

Specification for

Ropes and lines for fire service use other than for rope rescue purposes

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- Anglo-Scottish Fish Producers Organisation Ltd.
- Association of Load Restraint Equipment Manufacturers (ALREM)
- British Tugowners Association
- Chief and Assistant Chief Fire Officers Association
- Home Office
- London Fire and Civil Defence Authority
- Made-up Textiles Association
- Ministry of Defence
- Scottish Net Manufacturers Association
- Scottish Office — Environment, Agriculture and Fisheries for Scotland

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Foreword

This British Standard has been prepared by Technical Committee TCI/77, Ropes, cordage and nets. It supersedes BS 3367:1980 which is withdrawn.

The previous edition of this standard, BS 3367:1980, specified ropes and lines for both fire brigade and industrial purposes. However, in this fourth edition of BS 3367, the scope is limited solely to fire service ropes and lines.

Natural-fibre ropes have been excluded from this standard in the light of the superior performance of synthetic rope material currently available.

Annexes A, B, C and D are normative and annex E is informative.

A British Standard does not purport to include all necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 14, an inside back cover and a back cover.

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1 Scope

This British Standard specifies requirements for ropes to be used in the manufacture of fire service lowering lines, rescue lines, tail lines, guy lines, belt lines and general purpose lines, and also specifies some aspects of the make-up of these lines.

Ropes used in conjunction with specialist rope rescue equipment, such as those associated with mountaineering and caving activities where mechanical devices are used, are excluded. Guidelines and personal lines for use with breathing apparatus are also excluded.

In addition to the definitive requirements, this standard also requires the items detailed in clause 4 to be documented. For compliance with this standard, both the definitive requirements and the documented items have to be satisfied.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS EN 697, *Fibre ropes for general service — Polyester*.

BS EN 699, *Fibre ropes for general service — Polypropylene*.

BS EN 701:1995, *Fibre ropes for general service — General specification*.

BS EN 919, *Fibre ropes for general service — Determination of certain physical and mechanical properties*.

3 Terms and definitions

For the purposes of this British Standard, the following terms and definitions apply.

3.1

hawser laid rope

rope of three strands where the strands are twisted to form helices around the central axis

NOTE This definition is taken from BS 3724.

3.2

8-plait rope

rope having a core of any construction encased in a sheath made from eight interlacing plaits, four in a clockwise direction and four in an anticlockwise direction

3.3

16-plait rope

rope having a parallel core encased in an 8-plait initial sheath, comprising eight interlacing plaits, four in a clockwise direction and four in an anticlockwise direction and comprising a secondary braided sheath made from 16 interlacing plaits, eight in a clockwise direction and eight in an anticlockwise direction

4 Information and requirements to be agreed and documented

The following items to be agreed between the contracting parties are specified in the clauses referred to and shall be fully documented. For compliance with this standard both the definitive requirements specified throughout the standard and the following documented items shall be satisfied.

- a) Lowering lines:
 - 1) length of line (see 6.2);
 - 2) termination of the line (see 6.3.2);
 - 3) any accessories (see 6.4).
- b) Rescue lines:
 - 1) length of line (see 7.2);
 - 2) any accessories (see 7.4).
- c) Guy lines:
 - 1) length of line (see 9.2);
 - 2) any accessories (see 9.4).
- d) Belt lines:
 - 1) length of line (see 10.2);
 - 2) termination and splicing (see 10.3).
- e) General purpose lines:
 - 1) length of line (see 11.2).

5 Rope used in lines

5.1 Termination

Where splicing is necessary in the manufacture of lines, one of the following methods shall be used:

- a) for hawser laid ropes, the method described in annex A;
- b) for 8-plait ropes, the method described in annex B;
- c) for 16-plait ropes, the method described in annex C.

5.2 Marking and packing

5.2.1 Marking

Rope used in the manufacture of lines shall be marked in accordance with BS EN 701:1995, clause 9.

5.2.2 Packing

Rope used in the manufacture of lines shall be packed in accordance with BS EN 701:1995, clause 9.

6 Lowering lines

6.1 Rope

Rope used in the manufacture of lowering lines shall be of one of the following types:

- a) 16 mm nominal diameter hawser laid polyester rope conforming to BS EN 697;
- b) 16 mm nominal diameter 16-plait polyester rope, multifilament core, fibre sheath, nominal mass 14.5 kg per 100 m, having a minimum breaking force of 3 973 daN when determined in accordance with BS EN 919.

6.2 Length

The length of line shall be agreed between the contracting parties (see clause 4).

If no length is specified by the purchaser, the length of lowering line shall be 40 m with the running eye on the standing part fully closed.

6.3 Make-up

6.3.1 Free end

The free end of the line shall be palm and needle whipped for a minimum distance of 25 mm with synthetic fibre cord and shall be heat-sealed not less than 6 mm away from the whipping. The whipping shall be covered with a tight-fitting rubber or plastics sleeve approximately 25 mm long.

6.3.2 Termination

The method of termination shall be agreed between the contracting parties (see clause 4).

If no method of termination is specified by the purchaser, the other end of the line shall be terminated in accordance with annex D.

6.4 Accessories

Accessories shall be agreed between the contracting parties.

If no type of accessory is specified by the purchaser, the lowering line shall be supplied with a guy line conforming to clause 9.

7 Rescue lines (for use with turntable ladders)

7.1 Rope

Rope used in the manufacture of rescue lines shall conform to 6.1a) or b).

7.2 Length

The length of line shall be agreed between the contracting parties (see clause 4).

If no length is specified by the purchaser, the length of the rescue line shall be 70 m.

7.3 Make-up

7.3.1 Free end

The free end of the line shall be palm and needle whipped for a minimum distance of 25 mm with synthetic fibre cord and shall be heat-sealed not less than 6 mm away from the whipping. The whipping shall be covered with a tight-fitting rubber or plastics sleeve approximately 25 mm long.

7.3.2 Termination

The other end of the line shall be secured to a corrosion-resistant thimble which is eye-spliced into the line in accordance with annex A for hawser laid rope or in accordance with annex C for 16-plait rope.

7.3.3 Treatment of splices

All splices shall be whipped for a minimum distance of 150 mm using 0.5 mm to 2 mm diameter synthetic fibre cord.

7.4 Accessories

Accessories shall be agreed between the contacting parties (see clause 4).

If no type of accessory is specified by the purchaser, the rescue line shall be supplied with a tail line conforming to clause 8 and a guy line conforming to clause 9.

8 Tail lines

8.1 Rope

Rope used in the manufacture of tail lines shall be 12 mm nominal diameter hawser laid polyester rope conforming to BS EN 697.

8.2 Length

The length of tail lines shall be no greater than 6 m.

8.3 Make-up

8.3.1 Free end

The free end of the line shall be whipped for a minimum distance of 25 mm with synthetic fibre cord.

8.3.2 Termination

The other end of the line shall be secured to a corrosion-resistant thimble which is eye-spliced into the line in accordance with annex A.

8.3.3 Treatment of splices

All splices shall be whipped for a minimum distance of 150 mm using 0.5 mm to 2 mm diameter synthetic fibre cord.

8.4 Accessories

The attachment of any accessories supplied with a tail line shall be carried out in accordance with 9.4.