

Specification for

Dimensions of anchor chain cables —

Part 1: Stud-link anchor chain cables

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Foreword

This Part of this British Standard has been prepared under the authority of the Shipbuilding and Marine Industry Standards Committee and supersedes BS 3006 “*Dimensions of ships stud link anchor cables*”, which is therefore withdrawn.

The dimensions of the cable components set out in this standard are metric based, using millimetre units rounded to integral values for the purpose of the tables.

The listed nominal diameters of the common link from which the nominal sizes of cable are taken are in agreement with ISO 1704 “*Anchor chains*”¹⁾ and with the International Association of Classification Societies (IACS) published rules, and cover a range of 17.5 mm to 152 mm in a total of fifty-eight sizes²⁾. The use of a separate reference number for each chain cable size has been discontinued in this standard.

The raised heads of the shackle pins described in ISO 1704 have been changed to flush heads with a countersink under the head in this standard. A raised head constitutes a hazard, as it can become fouled with a wire or other obstruction, and a countersunk head is less liable to break off. The retaining pins of ISO 1704 are shown, but taper pins are specified as an alternative, and are recommended.

These modifications are being submitted to ISO/TC 8 as a proposed amendment to ISO 1704.

In the United Kingdom, the minimum strength of ships’ anchor cables is governed by the statutory provisions of the Anchor and Chain Cables Act, and this standard is complementary to the requirements of that Act.

It is necessary that the links and shackles of anchor cables should ride smoothly in the pockets and snugs of the windlass cable lifters, and special attention needs to be given to this aspect by the manufacturer in arriving at the completed cable. Lugless shackles (see Figure 5) by being applied directly to the common link and thus obviating the need for enlarged and end links, contribute greatly to this desired aim.

Certification. Attention is drawn to the certification facilities described on the inside back cover of this standard.

A British Standard does not purport to include all the 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 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

¹⁾ ISO 1704 includes dimensions for a studless link. This type of link will be the subject of Part 2 of this standard.

²⁾ The IACS published rules include certain sizes outside the range of this standard.

1 Scope

This British Standard specifies the shape, proportions, tolerances and material of the component parts of stud link anchor chain cables for ships, for a range of nominal sizes from 17.5 mm to 152 mm.

2 References

This standard makes reference to the following British Standard.

BS 46, *Keys and keyways and taper pins — Part 3: Solid and split taper pins.*

3 Shape and dimensions

3.1 Shape. The stud links, shackles, and shackle bolts shall be of the shapes and proportions shown in Figure 1 to Figure 6. All links and shackles shall be of uniform shape. Shackle pins shall have flush-fitting heads, and their holes shall be countersunk to allow this.

It is recommended that taper pins be used for retaining shackle pins and the lugless joining shackle shown in Figure 5.

3.2 Dimensions. The dimensions of stud links, shackles, shackle bolts and studless links shall be in accordance with Table 1 to Table 6.

The nominal diameters of the links shall be measured at the crown of the links.

All dimensions based on the nominal diameters of the common links shall be measured after the chain and shackles have been subjected to the statutory proof loads.

3.2.1 Enlarged links. The proportions of the enlarged links are equal to the proportions of the common links.

3.2.2 Common links and enlarged links. The inside radii of common links and enlarged links shall be sufficient to allow each link to bed properly and work freely.

3.2.3 End links and studless links. The inside radii of end links, and studless links shall be equal to half the inside width and the sides shall be parallel.

4 Tolerances

4.1 Diameter d of the common link. The diameter d of the common link is not restricted in the positive sense, but shall have negative tolerances on the nominal diameter as follows.

Minus 1 mm up to $d = 40$ mm

Minus 2 mm above $d = 40$ mm up to $d = 83$ mm

Minus 3 mm above $d = 83$ mm

The cross-sectional area of the link is not restricted in the positive sense but shall have a minimum value of at least that of the circle based on the nominal diameter d , i.e. $0.785 d^2$ or $\frac{1}{4} \pi d^2$.

The allowable manufacturing tolerance on a length of five links is of five links is $\pm 2.5, 0\%$.

4.2 All other linear dimensions. The allowable manufacturing tolerance is $\pm 2.5\%$, taking into account the fact that all components of the anchor chain shall be a good fit with each other.

5 Material

The quality of the material used for the manufacture of links and shackles shall not be inferior in any respect to that of the material used for the manufacture of the other component parts forming the anchor chain.

6 Dimensions of links and Shackles

The values given in the following tables apply to links and shackles manufactured partly or wholly from round steel bars.

The nominal diameters d are taken from those specified by the classification societies associated in the International Association of Classification Societies (IACS).

The values of d in brackets have been added in order to meet the requirements of the classification societies which are members of the IACS.