

CONFIRMED
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Specification for

Weed grids for sea inlets

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Foreword

This British Standard has been prepared under the authority of the Shipbuilding and Marine Industry Standards Committee and is based on a proposal of the British Ship Research Association.

Underwater openings are provided in ships for the purpose of admitting sea water under controlled conditions for ballasting and other essential services. This standard specifies details of protective weed grids for such openings in order to provide coarse straining of large water-borne debris.

This standard makes reference to the following British Standards:

BS 499, *Welding terms and symbols — Part 2: Symbols for welding.*

BS 729, *Hot dip galvanized coatings on iron and steel articles.*

BS 1400, *Copper alloy ingots and copper and copper alloy castings.*

BS 1574, *Split cotter pins — metric and inch series.*

BS 1936, *Undercuts and runouts for screw threads — Part 2: ISO metric screw threads.*

BS 2045, *Preferred numbers.*

BS 2870, *Rolled copper and copper alloys. Sheet, strip and foil.*

BS 2873, *Copper and copper alloys. Wire.*

BS 2874, *Copper and copper alloys. Rods and sections (other than forging stock).*

BS 3692, *ISO metric precision hexagon bolts, screws and nuts.*

BS 4320, *Metal washers for general engineering purposes.*

BS 4360, *Weldable structural steels.*

CP 3003, *Lining of vessels and equipment for chemical processes.*

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 11 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.

This British Standard, having been approved by the Shipbuilding and Marine Industry Standards Committee, was published under the authority of the Executive Board on 29 July 1974

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The following BSI references relate to the work on this standard:
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Amendments issued since publication

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NOTE Users of this British Standard: Marine Series should note that while observing the requirements of the standard they should at the same time ensure compliance with such statutory requirements, rules and regulations as may be applicable to the individual ship concerned.

1 Scope

1.1 This British Standard specifies a range of weed grids to act as coarse strainers for sea water inlets on ships. The standard specifies types and sizes of grids, materials, dimensions, quality of manufacture and fixing details.

1.2 Appendix A relates to the application and shipboard installation of weed grids.

2 Types

Weed grids manufactured in accordance with this standard shall comprise three types, as follows:

- Type A: Circular (See Figure 1 and Figure 2)
 Type B: Elliptical (See Figure 3 and Figure 4)
 Type C: Rectangular (See Figure 5)

3 Nominal sizes and designation

Weed grids shall be designated by reference to their type and nominal size as given in Table 1 (e.g. Type A25, Type B63 etc.).

NOTE The nominal sizes of the weed grids are related to the clear areas (m²) which are graduated in accordance with a preferred series of numbers (see R5 series of BS 2045).

Table 1 — Nominal sizes of weed grids

Nominal size	Type A	Type B	Type C
	Clear area	Clear area	Clear area
	m ²	m ²	m ²
25	0.025	0.25	0.25
40	0.040	0.40	—
63	0.063	0.63	—
100	0.100	1.00	—
160	0.160	—	—

4 Construction and dimensions

4.1 The construction of the weed grids and their dimensions shall be in accordance with Figure 1 to Figure 7. Typical details of fixing brackets and screws are shown in Figure 8.

4.2 The dimensions and finish of fasteners shall comply with the requirements of BS 1574, BS 3692 and BS 4320. Grid fixing screws to BS 3692 shall have the thread under the screw head undercut in accordance with the requirements of BS 1936-2 (plunge-cut f_1).

5 Materials

The materials used for the manufacture of weed grids shall be in accordance with the requirements of Table 2. Other materials may be used provided they are at least as suitable for the intended duty.

6 Quality of manufacture

6.1 Weed grids shall be either fabricated by welding or of cast form as shown by the appropriate figures.

NOTE The welding symbols used in Figure 6 are in accordance with the requirements of BS 499-2, but the associated dimensions are expressed in terms of the weld throat thickness and *not* leg length.

6.2 All welding shall be of good quality without undue porosity or undercut. After welding, and prior to any protective coating, sharp edges and surface roughness shall be removed or smoothed.

6.3 Fabricated and cast weed grids shall have the bars evenly spaced with a gap between bars of 25 mm.

6.4 Fabricated steel grids, after the completion of all welding, shall be galvanized in accordance with the requirements of BS 729. When grids are to be coated other than by galvanizing, special preparation of the surfaces may be required and reference should be made to CP 3003. See Appendix A for influence of thickness of coatings on clear area.

6.5 Cast weed grids shall be cleaned to remove any casting fins, attached scale or foundry sand.

6.6 Holes for fixing screws shall be accurately positioned and drilled in accordance with dimensions specified. For cast grids the holes shall be spot faced on the nut/washer surface.

7 Inspection

7.1 Fabricated and cast weed grids shall be checked to ensure there is no excessive distortion.

7.2 Cast weed grids shall be visually inspected for any detrimental defects such as porosity, blow holes or cracks.

7.3 Coated weed grids shall be visually inspected to ensure that the coating is sufficiently adherent and presents a uniform protection to the surfaces of the grid.