

Specification for

Manholes with bolted covers

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Committees responsible for this British Standard

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- British Ship Research Association
- British Shipbuilders
- Department of Trade and Industry — Marine Division
- Federation of Wire Rope Manufacturers of Great Britain
- General Council of British Shipping
- Honourable Company of Master Mariners
- Shiprepairers and Shipbuilders Independent Association

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Foreword

This revision of this British Standard has been prepared under the direction of the Shipbuilding and Marine Standards Committee. It supersedes the 1970 edition which is therefore withdrawn.

In order to ensure interchangeability of the covers and gaskets the revised standard provides technical and dimensional alignment with selected preferred nominal sizes of manhole as specified in ISO 5894:1978 "*Shipbuilding — Manholes with bolted covers*" published by the International Organization for Standardization (ISO).

The principal differences from the original edition of BS MA 7 relate to the following:

- a) the deletion of the raised coaming type incorporating a tapping ring;
- b) the inclusion of circular manholes with a surface mounted circular cover, a rectangular cover on a raised coaming of angle bar construction, and a circular cover in a recessed coaming.

The types of manhole specified in this standard are indicated in Figure 1, and the order of preference in terms of size indicated. It should be noted that dimension tables included in all figures have been tabulated in order of size preference. Thus the first line of dimensions in any table indicates preference one in regard to the size of manhole of the type indicated.

In selecting a particular type of manhole from those indicated in Figure 1, users should bear in mind that under certain conditions of access, particularly when breathing apparatus is to be worn by persons entering a compartment, only the largest sizes of clear openings, i.e. 620 mm × 420 mm, and 620 mm diameter, may be acceptable.

NOTE Users of this standard 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.

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 Scope

This British Standard specifies requirements for manholes with watertight and oiltight bolted covers of 12 mm thickness, for general shipboard use other than for pressure vessels.

The standard provides a general specification for a range of types of covered manhole with variation in design to suit the differing situations of installation. The standard specifies the dimensions of the holes in the plating and the number, size and position of the fasteners of raised coaming, surface mounted and recessed cover types.

The standard also provides for interchangeability of common parts by stipulating an identical cover, gasket, tapping ring and levelling plate for types A and E, and types C and F, in Figure 2, Figure 3, Figure 4 and Figure 6.

NOTE The titles of the publications referred to in this standard are listed on the inside back page.

2 Types and dimensions

2.1 The types of covered manhole listed in Table 1 shall be constructed in accordance with the details in Figure 1. They are classified by reference letters A, B, C, D, E and F, together with the number 1 or 2 indicating first or second preference. The details of the associated components used and the method of assembly, shall be in accordance with Figure 2 to Figure 8.

NOTE The welding symbols used in the figures are in accordance with BS 499-2.

2.2 The nominal size of the manhole shall be that of the clear opening for access. The size of the openings in the ship's plating shall be in accordance with Figure 1.

Table 1 — Shapes of manhole and cover, and types of mounting

Manhole type	Shape of hole	Shape of cover	Type of mounting
A	Oval	Oval	Surface mounted
B	Oval	Rectangular	Raised coaming
C	Circular	Circular	Surface mounted
D	Circular	Rectangular	Raised coaming
E	Oval	Oval	Recessed coaming
F	Circular	Circular	Recessed coaming

3 Materials

The materials used shall be in accordance with Table 2.

4 Manufacture

4.1 The steel plates and sections used shall be flat and free from pitting, reasonably clean and sufficiently smooth so as to enable a satisfactory joint to be formed without the need to machine the surface.

4.2 The gasket material shall have a thickness appropriate to the intended service, but shall not exceed 5 mm.

4.3 The dimensional accuracy of the manhole covers, of the gaskets and of the drilling and spacing of the holes for fasteners shall be such as to ensure interchangeability of these components.

4.4 The holes in manhole covers, gaskets and coamings shall be 22 mm diameter.

4.5 The access openings shall be free from all rough edges or surfaces likely to cause injury to the hands.

5 Ancillary fittings

5.1 Where the manhole is installed in a vertical position consideration shall be given to the addition of the following ancillary fittings:

- a) a fixed handle on the cover; and
- b) one elongated stud to enable the cover to be withdrawn slightly and pivoted clear of the opening.

5.2 Levelling plates shall be provided either with or without suitable handholes.

NOTE Handholes will only be provided when specified by the purchaser.

6 Designation

Manholes manufactured in accordance with this standard shall be designated, for ordering purposes, by the number of this standard together with the manhole reference, e.g. BS MA 7 E2 means an oval manhole with recessed oval coaming and the second preference size.