



MARINE ORDERS

Part 16

Load Lines

Issue 2

Order No 12 of 1997

Pursuant to Section 425(1AA) of the *Navigation Act 1912*, I hereby make this Order repealing Marine Orders, Part 16, Issue 1 and substituting the attached Marine Orders, Part 16, Issue 2, to come into operation on 1 February 1998.

P M McGrath
Chief Executive Officer
22 December 1997

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Previous issues

Issue 1, Order No. 3 of 1987

—Amended by Order No. 3 of 1994

1 Definitions

1.1 In this Part, unless the contrary intention appears, the following definitions apply:

AMSA means the Australian Maritime Safety Authority;

Article means an Article of the Convention;

assigning authority means:

- (a) in the case of a ship whose freeboard is assigned or to be assigned by a survey authority, that survey authority; or
- (b) in the case of any other ship, the Chief Marine Surveyor;

Chief Marine Surveyor means the person occupying the position of Manager, Marine Services—Ship Inspection Programs, in AMSA or, in respect of any particular purpose under this Part, a suitable qualified person authorised by the Manager, Marine Services—Ship Inspection Programs, for that purpose;

Circular means a Load Line Circular issued by IMO;

Convention means the International Convention on Load Lines, 1966, as amended by the Protocol of 1988;

IMO means the International Maritime Organization;

load line certificate means, in the case of a ship registered in Australia, the certificate issued or to be issued under paragraph 222 (a) or (b) of the Navigation Act, as the case may be, in respect of the ship;

Navigation Act means the Navigation Act 1912;

Regulation means a regulation annexed to the Convention;

Resolution means a resolution adopted by the Assembly of IMO;

SOLAS means the Safety Convention as defined in the Navigation Act;

survey authority means a survey authority authorised in writing by AMSA to issue certificates under section 222 of the Navigation Act; and

USL Code means the Uniform Shipping Laws Code referred to in section 427 of the Navigation Act.

1.2 In this Part, unless otherwise provided or unless the context otherwise requires, words and phrases have the same meaning as they have in the Convention.

1.3 A reference to the Administration:

- (a) in article 19(3) and 19(5), and regulations 8, 11, 14, 15, 16(3), 16(4), 19, 25(1), 27, 28 and 39(2) is to be read and construed as meaning the assigning authority; and
- (b) in any other article or regulation is to be read and construed as meaning the Chief Marine Surveyor.

1.4 In this Part, a reference to the date on which a ship was constructed means the date on which not less than 50 tonnes or one per cent of the proposed total mass of the structural material of the ship, whichever is the less, has been assembled.

1.5 The expression **to the satisfaction of the Chief Marine Surveyor** or any similar expression appearing in this Part, means that the Chief Marine Surveyor may require the fitting, material, appliance or apparatus referred to, to be demonstrated to be safe and effective for its intended purpose.

Note: Where equipment, material or fittings are required to be approved by or be acceptable to the Chief Marine Surveyor; those equipment, material or fittings, if approved by the Administration of a Contracting Government to the Convention or by a survey authority, may be accepted by the Chief Marine Surveyor provided sufficient information is submitted for recognition of the approval.

1.6 In this Part:

- (a) headings and sub-headings are part of the Part;
- (b) each Appendix is part of the Part;
- (c) a note included in the text and printed in italics is not part of the Part.

2 Purpose

This Part:

- (a) for the purposes of section 220 of the Navigation Act:
 - (i) makes provision for and in relation to giving effect to the Convention; and
 - (ii) generally makes provision for and in relation to load lines; and
- (b) for the purposes of section 171 of the Navigation Act, prescribes entries relating to load lines to be made in the official log-book of an Australian registered ship.

3 Application

This Part applies to and in relation to:

- (a) a ship registered in Australia except to the extent that exemption from the provisions of this Part or of the Convention has been granted under section 221 of the Navigation Act; and
- (b) a ship other than a ship registered in Australia, that is in the territorial sea of Australia or in waters on the landward side of the territorial sea, except:
 - (i) to the extent that exemption from the provisions of this Part has been granted under sub-section 221(6) or 221(7) of the Navigation Act; or
 - (ii) where a valid international load line exemption certificate exists in relation to the ship, to the extent of any exemption from the provisions of the Convention specified in that certificate.

4 Equivalents

Where a provision of the Convention or other provision of this Part requires a particular fitting, material, appliance or apparatus, or type thereof, to be fitted or carried in a ship, or a particular provision to be made in a ship, the Chief Marine Surveyor may allow any other fitting, material, appliance or apparatus, or type thereof, to be fitted or carried, or any other provision to be made, if satisfied that the other fitting, material, appliance or apparatus, or type thereof, or provision, is at least as effective as that required by this Part.

5 Review of decisions

5.1 Application may be made to the Administrative Appeals Tribunal for a review of a decision by the Chief Marine Surveyor:

- (a) refusing to allow under 4 a particular fitting, material, appliance or apparatus, or type thereof, to be fitted or carried in a ship or a particular provision to be made in a ship;
- (b) refusing to accept under 8.1 a ship or class of ships for experimental purposes;
- (c) in relation to a specification under 8.1 and 8.2 in relation to a ship or class of ships for experimental purposes;
- (d) refusing to determine a lesser bow height under 13;
- (e) in relation to loading stress information required to be kept on a ship under 15.2(b);
- (f) refusing to issue a copy of a certificate under 21;

- (g) refusing to extend the validity of a load line certificate under 22.1 or 22.2;
- (h) in relation to the exercise of a discretion bestowed, by virtue of 1.3(a), on the Chief Marine Surveyor by the Convention.

Note: Section 377D of the Navigation Act provides for the review of decisions relating to the issue, extension and cancellation of certificates and the granting, extension and cancellation of exemptions.

5.2 Statements to accompany notices

If a person making a decision referred to in 5.1 gives to a person whose interests are affected by the decision notice in writing of the decision, the notice must:

- (a) include a statement to the effect that, if the person is dissatisfied with the decision, application may, subject to the Administrative Appeals Tribunal Act 1975, be made to the Administrative Appeals Tribunal for review of the decision;
- (b) except where subsection 28(4) of that Act applies, also include a statement to the effect that the person may request a statement under section 28 of the Act.

5.3 Validity of decisions

Failure to comply with 5.2 in relation to a decision does not affect the validity of that decision.

6 Penal provisions

6.1 Provisions 14.1.2, 15.1, 15.2, 16, 24 and 26.2 are penal provisions.

6.2.1 Failure to comply with provision 16 constitutes an offence by the master of a ship.

6.2.2 Failure to comply with provisions 14.1.2, 15.1, 15.2 and 26.2 constitutes an offence by the owner and master of a ship.

*Note: Regulation 4 of the Navigation (Orders) Regulations provides:
'4. A person who contravenes a provision of an order made under subsection 425(1AA) of the Act that is expressed to be a penal provision is guilty of an offence and is punishable, upon conviction:—
(a) if the offender is a natural person—by a fine not exceeding \$2,000; or
(b) if the offender is a body corporate—by a fine not exceeding \$5,000.'*

7 Convention requirements

For the purposes of section 220 of the Navigation Act, the applicable articles and the applicable provisions of the regulations have the force of law as part of the law of the Commonwealth in relation to all ships, other than fishing vessels, except to the extent that the contrary intention is expressed in this Part or to the extent that the ship is exempted under section 221 of the Navigation Act from compliance with the Convention.

8 Approvals for experimental purposes

8.1 The Chief Marine Surveyor may accept for experimental purposes a ship or a class of ships as complying with this Part, specifying for that purpose by written instrument:

- (a) a provision of this Part, or of the articles or regulations, to apply with such modifications as are specified in that instrument;
- (b) appropriate freeboards to apply in lieu of those that would otherwise be assigned, together with the conditions of assignment appropriate to such freeboards;
- (c) appropriate load lines to apply in lieu of those that would otherwise be marked;
- (d) the manner of marking such load lines; and
- (e) for the purposes of section 187C and 207 of the Navigation Act, the appropriate load line or appropriate subdivision load line at any specified time or times.

8.2 An instrument referred to in 8.1 may be expressed to apply for such period, not exceeding 5 years, as the Chief Marine Surveyor considers appropriate.

9 Applications for exemption

Application for exercise of any of AMSA's powers of exemption under section 221 of the Navigation Act, must be accompanied or supplemented by:

- (a) in the case of a ship for which a load line certificate has not been issued under this Part, the information specified in 17.2; and
- (b) in all cases, such additional information as the Chief Marine Surveyor considers necessary for the exercise of that power.

Note: In order to avoid undue delay in completion of the assessment of an application for exemption, and facilitate provision of such additional information as may be required, each application should be made as early as possible.

10 Interpretation

10.1 An article or regulation referred to in the unified interpretations of the Convention published by the IMO as circulars LL.3/Circ.55, LL.3/Circ.69 and LL.3/Circ.77 are to be read and applied in accordance with those circulars

10.2 Regulation 49(7)(b) is to be read and applied in accordance with circular LL.3/Circ.90.

Note: Copies of Circulars LL.3/Circ.55, LL.3/Circ.69, LL.3/Circ.77 and LL.3/Circ.90 are obtainable from AMSA.

11 Strength of hull

Where freeboards are proposed to be assigned to a ship in accordance with this Part, they may be assigned only if the general structural strength of its hull is sufficient to permit it to be loaded to the draughts corresponding to those freeboards.

Note: For the purposes of 11, a ship built and maintained in accordance with the requirements of a survey authority recognised by the Administration of the country of registration of the ship is deemed to have the general structural strength required by that provision. For an Australian registered, ship, the recognised survey authorities are those listed in the note to Provision 20.

12 Assignment of increased freeboard

Where:

- (a) the owner of a ship requests assignment of a greater summer freeboard than would otherwise be calculated in accordance with the regulations; or
- (b) the structural strength or the intact or damage stability characteristics of a ship necessitate assignment of a greater than minimum summer freeboard; or
- (c) the Chief Marine Surveyor, as a condition of exemption from a provision of this Part or another Part of Marine Orders, requires assignment of a greater than minimum summer freeboard,

the circular mark forming part of the load line mark must be so placed that its centre is at amidships vertically below the deck line at a distance from the deck line corresponding to that greater freeboard.

13 Minimum bow height

For the purpose of regulation 39(3), the Chief Marine Surveyor, being satisfied that the safety of the ship and any person on board will not be thereby jeopardised, may determine a lesser bow height to be permissible for a ship.

Note: In relation to off-shore industry mobile units, Marine Orders, Part 47 (Off-shore Industry Mobile Units) may also apply.

14 Non-convention ships

14.1 Application of USL Code

14.1.1 For the purposes of section 222 of the Navigation Act, the conditions of assignment applicable to a ship referred to in paragraph 222(b) of that Act, other than a ship referred to in 14.1.2, are the applicable provisions of parts 2, 3, 5, 6 and 11 of section 7 of the USL Code.

14.1.2 A load line certificate need not be issued in respect of a ship of less than 24 metres in length if the ship complies with the applicable provisions of sub-sections 5C and 5D and of Part III of sub-section 5E of the USL Code.

14.2 Interpretation

For the purposes of 14.1, to the extent that a provision of the USL Code is inconsistent with a provision of the Convention, the provision of the Convention is to be disregarded.

14.3 Survey and inspection

The master and owner of a ship referred to in 14.1.2 need not comply with 15 to 26 inclusive of this Part, provided the ship is subjected, in relation to the applicable provisions of sub-sections 5C and 5D and of Part III of sub-section 5E of the USL Code, to the following surveys and inspections by a surveyor or survey authority:

- (a) an initial survey before the ship is put into service; and
- (b) a periodical survey:

- (i) at intervals not exceeding 5 years; or
- (ii) where the Chief Marine Surveyor has allowed an interval to be extended in accordance with 22.2, within the period of that extension; and
- (c) a periodical inspection within 3 months of each anniversary date of the initial survey.

15 Information to be carried

15.1 Statement of assigning authority

There must at all times be carried on a ship a statement by the assigning authority, substantially in the form specified in Appendix 2, setting out the conditions of assignment of freeboard:

- (a) specified in the Convention; or
- (b) in the case of a ship to which the Convention does not apply, specified in the relevant rules of the Administration of the country in which the ship is registered, applying to the ship; and
- (c) in the case of a ship referred to in 8, the instrument referred to in that provision.

15.2 Loading information

For the purpose of compliance with regulation 10(1) of the Convention, there must at all times be carried on a ship of 65 metres or more in length:

- (a) in the case of a ship classed by a survey authority, such loading stress information, including a loading manual and loading instrument as is required by that authority; and
- (b) in all other cases, such loading stress information as the Chief Marine Surveyor considers necessary to provide adequate guidance to the master.

Note 1: 'Loading instrument' includes a computer and any associated computer program approved by the survey authority.

Note 2: Information marked by the survey authority or AMSA as approved will be taken to remain acceptable for the purpose of all subsequent inspections and surveys unless the ship has undergone structural modification necessitating provision of amended information. In the case of an unclassified foreign ship, loading information approved by the ship's flag state will generally be acceptable under 15.2(b).

Note 3: Ships to which SOLAS applies are also required to carry the stability information required by Chapter II-1 of SOLAS.

16 Entries to be made in the official log-book

For the purposes of sub-section 171(1) of the Navigation Act, the master of an Australian registered ship must make such applicable entries in the official log-book as are set out in Parts II and III of the prescribed form of the official log-book.

Note: The prescribed form of the official log-book is set out as Form 6 in Appendix 1 of Marine Orders, Part 53 (Employment of Crews).

17 Initial survey

17.1 Application for the initial survey of a ship under this Part must be made:

- (a) if freeboards are to be assigned by the Chief Marine Surveyor, to any AMSA survey office; or
- (b) if freeboards are to be assigned by a survey authority, to the survey authority.

17.2 An application under 17.1 must be accompanied or supplemented by the following:

- (a) a general arrangement plan;
- (b) a lines plan;
- (c) plans giving full details of:
 - (i) scuppers, discharges, sea inlets and tank venting together with their associated piping; and
 - (ii) the structure and closing appliances of openings in the exposed freeboard deck, in any exposed superstructure deck, in an exposed deck above the superstructure deck, in a superstructure end bulkhead and in the ship's sides;
- (d) details showing arrangements such as guard rails, bulwarks, etc. for the protection of the crew;
- (e) details showing subdivision arrangements and calculations;
- (f) intact and damage stability data, including:
 - (i) a capacity plan;
 - (ii) deadweight scale;
 - (iii) hydrostatic curves; and

- (iv) cross curves of stability;
- (g) diagrams or tables of the allowable still water and seagoing shear forces and bending moments resulting from the distribution of cargo, fuel, water, ballast, stores, etc. within or on the ship;
- (h) such other plans giving details of the structure and arrangements as are necessary to enable the assigning authority to ensure that the ship's strength is consonant with the draught corresponding to the freeboard to be assigned,

except to the extent that the assigning authority considers that the furnishing of a plan or other information is unnecessary.

17.3 The assigning authority to which application for survey is made may require the owner of the ship to furnish such additional plans and information as is considered necessary to enable the survey to be made and to enable load lines to be assigned to the ship.

17.4 An initial survey is to consist of an examination of the structure of the ship and those parts of the equipment of the ship that are referred to in Chapter II of the regulations, for the purpose of:

- (a) ascertaining that the structural strength is not less than that referred to in 11;
- (b) ascertaining that the arrangements, materials and scantlings comply, except to the extent of any exemption from compliance granted under section 221 of the Act, with the conditions of assignment specified by the Convention, in so far as those conditions are applicable;
- (c) the assignment of freeboards in accordance with this Part; and
- (d) ascertaining that the ship is marked in accordance with this Part.

17.5 Where, under the Convention, the means of closing hatchways and other openings are required to be weathertight or watertight, tests for weathertightness or watertightness, as the case may be, of those means must be made at the initial survey.

17.6 At the initial survey, the assigning authority must ascertain that:

- (a) the information specified in 15 is carried on the ship; and
- (b) the ship has been marked with:
 - (i) the load line mark;
 - (ii) the seasonal load lines to be used in association with the load line mark; and
 - (iii) draught marks in accordance with 26.

18 Renewal survey

18.1 A ship must be subjected to a renewal survey in accordance with this Part at intervals not exceeding 5 years.

18.2.1 Subject to 18.2.2, application for a renewal survey in accordance with this Part must be made to the assigning authority for the existing load line certificate, who may require the applicant to furnish such plans and information as are necessary for the purposes of the survey.

18.2.2 Application for a renewal survey may be made to an assigning authority other than the assigning authority referred to in 18.2.1 and, in such a case, the applicant must comply with 17.1, 17.2 and 17.3.

Note: *Application for an AMSA survey should be made to the AMSA survey office at, or nearest to, the port at which the ship is to be surveyed.*

18.3.1 A renewal survey under this Part is to consist of an examination of the structure and those parts of the equipment that are referred to in Chapter II of the regulations, for the purpose of ascertaining whether or not:

- (a) the structural strength has deteriorated to such an extent that it is less than that referred to in 11;
- (b) the arrangements, materials and scantlings comply, except to the extent of any exemption from compliance granted under section 221 of the Navigation Act, with the relevant conditions of assignment specified by the Convention;
- (c) any alteration to the freeboards previously assigned is necessary;
- (d) the ship is marked in accordance with this Part; and
- (e) alterations have been made to the hull or superstructure.

18.3.2 Where, under the Convention, the means of closing hatchways and other openings are required to be weathertight or watertight, tests for weathertightness or watertightness, as the case may be, of those means must be made at each renewal survey.

18.3.3 At each renewal survey, the assigning authority conducting the survey must ascertain that:

- (a) the information specified in 15 is carried on the ship; and
- (b) the ship has been marked with:
 - (i) the load line mark;
 - (ii) the seasonal load lines to be used in association with the load line mark; and

- (iii) draught marks in accordance with 26.

19 Annual survey

19.1 An annual survey is to be conducted by the assigning authority for the existing load line certificate within 3 months of the anniversary date of that Certificate, unless application is made by or on behalf of the owner for the survey to be conducted by a different assigning authority.

19.2.1 An annual survey under this Part is to be an inspection of the ship for the purpose of ascertaining whether or not:

- (a) alterations have been made to the hull or superstructure, being alterations of such a nature that the summer freeboard specified in the load line certificate is no longer the summer freeboard to be assigned under this Part; and
- (b) the fittings and appliances for the protection of openings, for the guard rails, for freeing ports and for means of access to crew's quarters are maintained in an effective condition.

19.2.2 At each annual survey, the inspecting authority must ascertain that:

- (a) the information specified in 15 is carried on the ship; and
- (b) the ship has been marked with:
 - (i) the load line mark;
 - (ii) the seasonal load lines to be used in association with the load line mark; and
 - (iii) draught marks in accordance with 26.

19.3 On completion of each annual survey, the assigning authority must endorse the load line certificate accordingly.

20 Certificate issued by survey authority

Where a load line certificate is issued by a survey authority, the survey authority must furnish to the Chief Marine Surveyor:

- (a) a copy of the certificate;
- (b) a copy of the Record of Conditions of Assignment, referred to in 15.1, including, where the ship is assigned a reduced freeboard, the damage stability calculations upon which the assignment is based; and
- (c) a statement setting out the details of the computation for freeboard.

Note: The following survey authorities are authorised under section 222 of the Navigation Act to issue load line certificates:

American Bureau of Shipping

Bureau Veritas

Det Norske Veritas

Germanischer Lloyd

Lloyd's Register of Shipping

Nippon Kaiji Kyokai.

21 Additional certificate

Upon written request to the Chief Marine Surveyor, a copy of a load line certificate or international load line exemption certificate issued under the Navigation Act may be issued.

22 Extension of certificate

22.1 For the purpose of paragraph 224(2)(a) of the Navigation Act, the validity of an international load line certificate or an international load line exemption certificate may be extended by the assigning authority in accordance with Article 19(2).

22.2 For the purposes of subsection 224(4) of the Navigation Act, the validity of a certificate referred to in paragraph 222(b) of the Navigation Act may be extended by the Chief Marine Surveyor for a period not exceeding 3 months, provided that the Chief Marine Surveyor is satisfied that the safety of the ship and any person on board will not be thereby jeopardised.

23 Cancellation of certificate

23.1 For the purpose of paragraph 224(2)(b) of the Navigation Act, an international load line certificate or an international load line exemption certificate may be cancelled in accordance with Article 19(3) by the Chief Marine Surveyor upon the report of a surveyor or a survey authority.

23.2 For the purposes of subsection 224(4) of the Navigation Act, Articles 19(3) and (5) apply to a certificate referred to in paragraph 222(b) of the Navigation Act, as if it were an international load line certificate.

23.3 Further to the circumstances identified in Article 19(4), an international load line exemption certificate issued to a ship under section 223 of the Navigation Act will be

cancelled if the ship does not comply with a safety requirement specified as a safety requirement with which the ship must comply.

24 Alterations

An alteration referred to in Article 15 must not be made to a ship unless:

- (a) written application for approval has been made to the assigning authority for the existing load line certificate, specifying the nature of the alteration proposed;
- (b) the proposed alteration has been approved by the assigning authority; and
- (c) the alteration is in accordance with any conditions specified in the approval.

25 Overloading

25.1.1 For the purposes of subsection 187C(5) of the Navigation Act, the appropriate load line at any time for:

- (a) a ship registered in Australia; or
- (b) a Load Line Convention ship registered in a country other than Australia,

is that load line marked on the ship, in accordance with the Convention, applicable for the season of the year and the zone in which the ship is located.

25.1.2 For the purposes of subsection 187C(5) of the Navigation Act, the appropriate load line at any time for a ship registered in a country other than Australia and not being a Load Line Convention ship is:

- (a) if the ship is marked in accordance with the Convention, the load line applicable to the season of the year and the zone in which the ship is located; or
- (b) if the ship is marked in any other manner, the load line that is stated in the ship's papers to be the appropriate load line for that ship at that time or, if that load line can not be ascertained from the ship's papers, the lowest load line marked on the ship.

25.2.1 If only one subdivision load line is marked on either side of a passenger ship, being:

- (a) a ship registered in Australia; or
- (b) a SOLAS ship registered in a country other than Australia,

that subdivision load line is, for the purposes of subsection 187C(5) of the Navigation Act, the appropriate subdivision load line at that time for that passenger ship.

25.2.2 Where:

- (a) more than one subdivision load line is marked on each side of a passenger ship, being:
 - (i) a ship registered in Australia; or
 - (ii) a SOLAS ship registered in a country other than Australia; and
- (b) passengers are at any time being carried in the spaces specified in relation to one of those subdivision load lines in the appropriate certificate for the ship,

the lowest subdivision load line is, for the purposes of subsection 187C(5) of the Act, the appropriate subdivision load line at that time for that ship.

25.2.3 In 25.2.2, **the appropriate certificate** means:

- (a) for a ship registered in Australia, the passenger ship safety certificate or the certificate of survey for the ship; and
- (b) for a SOLAS ship registered in a country other than Australia, the passenger ship safety certificate.

25.2.4 For the purposes of subsection 187C(5) of the Act, the appropriate subdivision load line at any time for a passenger ship, other than a ship referred to in 25.2.1 or 25.2.2, is the subdivision load line marked on the ship or, if more than one subdivision load line is marked on the ship, whichever of those subdivision load lines is stated in the ship's papers to be the subdivision load line applicable at that time or, if that subdivision load line can not be ascertained from the ship's papers, the lowest subdivision load line marked on the ship.

26 Draught marks

26.1 For the purposes of section 222 of the Navigation Act, the required markings for a ship are:

- (a) the marks required by the Convention; and
- (b) clearly visible draught marks substantially in accordance with Appendix 1.

26.2 The marks referred to in 26.1 must be maintained in a clearly visible condition.

* * * * *

Appendix 1

Draught marks

1 Scales to be marked fore and aft

A ship must be marked on each side of the bow and of the stern with a draught scale in accordance with this Appendix, denoting the draught, fore and aft respectively, of the ship.

2 Requirements

2.1 A draught scale must comprise a series of marks the underside of each of which coincides with the intersection between:

- (a) the part of the hull of the ship on which that scale is required, in accordance with this Appendix, to be applied; and
- (b) a plane (in this Appendix referred to as a relevant plane) that is one of a series of planes that, at intervals of 2 decimetres, are parallel to the plane in which the designed waterline of the ship lies.

2.2 The lowest mark in a draught scale must correspond with the relevant plane that is, at its closest point, the least practicable number of whole intervals of 2 decimetres above the relevant draught mark datum, being:

- (a) in the case of a draught scale that is required to be applied to the bow of a ship, the forward cut-up point of the keel; and
- (b) in the case of a draught scale that is required to be applied to the stern of a ship, the lowest point aft of the hull, skeg or solepiece.

2.3 The uppermost mark in a draught scale must be a mark:

- (a) in a position that corresponds with a relevant plane that is not less than such distance above the designed waterline of the ship as is equal to 1% of the length of the ship or, where the part of the ship on which that scale is required by this Appendix to be inscribed does not extend to that plane, the highest relevant plane that intersects that part of the ship; or
- (b) in a position that corresponds with the maximum trim by the bow or by the stern, as the case requires, that may reasonably be expected in service,

whichever is the higher position.

2.4 Subject to 2.5, a mark referred to in 2.1 must comprise an arabic numeral, or arabic numerals, denoting the number of decimetres in the minimum distance between

the relevant plane to which the mark relates and the point referred to in 2.2(a) or (b), as the case requires.

2.5 A draught scale must be expressed in terms of metres and decimetres, and shall comprise:

- (a) in the case of the uppermost mark in the scale—a numeral, or numerals, denoting the number of complete metres in the distance referred to in 2.4 (in this provision referred to as the relevant draught) followed by the letter 'M' and the number (if any) of decimetres in the relevant draught in excess of that number of complete metres;
- (b) in the case of any other mark in the scale in relation to which the relevant draught consists solely of a number of complete metres—a numeral, or numerals, denoting that number of metres followed by the letter 'M'; and
- (c) in any other case—a numeral denoting the number of decimetres in the relevant draught in excess of the maximum number of complete metres in the relevant draught or the number of decimetres in the relevant draught, as the case requires,

being arabic numerals and, where applicable, roman capital letters as indicated in Figure 1.

2.6 A numeral or letter referred to in 2.4 or 2.5 must comply with the following requirements:

- (a) its height must be 100 millimetres;
- (b) the thickness of its strokes must be not less than 20%, and not more than 25%, of that height;
- (c) it must:
 - (i) be permanently marked on the surface of the portion of the ship to which it is applied; or
 - (ii) form part of the fabric of that portion of the ship and project from the surrounding surface of that portion of the ship; and
- (d) it must be painted with waterproof paint of a colour that makes a distinct contrast with the colour of the background on which it appears.

3 Position of forward draught marks

3.1 Subject to 3.2 and 3.3, a draught scale required to be marked on a side of the bow must be marked at the stem, following the line of the bow from the point referred to in 2.2(a), as illustrated in Figure 2.

3.2 Where the bow incorporates a bulbous projection below the designed waterline, the draught scale referred to in 3.1 must be marked on the ship in a transverse plane perpendicular to the designed waterline of the ship, as far forward as is practicable, as illustrated in Figure 3.

3.3 Where the bow is cylindrical in form, the draught scale referred to in 3.1 must be marked on the ship in a plane perpendicular to the designed waterline and the centreline of the ship, in the position illustrated in Figure 4.

4 Position of aft draught marks

4.1 A draught scale required to be marked on a side of the stern must be marked on the hull:

- (a) in the case of a ship having a stern post—in a transverse plane perpendicular to the designed waterline of the ship, the lower portion of which is on the side of the stern post;
- (b) in the case of a ship not having a stern post—in 2 portions, each of which is in a straight line perpendicular to the designed waterline of the ship, as follows:
 - (i) an upper portion directly abeam of, and not extending below the point of intersection of the side of the hull with, the rudder stock, and
 - (ii) a lower portion having as its upper limit a mark that relates to the draught aft of the ship that is indicated by a mark that is not lower than the third to lowest mark in the portion of the scale referred to in (i) that is placed forward of, but as near as practicable to, the rudder, as illustrated in Figure 2; or
- (c) where compliance with (a) or (b) is impracticable—in a straight line perpendicular to the designed waterline at the aft-most point of the ship that is practicable.

4.2 Draught marks must be located in the transverse plane of the centre of the rudder stock, where practicable, and:

- (a) may be placed on fixed appendages, such as fixed propeller nozzles;
- (b) must not be placed on moveable appendages such as the rudder or moveable nozzles.

4.3 A duplicate scale of draught marks must be placed forward of the rudder stock, in the aftermost line still enabling the marks to be placed on the skeg, to facilitate reading the draught range.

4.4 Aft draught marks must be measured from the point referred to in 2.2(b), as illustrated in Figure 2.

5 Bottom appendages

In the case of a ship fitted with a bottom appendage, extending below the point referred to in 2.2(a) or (b), the depth to which the appendage extends below that line must be clearly indicated by a notice located in the navigating bridge.

6 Unconventional hulls

Notwithstanding anything in the preceding provisions of this Appendix, where, by reason of the nature of the constructional features of a ship:

- (a) there is no part of the ship that is readily identifiable as the bow, or as the stern, of the ship, or
- (b) it is otherwise impracticable to mark a scale on a ship in the manner required by those provisions,

that scale must be marked on the ship in such position or in such manner as the Chief Marine Surveyor determines.

7 Existing ships

7.1 Draught marks on an existing ship that fail to comply with the requirements of this Appendix due only to the marks being applied in accordance with imperial measurements, will be deemed to be in compliance provided:

- (a) the interval between marks is one foot; and
- (b) in other respects, the marks approximate to those requirements.

7.2 On an existing ship, a draught scale expressed in roman numerals will be deemed to be in compliance with this Appendix.

8 Longitudinal information

8.1 The position of each draught mark must be recorded in relation to an adjacent or convenient datum (such as the rudder stock centre line), specifying the longitudinal distance of the mark from the datum.

8.2 A copy of the information referred to in 8.1 must be furnished to the consultant naval architect preparing the stability data of the ship to which the information relates and to the Chief Marine Surveyor.

Note: Knowledge of the longitudinal positions of the draught marks relative to the forward and aft perpendiculars is necessary to carry out trim and stability calculations.

Figure 1

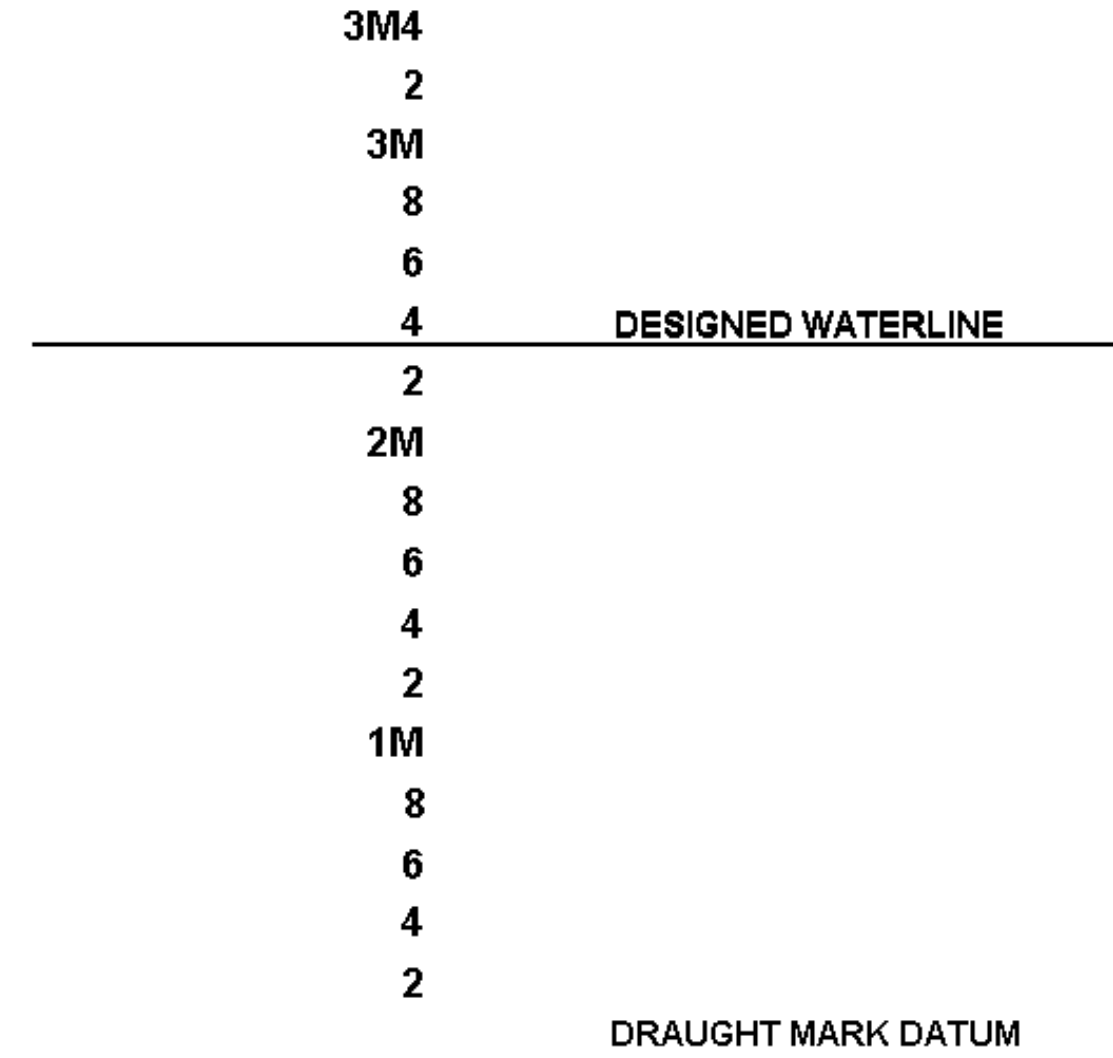
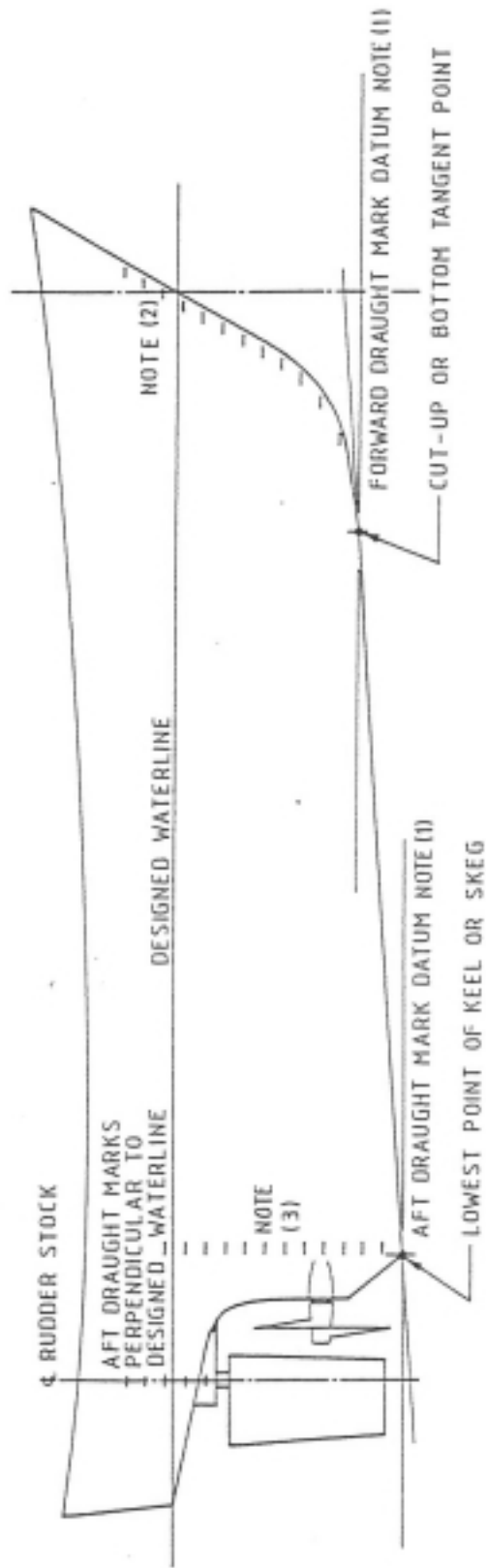


FIGURE 2



NOTES: (1) FORWARD AND AFT DRAUGHT MARK DATUMS ARE PARALLEL WITH THE DESIGNED WATERLINE, AND ARE IN THE SAME PLANE FOR SHIPS WITHOUT A RAKE OF KEEL.

(2) FORWARD DRAUGHT MARKS FOLLOW THE STEM CONTOUR EXCEPT AS NOTED IN FIGURES 3 AND 4.

(3) LOWER PORTION OF AFT DRAUGHT MARKS ARE AS NEAR AS PRACTICABLE TO THE CENTRELINE OF THE RUDDER STOCK, BUT POSITIONED CLEAR OF OBSTRUCTIONS (RUDDERS, PROPELLORS, SHAFTING) THAT MIGHT OBSCURE ANY MARK.

FIGURE 3
SHIP WITH A BULBOUS BOW

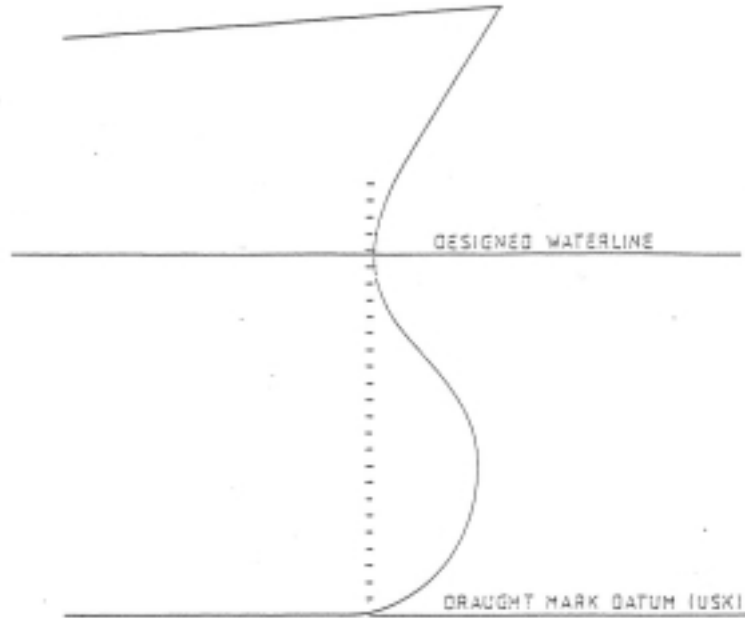
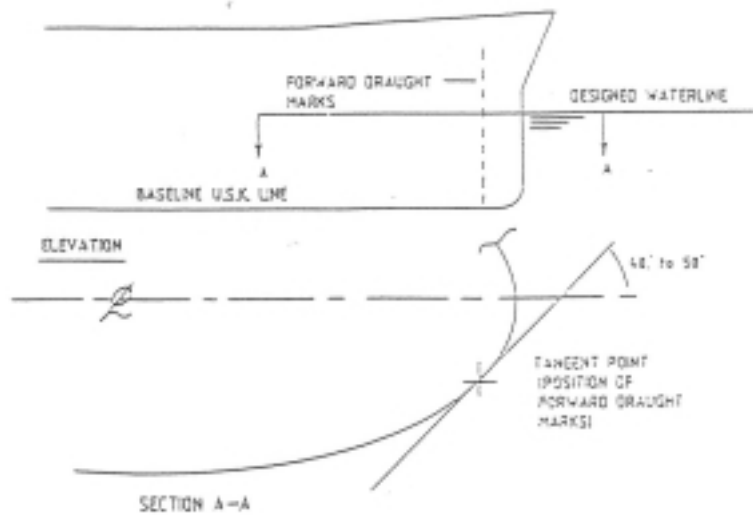


FIGURE 4
VESSEL WITH A CYLINDRICAL BOW



Appendix 2

Document LL.3/CIRC.19

Form of record of conditions of assignment of load lines

INTERNATIONAL CONVENTION ON LOAD LINES, 1966

RECORD OF CONDITIONS OF ASSIGNMENT

Name of ship

Port of registry

Nationality

Distinctive number or letters

Shipbuilders

Yard number

Date of construction/conversion

Freeboard assigned as a ship of Type

Classification

Date and place of initial survey

A plan of suitable size may be attached to this Report in preference to sketches on this page.

Disposition and dimensions of superstructures, trunks, deckhouses, machinery casings; extent of bulwarks, guard rails and wood sheathing on exposed deck, to be inserted in the diagrams and tables following; together with positions of hatchways, gangways and other means for the protection of the crew; cargo ports, bow and stern doors, side scuttles, scuppers, ventilators, air pipes, companionways, and other items that would affect the seaworthiness of the ship.

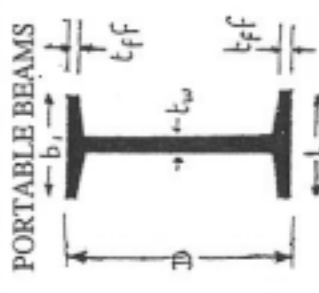
DOORWAYS IN SUPERSTRUCTURES, EXPOSED MACHINERY CASINGS AND DECKHOUSE PROTECTING OPENINGS IN FREEBOARD AND SUPERSTRUCTURE DECKS (Regulations 12, 17 and 18)

Location	Ref. No. on sketch plan	Number and size of openings	Height of sills	Closing appliances	
				Type and material	Number of clips
In forecastle bulkhead					
In bridge forward bulkhead					
In bridge after bulkhead					
In raised quarter deck bulkhead					
In poop bulkhead					
In exposed machinery casings on freeboard or raised quarter decks					

DOORWAYS IN SUPERSTRUCTURES, EXPOSED MACHINERY CASINGS AND DECKHOUSE PROTECTING OPENINGS IN FREEBOARD AND SUPERSTRUCTURE DECKS (continued)

Location	Ref. No. on sketch or plan	Number and size of openings	Height of sills	Closing appliances	
				Type and material	Number of clips
In exposed machinery casings on superstructure decks					
In machinery casings with superstructures or deckhouses on freeboard deck					
In deckhouses in Position 1 enclosing openings leading below freeboard deck					
In deckhouses in Position 2 enclosing openings leading within enclosed superstructures or below freeboard deck					
In exposed pump room casings					

**HATCHWAYS AT POSITIONS 1 AND 2 CLOSED BY PORTABLE COVERS AND SECURED WEATHERTIGHT
BY TARPAULINS AND BATTENING DEVICES (Regulation 15)**

Position and Reference No. on sketch or plan										
Dimensions of clear opening at top of coaming										
Height of coamings above deck										
<p>PORTABLE BEAMS</p>  <p>Means of securing each beam</p>	Number									
	Spacing									
	$b_1 \times t_{ff}$									
	$D \times t_w$									
<p>PORTABLE COVERS</p> <p>Spacing of cleats</p>	Bearing surface									
	Material									
	Thickness									
	Direction fitted									
<p>TARPAULINS</p>	Bearing surface									
	No. of layers									
	Material									

Means of securing each section of covers:
Are wood covers fitted with galvanized end bands?

HATCHWAYS AT POSITIONS 1 AND 2 CLOSED BY WEATHERTIGHT COVERS OF STEEL (OR OTHER EQUIVALENT MATERIAL) FITTED WITH GASKETS AND CLAMPING DEVICES (Regulation 16)

Position and Reference No. on sketch or plan								
Dimensions of clear opening at top of coaming								
Height of coamings above deck								
Type of cover or patent name Material								

MACHINERY SPACE OPENINGS AND MISCELLANEOUS OPENINGS IN FREEBOARD AND SUPERSTRUCTURE DECKS (Regulations 17 and 18)

Position and Reference No. on sketch or plan									
Dimensions									
Height of coaming									
COVER	Material								
	How attached								
Number and spacing of toggles									

Position and Reference No. on sketch or plan									
Dimensions									
Height of coaming									
COVER	Material								
	How attached								
Number and spacing of toggles									

VENTILATORS ON FREEBOARD AND SUPERSTRUCTURE DECKS (POSITIONS 1 AND 2) (Regulation 19)

Deck on which fitted	Number fitted	Coaming		Type (State patent name if any)	Closing appliances
		Dimensions	Height		

AIR PIPES ON FREEBOARD AND SUPERSTRUCTURE DECKS (Regulation 20)

Deck on which fitted	Number fitted	Coaming		Type (State patent name if any)	Closing appliances
		Dimensions	Height		

CARGO PORT AND OTHER SIMILAR OPENINGS (Regulation 21)

Position of port	Dimensions of opening	Distance of lower edge from freeboard deck	Securing devices	Remarks

SCUPPERS, INLETS AND DISCHARGES (Regulation 22)

State if scupper, discharge or inlet	Number	Pipe		From	Vertical distance above top of keel			Number, type and material of discharge valves	Position of controls	
		Diameter	Thickness		Material	Discharge				Uppermost valve
						Outlet in hull	Inboard end			

S — Scupper
D — Discharge
I — Inlet

MS — Mild steel
CS — Cast steel
GM — Gun metal
Any other approved material to be designated

SD — Screw down
ANR — Automatic non-return
SD ANR — Screw down automatic non-return

NOTE: Symbols may be used at the discretion of the Administration

SIDE SCUTTLES (Regulation 23)

Position	Number fitted	Clear glass size	Fixed or opening	Material		Type of glass and thickness	Standards used and Type No.
				Frame	Deadlight		

Indicate the vertical distance between the freeboard deck and the lower sill of the side scuttle positioned at the greatest vertical distance below the freeboard deck.

FREEING PORTS (Regulation 24)

	Length of bulwark	Height of bulwark	Number and size of freeing ports each side	Total area each side	Required area each side
Freeboard deck After well					
Forward well					
Superstructure deck					

State fore and aft position of After well
each freeing port in relation to
superstructure end bulkheads Forward well

Particulars of shutters, bars or rails fitted to freeing ports

Height of lower edge of freeing port above deck

PROTECTION OF THE CREW (Regulations 25 and 26)

State particulars of bulwarks or guard-rails on freeboard and superstructure decks:

State details of lifelines, walkways, gangways or underdeck passageways where required to be fitted:

TIMBER DECK CARGO FITTINGS (Regulation 44)

State particulars of uprights, sockets, lashings, guard-rails and lifelines:

OTHER SPECIAL FEATURES

The conditions of assignment shown on this form are a record of the arrangements and fittings provided on the ship and are in accordance with the requirements of the relevant regulations of the International Convention on Load Lines, 1966

.....
(Surveyor's signature)

.....
(Date)