

Maritime Transport Act 1994

Maritime Rules

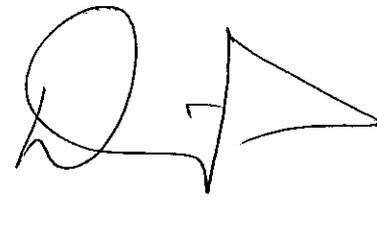
PART 47 AMENDMENT RULES 2007

Pursuant to sections 34 and 36 of the Maritime Transport Act 1994
I, Harry James Duynhoven, Minister for Transport Safety, hereby make the
following maritime rules.

Signed at Wellington

this *24th* day of *April* 2007

by HARRY JAMES DUYNHOVEN



Minister for Transport Safety

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Part Objective

The objective of the Part 47 Amendment Rules is to amend Section 1 of Part 47 to require that New Zealand ships and foreign ships in New Zealand of 24 metres or more comply directly with the provisions of the International Convention on Load Lines, as supplemented.

Consequential amendments are also made to Sections 2 and 3 as a result of the deletion of provisions in Section 1.

Rules subject to Regulations (Disallowance) Act 1989

Maritime rules are subject to the Regulations (Disallowance) Act 1989. Under that Act, the rules are required to be tabled in the House of Representatives. The House of Representatives may, by resolution, disallow any rules.

The Regulations Review Committee is the select committee responsible for considering rules under the Regulations (Disallowance) Act 1989.

Extent of Consultation

On 20 May 2006, Maritime New Zealand published in each of the daily newspapers in the four main centres of New Zealand a notice inviting comments on the proposed Part 47 Amendment Rules. A notice was also published in the *New Zealand Gazette* on 18 May 2006. The Authority then made its Invitation to Comment and draft Part 47 Amendment Rules available to the public with approximately 12 copies being sent automatically to interested parties. Comments on the draft Part were requested by 28 July 2006.

4 organisations and one individual provided written submissions on the draft. All submissions and any oral comments were considered, and where appropriate, the proposed rules were amended to take account of the comments made.

1 Entry into Force

These rules come into force on 1 June 2007.

2 Part 47 Objective

The objective to Part 47 is amended by deleting the third paragraph, which begins with the words "In drafting section 1".

3 Rule 47.2 Definitions

Rule 47.2 is amended by –

- (a) deleting the following definitions –
 - (i) appropriate load line;
 - (ii) existing ship;
 - (iii) in service;
 - (iv) new ship;
 - (v) position 1 and position 2;
 - (vi) standard sheer; and
 - (vii) surveyor.

- (b) inserting the following definitions in the appropriate place –

‘ **“Position 1”**, in relation to a hatchway, doorway or ventilator, means a position on –

- (a) an exposed freeboard or raised quarterdeck; or
- (b) an exposed superstructure deck, forward of a point located a quarter of the ship’s length from the forward perpendicular:

“Position 2”, in relation to a hatchway, doorway or ventilator, means a position on an exposed superstructure deck situated –

- (a) (i) abaft a quarter of the ship’s length from the forward perpendicular; and
 - (ii) at least one standard height of superstructure above the freeboard deck; or
- (b) forward of a point located –
 - (i) a quarter of the ship’s length from the forward perpendicular; and
 - (ii) at least two standard heights of superstructure above the freeboard deck.’

4 Rule 47.3 Submersion

Rules 47.3(1) to (3) are revoked.

5 Rules 47.6 to 47.12

For rules 47.6 to 47.12 are substituted the following –

“47.6 Application

- (1) Except as provided in subrule (2), this section applies to –
 - (a) every New Zealand ship; and
 - (b) every foreign ship in New Zealand waters, of 24 metres or more in length.

- (2) This section does not apply to –
 - (a) pleasure craft;
 - (b) fishing ships;
 - (c) ships of 150 gross tons or more the keel of which was laid or that was at a similar stage of construction before 5 May 1970;
 - (d) a barge that –
 - (i) operates entirely within coastal limits; or
 - (ii) does not carry any person on board during any voyage;
 - (e) a ship navigating solely within –
 - (i) the Great Lakes of North America and the River St. Lawrence as far east as a rhumb line drawn from Cap des Rosiers to West Point, Anticosti Island and, on the north side of Anticosti Island, the meridian of longitude 63 degrees W;
 - (ii) the Caspian Sea; or
 - (iii) the Plate, Parana and Uruguay Rivers as far east as a rhumb line drawn between Punta Norte, Argentina and Punta del Este, Uruguay.

47.7 Definitions

In this section and in the Load Line Convention –

administration, in respect of New Zealand, means the Director;

appropriate load line means the load line that indicates the maximum depth to which the ship may be loaded in the circumstances;

assigning authority, in respect of New Zealand, means an organisation that has entered into a memorandum of agreement with the Director –

- (a) in accordance with the International Maritime Organisation Assembly Resolution A.739(18) and the Annexes thereto entitled *Guidelines for the Authorisation of Organisations Acting on Behalf of the Administration*; and
- (b) whereby that organisation’s employees may survey and assign load lines to New Zealand ships in accordance with the Load Line Convention;

coastal limits means the limits set out in Appendix 2 of Part 20;

Convention means the Load Line Convention;

international voyage means a voyage to or from a port or offshore terminal outside New Zealand;

Load Line Convention means the International Convention on Load Lines 1966 as modified by the protocol of 1988 relating thereto and includes any subsequent protocol, amendment or revision accepted or ratified by New Zealand;

New Zealand Load Line Certificate means a New Zealand Load Line Certificate that –

- (a) has been issued in accordance with rule 47.54(3)(a); and
- (b) is in the form shown in Appendix 4;

New Zealand Load Line Exemption Certificate means a New Zealand Load Line Exemption Certificate that –

- (a) has been issued in accordance with rule 47.54(3)(b); and
- (b) is in the form shown in Appendix 4;

pleasure yacht means a ship that is used exclusively for the owner's pleasure or as the owner's residence and is not offered or used for hire or reward; but does not include a ship that is –

- (a) provided for transport, sport or recreation by or on behalf of any institution, hotel, motel, place of entertainment or other establishment or business;
- (b) used on any voyage for pleasure, if it is used normally or intended to be used normally –
 - (i) as a fishing ship; or
 - (ii) for the carriage of passengers or cargo for hire or reward;
- (c) operated or provided by any club, incorporated society, trust or business."

47.8 Owner's and master's obligations

- (1) The owner must –
 - (a) in the case of a new ship, apply to the Director or an assigning authority for the assignment of freeboards to the ship;
 - (b) provide the Director or the assigning authority with such plans, drawings, specifications and other documents and information relating to the design and construction of the ship as the Director or assigning authority may require;
 - (c) cause the ship to be surveyed in accordance with the Load Line Convention; and
 - (d) afford all necessary facilities for such surveys.
- (2) The owner and master must –
 - (a) comply with and ensure compliance with this Section and the provisions of Articles 2, 3, 7, 10 to 15, Annex I and Annex II of the Load Line Convention;
 - (b) not allow the ship to proceed on any voyage unless –
 - (i) it is surveyed, maintained and marked in accordance with this Section and the Load Line Convention; and

- (ii) there is held in respect of the ship a valid International Load Line Certificate, International Load Line Exemption Certificate, New Zealand Load Line Certificate or New Zealand Load Line Exemption Certificate, as applicable.

47.9 Administration

- (1) The Director or an assigning authority –
 - (a) may assign freeboard(s) to a New Zealand ship in accordance with this Section and the Load Line Convention;
 - (b) must determine –
 - (i) the particulars of the freeboard(s) to be assigned;
 - (ii) which load lines are to be marked on the sides of the ship; and
 - (iii) the position where the load lines and deck line are to be marked; and
 - (c) complete and keep a record of particulars relating to the conditions of assignment.
- (2) The Director or an assigning authority may survey, inspect or mark any ship in accordance with this Section and the Load Line Convention.

47.10 Passenger ships

If a passenger ship is marked with subdivision load lines and the lowest of those lines is lower than the appropriate load line determined in accordance with the Load Line Convention, the Director or an assigning authority –

- (a) must assign that subdivision load line in place of the appropriate load line if the subdivision load line is required to be marked on the ship by Part 40B;
- (b) may, in all other cases, assign that subdivision load line in place of the appropriate load line.

47.11 Assignment of greater than minimum freeboard

The Director or an assigning authority may assign a greater than minimum freeboard to a ship –

- (a) at the request of the owner of the ship; or
- (b) if the structural strength, arrangement of openings in the hull, or design of the ship make assignment of the minimum freeboard inappropriate.

47.12 Lesser requirements for ships operating in enclosed waters only

- (1) This rule applies to ships operating in enclosed waters only.
- (2) The height of the doorway sills of deckhouses and superstructures on the weather deck, from inside which there is direct access to spaces below, may not be less than 150 millimetres.
- (3) Except as provided in subrule (4), position 1 and position 2 coamings must –

- (a) have a minimum height of 300 millimetres; and
 - (b) be of substantial construction;
- (4) The Director or an assigning authority may approve coamings of a height less than that specified in subrule (3)(a) if –
- (a) the hatches situated within the mid half beam of the ship are –
 - (i) narrower than half the beam of the ship; and
 - (ii) closed with weathertight covers of steel or other equivalent material; and
 - (iii) fitted with gaskets and clamping devices; and
 - (iv) capable of being rapidly closed and battened down; and
 - (b) he or she is satisfied that the safety of the ship in the service sea conditions will not be impaired by so doing.”

6 Revocation of Rules 47.13 to 47.53

Rules 47.13 to 47.53 are revoked.

7 Rules 47.54, 47.55 and 47.56

For rules 47.54 to 47.56 are substituted the following –

“47.54 Issue, endorsement and renewal of certificates

- (1) Upon application by the owner under section 35 of the Act, the Director may, in accordance with section 41 of the Act and Articles 16 to 18 of the Convention, issue to any ship that has been surveyed, inspected and marked in accordance with the Convention –
 - (a) an International Load Line Certificate; or
 - (b) if the ship has been given an exemption in accordance with rule 47.4 or 47.57, an International Load Line Exemption Certificate,in the form prescribed in Annex III of the Convention.
- (2) Upon application by the owner under section 35 of the Act, the Director may, in accordance section 41 of the Act and Articles 17 to 19 of the Convention, endorse or renew –
 - (a) the International Load Line Certificate; or
 - (b) the International Load Line Exemption Certificate,of a ship that has been surveyed, inspected and marked in accordance with the Convention.
- (3) Upon application by the owner under section 35 of the Act, the Director may, in accordance with section 41 of the Act, issue to any New Zealand ship that does not proceed on international voyages and has been surveyed, inspected and marked in accordance with the Convention –
 - (a) a New Zealand Load Line Certificate; or
 - (b) if the ship has been given an exemption in accordance with rule 47.4 or 47.57, a New Zealand Load Line Exemption Certificate,

in the form prescribed in Appendix 4 for a period of no more than 5 years.

47.55 Validity of certificates

- (1) Article 19 of the Load Line Convention shall apply to the duration and validity of International Load Line and International Load Line Exemption Certificates.
- (2) The Director may, in accordance with section 43 of the Act, suspend an International Load Line Certificate or International Load Line Exemption Certificate issued by the Director, or a New Zealand Load Line Certificate or New Zealand Load Line Exemption Certificate, if -
 - (a) any material alteration is made to the hull or superstructures of the ship that necessitates the assignment of an increased freeboard;
 - (b) the fittings and appliances for the protection of means of access to the crew's quarters, openings, guard rails or freeing ports are not maintained in an effective condition; or
 - (c) the structural strength of the ship is lowered to such an extent that the ship is unsafe.
- (3) An International Load Line Certificate or International Load Line Exemption Certificate issued by the Director shall cease to be valid if a ship ceases to be registered as a New Zealand ship.
- (4) A New Zealand Load Line Certificate or New Zealand Load Line Exemption Certificate shall cease to be valid if a ship ceases to be registered as a New Zealand ship.

47.56 Certificates required to be kept on board

The owner and master of a ship must ensure that the ship's -

- (a) International Load Line Certificate;
 - (b) International Load Line Exemption Certificate;
 - (c) New Zealand Load Line Certificate; or
 - (d) New Zealand Load Line Exemption Certificate,
- is readily available on board for examination at all times."

8 Deletion of Section 1 subsection headings

The following headings (but not the rules to which they relate) are deleted -

- (a) "SUBSECTION 7 – EXEMPTIONS";
- (b) "SUBSECTION 8 – LOGBOOK ENTRIES"; and
- (c) "SUBSECTION 9 – FOREIGN SHIPS".

9 Rule 47.58 Official Log Book Entries

Rule 47.58 is amended by deleting the words "by rule 47.55".

10 Rule 47.59 Port State Control

Rule 47.59(2)(d) is amended by substituting for the words "47.48" the words "Regulation 44 of Annex I of the Load Line Convention".

11 Rule 47.62 Section 2 – Definitions

Rule 47.62 is amended by inserting the following definitions in the appropriate places –

' "New ship" means a ship built on or after the date this Part came into force.'

' "Surveyor" means any suitably qualified person who –

- (a) has been recognised by the Director under rule 46.29 as a surveyor entitled to undertake the particular functions referred to; and
- (b) holds a valid maritime document as a surveyor issued in accordance with section 41 of the Act.'

' "Weathertight" means impenetrable by water in any sea or weather conditions.'

12 Rule 47.63 Determination of freeboard

(1) Rule 47.63(2) is amended by –

- (a) in paragraph (a), substituting for the words "47.11" the words "Appendix 6, clause 1";
- (b) substituting for paragraph (b), the following –

"(b) if the block coefficient (C_b) is more than 0.68, the basic freeboard must be multiplied by the factor: $(C_b + 0.68)/1.36$; and"

- (c) in paragraph (c), substituting for the words "47.13" the words "Appendix 6, clause 2";
- (d) in paragraph (d), substituting for the words "47.19" the words "Appendix 6, clause 6"; and
- (e) in paragraph (e), substituting for the words "47.20" the words "Appendix 6, clause 8".

(2) Rule 47.63(3) is amended by substituting for the word "40B" the word "40C".

(3) Rule 47.63 is amended by adding the following subrules –

"(4) The minimum freeboard in winter must be the freeboard obtained by an addition to the summer freeboard of one forty-eighth of summer draught, measured from the top of the keel to the top of the summer load line mark.

(5) Except as provided in subrule (6), the minimum freeboard in fresh water of unit density must be obtained by deducting from the minimum freeboard in salt water –

$$\Delta \div 40T$$

where: Δ = displacement in salt water in tons at the summer load waterline
 T = tons per centimetre immersion in salt water at the summer load waterline.

- (6) If the displacement at the summer load waterline cannot be certified, the minimum freeboard in fresh water of unit density must be obtained by deducting from the minimum freeboard in salt water one-forty-eighth of the summer draught, measured from the top of the keel to the top of the summer load line mark.

13 Rule 47.65 Conditions of assignment

Rule 47.65 is amended -

- (a) in subrule (5), by substituting for the words "rules 47.43(2) and 47.43(3)" the words "subrules (5A) and (5B)".
- (b) by inserting the following subrules -
- "(5A) The minimum freeing port area, calculated in accordance with subrule (5), must -
- (a) if the bulwark is more than 1.2 metres in average height, be increased by 0.004 square metres per metre of length of well for each 0.1 metre difference in height;
- (b) if the bulwark is less than 0.9 metres in average height, be reduced by 0.004 square metres per metre of length of well for each 0.1 metre difference in height.
- (5B) The minimum freeing port area, calculated in accordance with subrule (5)(b), must -
- (a) in ships with no sheer, be increased by 50 percent; and
- (b) in ships where the sheer is less than the standard, be increased by a percentage obtained by linear interpolation."

14 Rule 47.73 Conditions of assignment

Rule 47.73 is amended -

- (a) in subrule (1), by substituting for the words "meeting the requirements of rules 47.34 or 47.35" the words "that are fit for purpose and acceptable to the Director or a surveyor";
- (b) by substituting for subrule (2) the following -
- "(2) If air pipes to ballast and other tanks extend above the freeboard or superstructure decks, the exposed parts of the pipes must be constructed to the satisfaction of the surveyor.
- (3) The height of an air pipe, from the deck to the point where water may have access below, must be at least -
- (a) 760 millimetres on the freeboard deck; or
- (b) 450 millimetres on the superstructure deck,

except that if that height might interfere with the working of the ship, the surveyor may approve a lower height if he or she is satisfied that it is justified by the closing arrangements and other circumstances.

- (4) Air pipes must be provided with automatic closing devices, which in the case of oil tankers, may include pressure vacuum (PV) valves.

15 Revocations of Appendices 1, 2, 3 and 5

Appendices 1, 2, 3, and 5 of Part 47 are revoked.

16 Part 47 Appendix 4 Certificates

For Appendix 4 of Part 47 is substituted the following –

“Appendix 4 Certificates

NEW ZEALAND LOAD LINE CERTIFICATE

(Official seal)

Issued under the provisions of rule 47.54(3)/47.67(1)/47.75(1) of the maritime rules
by the Director of Maritime New Zealand*

*Particulars of ship/barge**

Name of ship/barge*

Distinctive number or letters Maritime New Zealand No

Port of registry

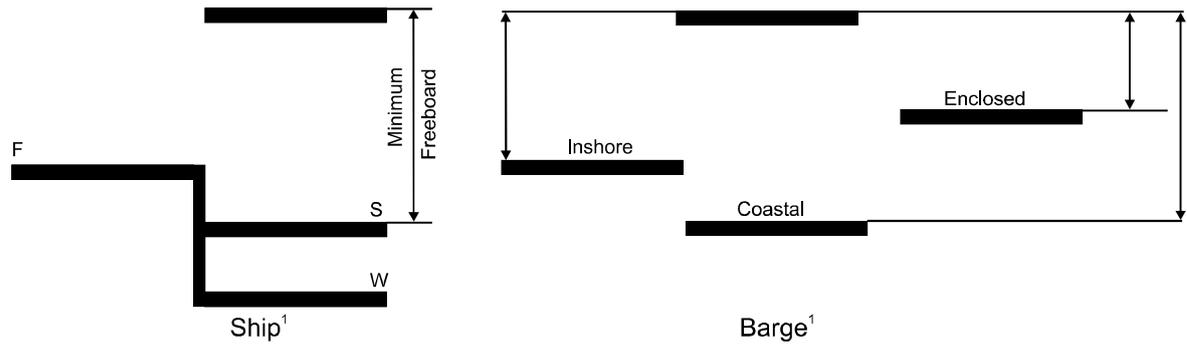
Length (L) (as defined in rule 47.2)

Ship Type*: Type ‘A’
 Type ‘B’
 Type ‘B’ with reduced freeboard
 Type ‘B’ with increased freeboard.
 Ship of less than 24 metres length complying with Section 2 of Part 47.
 Barge of 24 metres length or more complying with Section 3 of Part 47.

	Freeboard from deck line	Load line
Ship*:	Summer mm(S)	Upper edge of line
	Winter mm(W) mm below (S)
	Allowance for fresh water mm	
Barge*:	Coastal mm	Upper edge of line
	Inshore mm	Upper edge of line
	Enclosed waters..... mm	Upper edge of line

The upper edge of the deck line from which the freeboard is measured is mm above/below* deck at side.

(* delete as appropriate)



THIS CERTIFIES THAT:

- 1 The ship/barge* has been surveyed in accordance with the requirements of rule 47.8/47.66(2)/47.66(4)/47.74(2)/47.74(6)* of the maritime rules.
2. That the survey showed that -
 - i. the freeboards have been assigned; and
 - ii. the load lines shown above have been marked in accordance with Part 47 of the maritime rules.

This certificate is valid untilsubject to Article 15 of the Load Line Convention*/rule 47.66(5)/47.74(7)* of the maritime rules*.

Issued at

(Place of issue of certificate)

.....
(Date of issue)

.....
(Signature of official acting under delegated authority)

(Seal or stamp of Maritime New Zealand)

Note: A ship that is issued with this certificate under rule 47.54(3) and is a ship to which Section 1 of Part 46 applies must be marked in accordance with the Load Line Convention except that only the summer, winter and fresh water load lines are required.

(*delete as appropriate)

NEW ZEALAND LOAD LINE EXEMPTION CERTIFICATE

(Official seal)

Issued under the provisions of rule 47.54(3) of the maritime rules
by the Director of Maritime New Zealand

Particulars of ship

Name of ship

Distinctive number or letters Maritime New Zealand No

Port of registry

Length (L) (as defined in rule 47.2)

THIS IS TO CERTIFY that, pursuant to rule 47.11 of the maritime rules, the above mentioned ship is exempted from:

- 1. all of the provisions of the Load Line Convention*.
- 2. the following provisions of the Load Line Convention*:
.....
.....
.....
.....

Subject to the following conditions:¹
.....
.....
.....
.....

This certificate is valid until

.....
(Date of issue) (Signature of official acting under delegated authority)

(Seal or stamp of Maritime New Zealand)

¹ Delete as appropriate.

17 Appendix 6 Corrections to Freeboard

Part 47 is amended by inserting the following Appendix -

“Rule 47.63

APPENDIX 6 CORRECTIONS TO FREEBOARD

1 Corrections to freeboard for short superstructures

In the case of a ship with enclosed superstructures with an effective length of up to 35 percent of the length of the ship, the basic freeboard must be increased by -

$$7.5(100 - L)(0.35 - E_1/L) \text{ millimetres}$$

where

L = length of the ship in metres

E_1 = effective length of superstructure in metres.

2 Correction to freeboard for block coefficient

If the block coefficient (C_b) is more than 0.68, the basic freeboard must be multiplied by the factor: $(C_b + 0.68) / 1.36$.

3 Corrections to freeboard for depth

- (1) If the depth of freeboard (D) is more than $L/15$, the basic freeboard must be increased by $(D - L/15) R$ millimetres, where R is $L/0.48$.
- (2) If the depth of freeboard (D) is less than $L/15$ and the ship has an enclosed superstructure covering at least $0.6L$ amidships with -
 - (a) a complete trunk; or
 - (b) a combination of detached enclosed superstructures and trunks that extend all fore and aft,the basic freeboard must be reduced by $(D - L/15) R$ millimetres, where R is $L/0.48$, except that if the actual height of the superstructure or trunk is less than the standard height the reduction must be decreased by the ratio of the actual to the standard height.

4 Standard height of superstructure

The standard height of -

- (a) a raised quarterdeck is $0.03L$;
 - (b) any other superstructure is $0.06L$;
- where L is the length of the ship.

5 Effective length of superstructures

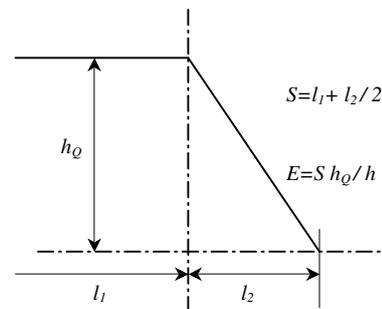
- (1) Except as provided in subclause (2), the effective length (“E”) of an enclosed superstructure of standard height is equal to its length.
- (2) If an enclosed superstructure of standard height is set-in from the sides of the ship, its effective length is equal to its length modified by the ratio b/B_s , where -

b = the breadth of the superstructure at the middle of its length; and

B_s = the breadth of the ship at the middle of the length of the superstructure, except that if the superstructure is set-in only for a part of its length, this modification may only be applied to the set-in part.

- (3) If the height of an enclosed superstructure is less than the standard height, its effective length is its length reduced by the ratio of the actual height to the standard height.³
- (4) If a superstructure has sloped end bulkheads and the height of the superstructure, clear of the slope, is equal to or less than the standard height, its effective length is its length S , calculated in accordance with figure 1, reduced by the ratio of the actual height to the standard height;

Figure 1
Height of superstructure equal to or less than the standard height (h)



- (5) if a ship with excess sheer is fitted with a poop or forecastle of less than standard height but it is not fitted with any superstructure within $0.2L$ amidships, credit may be given [in this rule] $\frac{1}{10}$ for the height of the poop or forecastle by increasing the actual height by the difference between the actual and the standard sheer profiles. The deduction for excess sheer may not be granted in accordance with clause .
- (6) The effective length of a raised quarterdeck fitted with an intact front bulkhead, is equal to its length up to a maximum of $0.6L$.
- (7) If a raised quarterdeck is fitted with a front bulkhead that is not intact, the raised quarterdeck must be treated as a poop of less than standard height.
- (8) A superstructure that is not enclosed has no effective length.

6 Corrections to freeboard – Deduction for superstructures

³ If the height exceed the standard, no increase may be made to the effective length

- (1) In this rule,
 - Type A** means -
 - (a) designed to carry only liquid cargoes in bulk; and
 - (b) having an exposed deck of high integrity with only small access openings to cargo compartments that are closed by watertight gasketed covers of steel or equivalent material; and
 - (c) having low permeability of loaded cargo compartments;**Type B** means not Type A.
- (2) If the total effective length of the superstructures is 1.0L, the deduction from the freeboard for the superstructure [is -
 - (a) for a ship of 10 metres length, 180 millimetres; and
 - (b) for a ship of 24 metres length, 350 millimetres; and
 - (c) for ships of intermediate lengths, to be determined by linear interpolation.
- (3) Except as provided in subclause (4), if the total effective length of the superstructure is less than 1.0L, the deduction from the freeboard is to be determined -
 - (a) as a percentage of the length; and
 - (b) in accordance with table 2; and
 - (c) at intermediate lengths, by linear interpolation:

Table 2
Percentage of Deduction

	Total Effective Length of Superstructures										
	0	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	1.0L
Percentage of deduction for all types of superstructures	0	7	14	21	31	41	52	63	75.3	87.7	100

- (4) If the effective length of a forecastle of a Type B ship is less than 0.07L, no deduction [may be made] from the freeboard.

7 Sheer

- (1) Except as provided in subclauses (2) to (5), the sheer is to be measured from the deck at its side to a line of reference drawn parallel to the keel through the sheer line amidships.
- (2) In ships designed with a rake of keel, the sheer is to be measured in relation to a reference line drawn parallel to the design load waterline.
- (3) In flush deck ships and in ships with detached superstructures, the sheer is to be measured at the freeboard deck.

- (4) In ships with topsides in which there is a step or break in the topsides, the sheer is to be considered in relation to the equivalent depth amidships.
- (5) In ships with a superstructure of standard height that extends over the whole length of the freeboard deck, the sheer is to be measured at the superstructure deck and –
- if the height exceeds the standard, the least difference (Z) between the actual and standard heights must be added to each end ordinate;
 - intermediate ordinates at distances of $1/6L$ and $1/3L$ from each perpendicular must be increased by $0.444Z$ and $0.111Z$ respectively.
- (6) If the deck of an enclosed superstructure has at least the same sheer as the exposed freeboard deck, the sheer of the enclosed portion of the freeboard deck may not be taken into account in calculating the sheer.
- (7) If an enclosed poop or forecastle –
- is of standard height with greater sheer than that of the freeboard deck; or
 - is of more than standard height,
- an addition to the sheer of the freeboard deck is to be made as provided in subrule (12).

8 Standard Sheer Profile

- (1) The ordinates of the standard sheer profile are given in table 2 where L is in metres –

Table 2

	Station	Ordinate (in mm)	Factor
After half	After Perpendicular	$25(L/3 + 10)$	1
	$1/6L$ from A.P.	$11.1(L/3 + 10)$	3
	$1/3L$ from A.P.	$2.8(L/3 + 10)$	3
	Amidships	0	1
Forward half	Amidships	0	1
	$1/3L$ from F.P.	$5.6(L/3 + 10)$	3
	$1/6L$ from F.P.	$22.2(L/3 + 10)$	3
	Forward Perpendicular	$50(L/3 + 10)$	1

- (2) If the sheer profile differs from the standard –
- the four ordinates of each profile in the forward or after half must be multiplied by the appropriate factors given in table 2;
 - the difference between the sums of the respective products and those of the standard divided by 8 is the deficiency or excess of sheer in the forward or after half; and
 - the arithmetical mean of the excess or deficiency in the forward and after halves is the excess or deficiency of sheer.

- (3) If the after half of the sheer profile is greater than the standard and the forward half is less than the standard, no credit is to be allowed for the part in excess and the deficiency only is to be measured.
- (4) If the forward half of the sheer profile exceeds the standard, and the after portion of the sheer profile is –
- (a) not less than 75 percent of the standard, credit is to be allowed for the part in excess;
 - (b) less than 50 percent of the standard, no credit is to be given for the excess sheer forward;
 - (c) between 50 percent and 75 percent of the standard, intermediate allowances may be granted for excess sheer forward.
- (5) If sheer credit is given for a poop or forecastle the formula $s = (y/3)(L1/L)^1$ must be used to determine the sheer profile for forward and after halves of the ship, where –

s = sheer credit to be deducted from the deficiency or added to the excess of sheer; and

y = difference between actual and standard height of superstructure at the after or forward perpendicular; and

L1 = mean enclosed length of poop or forecastle up to a maximum length of 0.5L; and

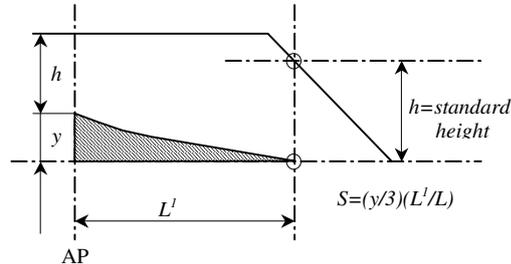
L = length of ship; and

provided that –

- (i) the superstructure deck must not be less than standard height at any point above the curve;
- (ii) if the actual height of a superstructure is less than the standard height, the superstructure deck must not be less than the minimum height of the superstructure above the virtual sheer curve at any point and for this purpose *y* must be taken as the difference between the actual and minimum height of the superstructure at the after or forward perpendicular as appropriate;
- (iii) any excess in the height of a superstructure that does not extend to the after perpendicular must not be regarded as contributing to the sheer credit;
- (iv) sheer credit may only be given, in the case of a raised quarterdeck, if the height of the quarterdeck is greater than the standard height of other superstructures, and only for the amount by which the actual height of the raised quarterdeck exceeds that standard height;
- (v) if the poop or a forecastle has sloping end bulkheads, sheer credit may be allowed in respect of excess height where *y* and L1 are calculated as shown in figure 2.

¹ The formula provides a curve in the form of a parabola tangent to the actual sheer curve at the freeboard deck and intersecting the end ordinate at a point below the superstructure deck at a distance equal to the standard height of a superstructure.

Figure 2



9 Corrections to freeboard for sheer

- (1) The correction for sheer is found by multiplying the deficiency or excess of sheer by $0.75 - S/2L$ where S is the total length of enclosed superstructures.
- (2) If the sheer is less than the standard, the correction for deficiency in sheer, as calculated in accordance with subclause (1), must be added to the freeboard.
- (3) If the sheer is greater than the standard and the ship has no enclosed superstructure that covers amidships, no deduction for excess of sheer may be made from the freeboard.
- (4) If the sheer is greater than the standard, the deduction from the freeboard shall, in the case of a ship with an enclosed superstructure that covers -
 - (a) $0.1L$ before and $0.1L$ abaft amidships, be equal to the correction for excess of sheer, calculated in accordance with subclause (1);
 - (b) less than $0.1L$ before and $0.1L$ abaft amidships, be obtained by linear interpolation;
 except that -
 - (i) the deduction may not exceed 125 millimetres per 100 metres of length; and
 - (ii) if the actual height of the superstructure or raised quarterdeck is less than the standard height, the deduction must be reduced by the ratio of the actual to the standard height."

18 Consequential Amendments

- (1) Rule 40A.11 is amended by inserting in the definition of "freeboard deck" the words "the International Convention on Load Lines as incorporated in" before the words "Part 47".

Maritime Rules

PART 47

LOAD LINES

AMENDMENT

Consultation Details

(This text does not form part of the rules contained in Part 47. It provides details of the consultation undertaken before making the rules.)

Summary of Consultation

5 organisations and individuals provided written submissions on the draft of Part 47 Amendment Rules –

John Smallridge
Auckland Regional Council Deputy Harbourmaster
SGS M&I
Northland Regional Council Regional Council Harbourmaster
New Zealand Shipping Federation Inc

Comments on Submissions

1. **Mr J F Smallridge** comments that removing the winter, winter north Atlantic and tropical fresh are a good move as they are not really needed in New Zealand coastal waters and asks if it is the intention to keep the plimsoll line in New Zealand.

Mr Smallridge also comments that the load line calculations must be in question if a ship was trading in a full fresh water situation, with regard to sheer.

Maritime New Zealand response: *The aim of the Part 47 amendments is to give direct reference to the International Load Line Convention for ships of 24 metres and above. The amendments made to Part 47 are consequential changes to replace references to the current Section 1. Subsequently, the content of Part 47 has not changed significantly and this includes the load lines marked on New Zealand ships that are less than 24 metres in length and the plimsoll line, which is still marked. In regard the point on sheer, the rule reflects the International Convention on Load Lines and it is beyond the scope of Maritime New Zealand to alter, at the present time.*

Mr Smallridge also asks if there is an intention to have, as a guide, a scale of tonnes per inch (TPI) immersion scale to be kept onboard for the masters reference that is suited to New Zealand conditions if trading solely on the New Zealand coast.

Maritime NZ response: *It is not the intention to mandate for a guide on scale of tonnes per inch immersion scale to be kept on board for the Masters reference.*

As part of calculating the load lines the stability is required to be analysed and this stability information is available to the Master if it is so required. Under the Maritime Transport Act and the Health and Safety in Employment Act the Master is at liberty to request such information.

2. **The Auckland Regional Council Deputy Harbourmaster** comments that the amendment seems sensible and appropriate, though it deals with issues outside the Harbourmasters role.
3. **SGS M&I** asks whether it would be appropriate to mention stability as well in rule 47.11. In their opinion, the minimum freeboard should be the greater of the structural strength and the stability.

Maritime NZ response: Maritime New Zealand agrees and would like to point out that the stability issue is already mentioned in rule 47.63(3).

SGS M&I also comment that there is no rule providing the determination of the fresh water and winter allowance.

Maritime NZ response: Maritime New Zealand agrees with this comment and the rule has been amended accordingly .

SGS M&I ask if it is only New Zealand Load Line certificates that are to be issued now and what the options are for an owner that wishes to have an International Load Line.

Maritime NZ response: If the ship is less than 24 metres in length, it can only be assigned a New Zealand Load Line as the International Load Line Convention does not apply to ships less than 24 metres in length. If the ship is above 24 metres in length then it will be assigned an International Load Line as calculated from the International Load Line Convention.

4. **The Northland Regional Council Harbourmaster** comments that the Northland Regional Council supports Maritime New Zealand in its continual improvement of maritime safety in New Zealand.
5. **The New Zealand Shipping Federation Inc** comments that the approach of incorporating by reference to the Convention instead of rewriting makes for a more efficient process. However, they ask why rule 47.6 (2)(e) has been inserted, referring to the Great Lakes, Caspian Sea and South America.

Maritime NZ response: This has come from Article 5 of the International Convention on Load Lines and the amendment reflects the international convention.