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# Canada Gazette

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### REGULATORY IMPACT ANALYSIS STATEMENT

*(This statement is not part of the Regulations.)*

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#### *Description*

Load lines located on each side of a vessel amidships indicate the deepest that a ship can submerge into the water as a result of the loading of passengers, cargo, fuel, stores or other material on board. There are different load lines for different seasons of the year, areas of operation and densities of water.

The actual placement of these lines is dependent on numerous factors relating to the geometry of the vessel. As well, since the load line placement assumes that the vessel will have a certain stability when fully loaded, certain conditions must be fulfilled in the construction and design of the vessel—water should not accumulate on deck in bad weather, openings to below deck must be watertight or weathertight, and so on.

Load line requirements have existed for a very long time and can be regarded as well settled technically. They are necessary to public safety in marine transport.

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The *Canada Shipping Act, 2001* (CSA 2001) promotes and maintains safety, security and environmental protection of marine transportation within Canada. It replaces the *Canada Shipping Act* (CSA) that has existed in its present form for decades.

To accommodate the changes being brought about by the CSA 2001, the Marine Safety Directorate of Transport Canada (TC) established a Regulatory Reform Project to review the existing regulations under the CSA and decide which of those regulations should be replaced with the coming into force of the CSA 2001. The Project identified the proposed *Load Line Regulations* (the Regulations) as one of the new regulations that would be required.

The following are four separate sets of regulations dealing with load lines under the existing CSA:

1. The *General Load Line Rules*, C.R.C., c. 1425;
2. The *Load Line Regulations (Inland)*, C.R.C., c. 1440;
3. The *Load Line Regulations (Sea)*, C.R.C., c. 1441; and
4. The *Load Line Rules for Lakes and Rivers*, C.R.C., c. 1442.

The proposed Regulations would consist of three parts.

Part 1, Circle Load Lines, would pertain to vessels engaged on international voyages and vessels not exclusively operating in Canadian inland waters, including the Great Lakes. This Part would replace the *General Load Line Rules* and the *Load Line Regulations (Sea)*.

Part 2, Diamond Load Lines, would concern vessels operating exclusively in Canadian inland waters, including the Great Lakes. This Part would replace the *Load Line Rules for Lakes and Rivers* and the *Load Line Regulations (Inland)*.

Part 3 would repeal the existing regulations concerning load lines under the CSA.

Circle Load Lines would incorporate, by reference, the International Maritime Organization's (IMO) International Convention on Load Lines, 1966 (the Convention) and the 1988 Protocol relating to the Convention, as amended effective January 1, 2005 (the Protocol). Canada has adopted the Convention, and the proposed Regulations would bring Canadian requirements in line with the IMO's most recent amendments.

In Circle Load Lines, the Convention and Protocol would contain the "factors" and "conditions" mentioned in paragraph 2 of this description. In fact, technically, the "factors" are corrections to the determination of freeboards and the "conditions" are conditions of assignment.

The Convention and Protocol deal with conditions of assignment and determination of freeboards for Circle Load Lines. In Diamond Load Lines, Schedules 1 and 2 to the

proposed Regulations would cover these, respectively.

Schedule 3 to the proposed Regulations would detail the marking requirements for Diamond Load Lines. The Convention and Protocol cover these requirements for Circle Load Lines.

There are no substantive changes in Diamond Load Line requirements. These reproduce the technical requirements of the *Load Line Regulations (Inland)* and the *Load Line Rules for Lakes and Rivers*. They are harmonized with the *Code of Federal Regulations* of the United States relating to Great Lakes Load Lines.

For the purpose of reducing the amount of regulatory text, it would have been desirable to use the Convention and Protocol for Diamond Load Line requirements. However, this was not possible because the Convention and Protocol are based on open sea travel conditions while the Diamond Load Line requirements are based on the less arduous conditions on the Great Lakes and inland waters.

### ***Alternatives***

There are no viable alternatives to the proposed Regulations.

Canada is a signatory to the Convention. National instruments implementing the Convention must be deposited with the IMO in London, England. The requirements of the Convention can only be implemented if they are made mandatory by each nation, and regulation is the most effective and public method of doing so.

Also, Canada and the United States are signatories to numerous Memoranda of Understanding, the most recent in 1977, which recognize each other's regulations concerning diamond load lines in force on the Great Lakes of North America.

For these reasons, both Circle and Diamond load line requirements must be embodied in the proposed Regulations.

### ***Benefits and costs***

#### **Benefits**

The Consolidated Regulations of Canada contain 200 pages devoted to the existing regulations concerning load lines. The proposed Regulations would replace these pages with approximately 30 pages of text, tables and figures.

The proposed Regulations take into account statutory changes being brought about by the coming into force of the CSA 2001, and much of the complexity in the existing regulations has been eliminated.

Finally, with regard to Canada's duty to remain current with its international obligations, the proposed Regulations include the most recent amendments to the Convention and Protocol.

## Costs

The cost implications of the proposed Regulations would be nil or, at most, marginal. Since the proposed Regulations are basically a restatement of existing requirements, impact on industry activities will be minimal.

There are some marginal costs involved in Marine Safety Inspectors becoming familiar with the text of the proposed Regulations, but these will be absorbed in existing budgets.

## ***Environmental impacts***

A preliminary scan of environmental impacts has been undertaken in accordance with the criteria of TC's Strategic Environmental Assessment Policy Statement — March 2001. The preliminary scan has led to the conclusion that a detailed analysis is not necessary. Further assessments or studies regarding environmental effects of this initiative are not likely to yield a different determination. The proposed Regulations would have an indirect positive outcome for the environment by maintaining safety levels in vessel construction and operation that prevent increased marine accidents and incidents and their attendant negative environmental consequences.

## ***Privacy impacts***

The proposed Regulations would not raise any privacy issues. They relate to vessel construction and operation and have no private personal data implications.

## ***Regulatory burden***

The proposed Regulations are consistent with the principles of the Smart Regulation Strategy in minimizing the regulatory burden on Canadians as much as possible while promoting regulatory compliance. The proposed Regulations would maintain load line requirements that are necessary for public safety in marine operations while reducing the complexity and length of the regulatory text supporting those requirements.

## ***Consultation***

Extensive consultation has taken place with the marine transportation industry with regard to the proposed Regulations. Numerous presentations have been made during meetings of the regional and national Canadian Marine Advisory Council in 2004 and 2005. Comments and recommendations from the marine industry community have been minimal. Given the fact that there are very few substantive changes between the existing and proposed Regulations, this is understandable.

## ***Compliance and enforcement***

Load line requirements will be monitored and enforced by TC Marine Safety Inspectors. A separate compliance mechanism is not required, as load line requirements are currently routinely inspected under the existing regulations.

While the requirements themselves are virtually identical to those under the existing

regulations, inspectors will be trained to identify the requirements in the text of the proposed Regulations. The cost of these activities will not be significant, since the current inspection program will be used.

### **Contact**

Frank Ritchie, AMSX, Project Manager, Regulatory Services and Quality Assurance, Marine Safety, Transport Canada, Place de Ville, Tower C, 330 Sparks Street, 11th Floor, Ottawa, Ontario K1A 0N5, 613-949-4643 (telephone), 613-991-5670 (fax), [ritchif@tc.gc.ca](mailto:ritchif@tc.gc.ca) (email).

## **PROPOSED REGULATORY TEXT**

Notice is hereby given that the Governor in Council proposes, pursuant to paragraphs 35(1)(d) and 120(1)(h) of the *Canada Shipping Act, 2001* ([see footnote a](#)), to make the annexed *Load Line Regulations*.

Interested persons may make representations to the Minister of Transport, Infrastructure and Communities with respect to the proposed Regulations within 30 days after the publication date of this notice. All such representations must be in writing and cite the *Canada Gazette*, Part I, and the date of publication of this notice, and be sent to Frank Ritchie, Project Manager, Regulatory Services and Quality Assurance, Marine Safety, Transport Canada, Place de Ville, Tower C, 330 Sparks Street, Ottawa, Ontario K1A 0N5 (tel.: 613-949-4643; fax: 613-991-5670; e-mail: [ritchif@tc.gc.ca](mailto:ritchif@tc.gc.ca)).

Persons making representations should identify any of those representations the disclosure of which should be refused under the *Access to Information Act*, in particular under sections 19 and 20 of that Act, and should indicate the reasons why and the period during which the representations should not be disclosed. They should also identify any representations for which there is consent to disclosure for the purposes of that Act.

Ottawa, November 30, 2006

MARY O'NEILL  
*Assistant Clerk of the Privy Council*

## **LOAD LINE REGULATIONS**

### **INTERPRETATION**

1. (1) The following definitions apply in these Regulations.

"1966 Convention" means the International Convention on Load Lines, 1966. (*Convention de 1966*)

"Act" means the *Canada Shipping Act, 2001*. (*Loi*)

"Board" means the Marine Technical Review Board established under section 26 of the

Act. (*Bureau*)

"classification society" means the American Bureau of Shipping, Bureau Veritas, Det Norske Veritas, Lloyd's Register of Shipping, Germanischer Lloyd, Registro Italiano Navale and Nippon Kaiji Kyokai. (*société de classification*)

"Convention" means the International Convention on Load Lines, 1966, as modified by the Protocol. (*Convention*)

"domestic voyage" means a voyage that is from a place in Canada to another place in Canada. (*voyage intérieur*)

"freeboard deck" in respect of a vessel, means

(a) the vessel's uppermost complete deck that is exposed to weather and sea and has permanent means of closing all openings in its exposed parts, and below which all openings in the shell of the vessel are fitted with permanent means of watertight closing; or

(b) a permanent deck that is lower than the deck referred to in paragraph (a), is continuous in a fore and aft direction at least between the machinery space and peak bulkheads and continuous athwartships if the vessel's owner requests that lower deck. (*pont de franc-bord*)

"HSC Code" means the *International Code of Safety for High Speed Craft, 2000*, (2000 HSC CODE), published by the IMO, as amended from time to time. (*recueil HSC*)

"IMO" means the International Maritime Organization. (*OMI*)

"inland voyage" means a voyage on the inland waters of Canada together with any part of any lake or river forming part of the inland waters of Canada that lies within the United States or on Lake Michigan. (*voyage en eaux intérieures*)

"inland waters of Canada" means all the rivers, lakes and other navigable fresh waters within Canada, and includes the St. Lawrence River as far seaward as a straight line drawn

(a) from Cap-des-Rosiers to West Point, Anticosti Island; and

(b) from Anticosti Island to the north shore of the St. Lawrence along a meridian of longitude 63°W. (*eaux intérieures du Canada*)

"Minister" means the Minister of Transport. (*ministre*)

"open-hopper dredge" means a self-propelled dredge with an open hold or hopper in the hull that receives dredged material and is fitted with bottom doors that can quickly jettison the dredged material. (*marie-salope*)

"place" means a port or a marine installation or vessel that is used for loading or unloading vessels. (*lieu*)

"Protocol" means the 1988 Protocol relating to the International Convention on Load lines, 1966, as amended on January 1, 2005. (*Protocole*)

"sheltered waters voyage" has the same meaning as in section 1 of the *Vessel Certificates Regulations*. (*voyage en eaux abritées*)

"superstructure" means a decked structure on the freeboard deck of a vessel extending from side to side of the vessel or with the side plating not being more than four per cent of the breadth inboard of the shell plating, and includes that part of the hull extending above the freeboard deck if the freeboard deck is a lower deck. (*superstructure*)

"watertight" means designed to withstand a static head of water without any leakage. (*étanche à l'eau*)

(2) For the purpose of these Regulations, a vessel is constructed on the earliest of

(a) the day on which its keel is laid;

(b) the day on which construction identifiable with a specific vessel begins; and

(c) the day on which assembly of the vessel reaches the lesser of 50 tonnes and one per cent of the estimated mass of all structural material.

(3) Subject to subsection (4), for the purpose of these Regulations, every reference to "Administration" in a document incorporated by reference in these Regulations means

(a) in the case of a Canadian vessel, the Minister; and

(b) in the case of a foreign vessel, the government of the state whose flag the vessel is entitled to fly.

(4) For the purpose of these Regulations, every reference to "Administration" in articles 6 and 8 of the 1966 Convention or the Convention means, in the case of a Canadian vessel, the Board.

(5) For the purpose of interpreting a document incorporated by reference in these Regulations, "should" shall be read to mean "shall".

## PART 1

### CIRCLE LOAD LINES

#### *Interpretation*

2. The following definitions apply in this Part.

"amidships" means the middle of the length of a vessel. (*milieu du bâtiment*)

"deck line" means a horizontal line that is 300 mm long and 25 mm wide marked amidships on the outer surface of the shell on each side of the vessel. (*ligne de pont*)

"existing vessel" means a vessel that is not a new vessel. (*bâtiment existant*)

"international voyage" means a voyage, other than an inland voyage, between a place in Canada and a place not in Canada or between places not in Canada. (*voyage international*)

"length"

(a) in respect of a new vessel, has the same meaning as in article 2(8) of Annex A to the Convention; and

(b) in respect of an existing vessel, has the same meaning as in subsection 1(2) of Schedule I to the Rules. (*longueur*)

"new vessel" means

(a) a Canadian vessel

(i) that was constructed on or after April 14, 1970 and is engaged on an international voyage,

(ii) that was constructed on or after April 14, 1973 and is not engaged on an international voyage, or

(iii) that was constructed before April 14, 1970 and is engaged on an international voyage, or that was constructed before April 14, 1973 and is not engaged on an international voyage, if the authorized representative makes a request in writing to the Minister for the vessel to be assigned freeboards as a new ship; or

(b) a foreign vessel that was constructed on or after the date on which the 1966 Convention came into force in the state whose flag the vessel is entitled to fly. (*bâtiment neuf*)

"North American Great Lakes Zone" means Lake Ontario, Lake Erie, Lake Huron (including Georgian Bay), Lake Michigan and Lake Superior, the waters connecting those lakes, the St. Lawrence Seaway and the St. Lawrence River west of the Victoria Bridge in Montréal. (*zone des Grands Lacs de l'Amérique du Nord*)

"Rules" means the *General Load Line Rules*, C.R.C., c. 1425, as they read on January 1, 2006. (*Règles*)

"sailing vessel" means a vessel that has sufficient sail area for navigation under sails alone, whether or not fitted with mechanical means of propulsion. (*voilier*)

"St. Lawrence River Seasonal Area" means that part of the St. Lawrence River bounded by the Victoria Bridge in Montréal, a straight line drawn from Cap-des-Rosiers to West Point, Anticosti Island, and a line drawn along the meridian of longitude 63°W from Anticosti Island to the north shore of the St. Lawrence River. (*région saisonnière du fleuve Saint-Laurent*)

"tanker" means a vessel specially constructed for the carriage of liquid cargoes in bulk. (*bâtiment-citerne*)

"timber deck cargo" means a cargo of timber carried on an uncovered part of a freeboard deck or superstructure deck. (*chargement de bois en pontée*)

"West Coast Treaty Zone" means

(a) the waters of Puget Sound in the State of Washington;

(b) the waters lying between Vancouver Island and the mainland and east of a line from a point one nautical mile west of the city limits of Port Angeles in the State of Washington to Race Rocks on Vancouver Island and of a line from Hope Island, British Columbia, to Cape Calvert, Calvert Island, British Columbia;

(c) the waters lying east of a line from Cape Calvert to Duke Point on Duke Island in the State of Alaska;

(d) the waters lying north of Duke Island and east of Prince of Wales Island, Baranof Island and Chicagof Island in the State of Alaska;

(e) the waters of Peril, Neva and Olga Straits as far south as Sitka in the State of Alaska; and

(f) the waters lying east of a line from Port Althorp on Chicagof Island to Cape Spencer in the State of Alaska. (*zone d'application du Traité — côte ouest*)

#### *Application*

**3.** (1) Subject to subsection (2), this Part applies in respect of Canadian vessels everywhere and foreign vessels in Canadian waters.

(2) This Part does not apply in respect of

(a) pleasure craft;

(b) vessels ordinarily engaged in catching, attempting to catch or harvesting fish, whales, seals, walrus or other living resources of the sea;

- (c) high-speed craft that have been certified in accordance with the HSC Code and meet the requirements of that Code;
  - (d) new vessels of less than 24 m in length;
  - (e) existing vessels of less than 150 gross tonnage;
  - (f) vessels that are engaged on
    - (i) a voyage solely within the limits of the inland waters of Canada or an inland voyage and holding a certificate issued under Part 2 or similar load line regulations made under the laws of the United States,
    - (ii) a sheltered waters voyage, or
    - (iii) a domestic voyage, if the vessels are not carrying passengers or cargo;
  - (g) Canadian vessels or vessels registered in the United States that are engaged on an international voyage wholly within the West Coast Treaty Zone;
  - (h) new vessels that do not have means of self-propulsion that
    - (i) are engaged on a domestic voyage wholly within the West Coast Treaty Zone and are not carrying oil as cargo or passengers, or
    - (ii) are engaged on a domestic voyage outside the West Coast Treaty Zone and are not carrying oil as cargo, passengers or crew; or
  - (i) existing vessels that do not have means of self-propulsion, are engaged on a domestic voyage and are not carrying passengers or crew.
- (3) This Part applies in respect of vessels that are capable of engaging in the drilling for, or the production, conservation or processing of, oil or gas.

#### *Prohibitions*

4. (1) No Canadian vessel shall depart on a domestic voyage unless it
- (a) holds an International Load Line Certificate, a Local Load Line Certificate or an International Load Line Exemption Certificate issued under section 5; and
  - (b) is marked in accordance with the certificate.
- (2) No Canadian vessel shall depart on an international voyage unless it
- (a) holds an International Load Line Certificate or an International Load Line Exemption Certificate issued under section 5; and

(b) is marked in accordance with the certificate.

(3) No foreign vessel shall depart from a place in Canada unless it

(a) holds an International Load Line Certificate or an International Load Line Exemption Certificate issued by the government of the state whose flag the vessel is entitled to fly or, at the request of that government, by another government; and

(b) is marked in accordance with the certificate.

### *Certificates*

**5.** (1) On application by the authorized representative of a Canadian vessel that is a new vessel and was constructed before the day on which this section comes into force, the Minister shall issue an International Load Line Certificate to the vessel if

(a) the conditions of assignment set out in Chapter II of Annex I to the 1966 Convention are met;

(b) the vessel is maintained in accordance with the requirements of a classification society;

(c) the vessel has been assigned freeboards that

(i) are determined in accordance with Chapter III of Annex I to the 1966 Convention, or

(ii) if the freeboards determined under subparagraph (i) are not adequate because of the general structural strength of the vessel, are adequate for the general structural strength of the vessel; and

(d) the vessel is marked in accordance with Chapter I of Annex I to the 1966 Convention.

(2) On application by the authorized representative of a Canadian vessel that is a new vessel and was constructed on or after the day on which this section comes into force, the Minister shall issue an International Load Line Certificate to the vessel if

(a) the conditions of assignment set out in Chapter II of Annex I to the Convention are met;

(b) the vessel is maintained in accordance with the requirements of a classification society;

(c) the vessel has been assigned freeboards that

(i) are determined in accordance with Chapter III of Annex I to the Convention, or

(ii) if the freeboards determined under subparagraph (i) are not adequate because of the general structural strength of the vessel, are adequate for the general structural strength of the vessel; and

(d) the vessel is marked in accordance with Chapter I of Annex I to the Convention.

(3) On application by the authorized representative of a Canadian vessel that is an existing vessel, the Minister shall issue an International Load Line Certificate or Local Load Line Certificate to the vessel if

(a) the conditions of assignment set out in Part I of Schedule I to the Rules are met;

(b) the vessel is maintained in accordance with the requirements of a classification society;

(c) the vessel has been assigned freeboards determined in accordance with

(i) in the case of a vessel other than a sailing vessel or tanker, Part II of Schedule I to the Rules and, if the vessel is carrying timber deck cargo, Part IV of that Schedule,

(ii) in the case of a sailing vessel, Part III of Schedule I to the Rules, or

(iii) in the case of a tanker, Part IV of Schedule I to the Rules; and

(d) the vessel is marked in accordance with Part VI of Schedule I to the Rules.

(4) On application by the authorized representative of a Canadian vessel that is a new vessel, the Minister shall issue a Local Load Line Certificate to the vessel if

(a) the intended operation of the vessel provides an equivalent or greater level of safety than one or more of the requirements set out in subsection (1) or (2), as the case may be; and

(b) the other requirements set out in subsection (1) or (2), as the case may be, are met.

(5) On application by the authorized representative of a Canadian vessel, the Minister shall issue an International Load Line Exemption Certificate to the vessel if it has been granted an exemption by the Board under section 13 and

(a) subject to the terms of that exemption, the requirements of subsection (1) or (2), as the case may be, are met; and

(b) any design-, construction- or equipment-related safety requirements set by the Board under that section are met.

(6) A Local Load Line Certificate that is issued to an open-hopper dredge shall include a

dredging load line if

(a) it has been assigned a dredging freeboard that is 62.5 per cent of the assigned summer freeboard or 150 mm, whichever is greater; and

(b) it is marked with the dredging load line placed directly below the deck line so that its upper edge marks the assigned dredging freeboard and the letters "WD" are marked forward of this line.

(7) Despite paragraphs (1)(d), (2)(d) and (3)(d), the Minister may issue a certificate if

(a) the marking is placed so that the freeboards are greater than those required by paragraph (1)(d), (2)(d) or (3)(d), as the case may be; or

(b) in the case of a passenger vessel, it is marked in accordance with paragraph 22(2)(c) of the *Hull Construction Regulations*.

(8) Despite paragraph (6)(b), the Minister may issue a certificate that includes a dredging load line if the dredging load line is placed so that the dredging freeboard is greater than that required by that paragraph.

#### *Authorized Representative's Duties*

**6.** (1) The authorized representative of a vessel that holds an International Load Line Certificate or a Local Load Line Certificate shall ensure that

(a) the conditions of assignment that were required to be met for the issuance of the certificate are met and the vessel is maintained in accordance with the requirements of a classification society;

(b) the vessel is marked as it was required to be marked for the issuance of the certificate or as it may be marked under subsection 5(7) or (8);

(c) the certificate is endorsed as required by the Convention;

(d) no material alterations take place in the hull or superstructure of the vessel that would necessitate the assignment of an increased freeboard; and

(e) the vessel is operated only as intended, in the case of a Local Load Line Certificate.

(2) The authorized representative of a vessel that holds an International Load Line Exemption Certificate shall ensure that

(a) the conditions of assignment that were required to be met for the issuance of the certificate are met and the vessel is maintained in accordance with the requirements of a classification society;

(b) the vessel is marked as it was required to be marked for the issuance of the certificate

or as it may be marked under subsection 5(7) or (8);

(c) the vessel complies with any safety requirements set under article 6(2) or (4) of the 1966 Convention or the Convention or under section 13, as the case may be;

(d) the certificate is endorsed as required by the Convention; and

(e) no material alterations take place in the hull or superstructure of the vessel that would necessitate the assignment of an increased freeboard.

#### *Seasonal Zones, Areas and Periods*

7. (1) The seasonal zones, areas and periods set out in Annex II to the Convention apply for the purpose of determining the applicable load line when a new vessel is in one of those zones or areas.

(2) When a new vessel is engaged on a voyage set out in column 1 of the table to this subsection during a period set out in column 2, the seasonal period set out in column 3 applies for the purpose of determining the applicable load line.

TABLE

	Column 1	Column 2	Column 3
Item	Voyage	Period	Seasonal Period
1.	A voyage during the course of which the vessel crosses the eastern boundary of the St. Lawrence River Seasonal Area	(a) Period beginning on November 1 and ending on March 31 (b) Period beginning on April 1 and ending on October 31	(a) Winter (b) Summer
2.	A voyage entirely within the limits of the North American Great Lakes Zone and the St. Lawrence River Seasonal Area	(a) Period beginning on November 1 and ending on March 31 (b) Period beginning on April 1 and ending on April 30 and beginning on October 1 and ending on October 31 (c) Period beginning on May 1 and ending on September 30	(a) Winter (b) Summer (c) Tropical

(3) The seasonal zones, areas and periods set out in Schedule III or IV, whichever is applicable, of the Rules apply for the purpose of determining the applicable load line when an existing vessel is in one of those zones or areas.

(4) A port standing on the boundary line between two zones or two areas is considered to be in the zone or area from which a vessel departs or into which a vessel arrives, as the case may be.

### *Adjustments to Load Lines*

**8.** (1) When a vessel is in fresh water of a specific gravity of 1.0, the applicable load line is adjusted by the fresh water allowance that is specified in the vessel's load line certificate and determined in accordance with the 1966 Convention, the Convention or the Rules, as the case may be. However, if the vessel is in water of a specific gravity that is greater than 1.0 but less than 1.025, the applicable load line is adjusted by the following formula:

$$[(1.025 - A)/0.025] \times B$$

where

A equals the actual specific gravity; and

B equals the fresh water allowance.

(2) Subsection (1) does not apply in respect of

(a) a new vessel that is in the North American Great Lakes Zone; or

(b) an existing vessel that is in the North American Great Lakes Zone during the period starting on September 16 in any year and ending on April 30 in the next year.

(3) When a vessel departs from a place situated on a river or on inland waters to the sea, the applicable load line is raised to a level that accounts for the weight of fuel and all other materials required for consumption between the point of departure and the sea.

(4) Subsection (3) does not apply in respect of a vessel that

(a) is in the North American Great Lakes Zone; or

(b) is in the St. Lawrence River Seasonal Area, if the vessel is engaged on a voyage wholly within the limits of the North American Great Lakes Zone and the St. Lawrence River Seasonal Area.

### *Dredging Load Lines*

**9.** The dredging load line on an open-hopper dredge is the applicable load line when

(a) the dredge is operating not more than 20 nautical miles from the mouth of a harbour of safe refuge;

(b) the height of waves in the area of operation is not more than 3 m or the wind velocity in the area is not more than 65 km/h; and

(c) the dredge is carrying dredged material with a specific gravity that is not greater than the highest specific gravity of dredged material that the dredge is designed to dredge.

#### *Timber Load Lines*

**10.** The provisions of the 1966 Convention and the Convention relating to timber load lines do not apply in respect of any vessel that is in the North American Great Lakes Zone or that is engaged on a voyage wholly within the limits of the North American Great Lakes Zone and the St. Lawrence River Seasonal Area.

#### *Posting of Certificates*

**11.** The authorized representative of a Canadian vessel that holds an International Load Line Certificate, a Local Load Line Certificate or an International Load Line Exemption Certificate shall ensure that it is framed and posted in a conspicuous place on board the vessel.

#### *Draught and Freeboard Notices*

**12.** The master of a Canadian vessel that holds an International Load Line Certificate, a Local Load Line Certificate or an International Load Line Exemption Certificate shall, before leaving a place to proceed on an international voyage, post the particulars of the draughts and freeboards in a conspicuous place on board the vessel and keep them legible until the vessel arrives at another place.

#### *Exemptions and Equivalents*

**13.** The Board may exercise the powers conferred on the Administration by articles 6 and 8 of the 1966 Convention or the Convention, as the case may be.

### PART 2

#### DIAMOND LOAD LINES

##### *Interpretation*

**14.** (1) The following definitions apply in this Part.

"amidships" means the middle of the length of a vessel. (*milieu du bâtiment*)

"deck line" means a horizontal line that is 300 mm long and 25 mm wide marked amidships on the outer surface of the shell on each side of the vessel. (*ligne de pont*)

"existing vessel" means a vessel that is not a new vessel. (*bâtiment existant*)

"length" or "L"

(a) in respect of a new vessel, means 96 per cent of the total length on a waterline at 85 per cent of the least moulded depth measured from the top of the keel, or the length from the fore side of the stem to the axis of the rudder stock on that waterline, if that is greater, except that, in vessels designed with a rake of keel, the waterline on which the length is measured shall be parallel to the designed waterline; and

(b) in respect of an existing vessel, has the same meaning as in subsection 1(2) of Schedule I to the Rules. (*longueur ou L*)

"moulded depth" means the vertical distance measured

(a) from the top of the freeboard deck beam at side

(i) to the top of the keel,

(ii) in the case of a vessel that is not of metal construction, to the lower edge of the keel rabbet, or

(iii) in the case of a vessel that is fitted with thick garboards or a structure other than a flat plate keel, to the point where a line extending the flat of the bottom continued inwards would cut the side of the keel;

(b) in the case of a vessel that has rounded gunwales, from the point where the moulded lines of the deck and shell would intersect if the gunwale were right-angled to the point described in subparagraph (a)(i), (ii) or (iii), as the case may be; or

(c) in the case of a vessel that has a stepped freeboard deck, from a line extending from the lower part of the freeboard deck along a line parallel to the higher part of the freeboard deck to the point described in subparagraph (a)(i), (ii) or (iii), as the case may be. (*creux sur quille*)

"new vessel" means a vessel that is 24 m or more in length

(a) that was constructed on or after April 14, 1973; or

(b) that was constructed as a Canadian vessel before the date referred to in paragraph (a), if the vessel's authorized representative makes a request in writing to the Minister for the vessel to be assigned freeboards as a new vessel. (*bâtiment neuf*)

"Rules" means the *Load Line Rules for Lakes and Rivers*, C.R.C., c. 1442, as they read on January 1, 2006. (*Règles*)

#### *Application*

**15.** (1) Subject to subsections (2) and (3), this Part applies in respect of Canadian vessels and foreign vessels that are engaged on a voyage solely within the limits of the inland waters of Canada and Canadian vessels that are engaged on an inland voyage.

(2) This Part does not apply in respect of

(a) pleasure craft;

(b) vessels ordinarily engaged in catching, attempting to catch or harvesting fish, whales, seals, walrus or other living resources of the sea;

(c) high-speed craft that have been certified in accordance with the HSC Code and meet the requirements of that Code;

(d) new vessels of less than 24 m in length;

(e) existing vessels of less than 150 gross tonnage;

(f) vessels that hold an International Load Line Certificate, a Local Load Line Certificate or an International Load Line Exemption Certificate;

(g) vessels that are engaged on

(i) a sheltered waters voyage, or

(ii) a domestic voyage, if the vessels are not carrying passengers or cargo;

(h) new vessels that do not have means of self-propulsion, are engaged on a domestic voyage and are not carrying passengers, crew or oil as cargo; or

(i) existing vessels that do not have means of self-propulsion, are engaged on a domestic voyage and are not carrying passengers or crew.

(3) Section 17 does not apply in respect of vessels that hold a load line certificate issued under Title 46, chapter I, part 45 of the *Code of Federal Regulations* of the United States, as amended from time to time.

(4) This Part applies in respect of vessels that are capable of engaging in the drilling for, or the production, conservation or processing of, oil or gas.

### *Prohibitions*

**16.** No vessel shall depart from a place in Canada and no Canadian vessel shall depart from a place outside Canada unless it

(a) holds

(i) a Great Lakes and Inland Waters of Canada Load Line Certificate issued under section 17, or

(ii) a load line certificate issued under Title 46, chapter I, part 45 of the *Code of*

*Federal Regulations* of the United States, as amended from time to time; and

(b) is marked in accordance with the certificate.

*Certificates*

**17.** (1) On application by the authorized representative of a new vessel, the Minister shall issue a Great Lakes and Inland Waters of Canada Load Line Certificate to the vessel if

(a) the conditions of assignment set out in Schedule 1 are met;

(b) the vessel is maintained in accordance with the requirements of a classification society;

(c) the vessel has been assigned freeboards that

(i) are determined in accordance with Schedule 2, or

(ii) if the freeboards determined under subparagraph (i) are not adequate because of the general structural strength of the vessel, are adequate for the general structural strength of the vessel; and

(d) the vessel is marked in accordance with Schedule 3.

(2) On application by the authorized representative of an existing vessel, the Minister shall issue a Great Lakes and Inland Waters of Canada Load Line Certificate to the vessel if

(a) the conditions of assignment set out in Part I of Schedule I to the Rules are met;

(b) the vessel is maintained in accordance with the requirements of a classification society;

(c) the vessel has been assigned freeboards determined in accordance with Part II, III or IV of Schedule I to the Rules; and

(d) the vessel is marked in accordance with Part V of Schedule I to the Rules.

(3) Despite paragraphs (1)(d) and (2)(d), the Minister may issue a certificate if

(a) the marking on the vessel is placed so that the freeboard is greater than that required by paragraph (1)(d) or (2)(d), as the case may be; or

(b) in the case of a passenger vessel, it is marked in accordance with subsection 37(2) of the *Hull Construction Regulations*.

*Authorized Representative's Duties*

**18.** The authorized representative of a vessel that holds a Great Lakes and Inland Waters of Canada Load Line Certificate shall ensure that

(a) the conditions of assignment set out in Part I of Schedule I to the Rules or in Schedule 1, as the case may be, are met;

(b) the vessel is maintained in accordance with the requirements of a classification society;

(c) the vessel is marked as it was required to be marked for the issuance of the certificate or as it may be marked under subsection 17(3);

(d) no material alterations take place in the hull or superstructure of the vessel that would necessitate the assignment of an increased freeboard; and

(e) within three months of each anniversary date of its issuance, the certificate is endorsed by the Minister as meeting the requirements set out in paragraphs (a) to (d).

#### *Seasonal Periods*

**19.** The following seasonal periods apply for the purpose of determining the applicable load line when a vessel is on the inland waters of Canada:

(a) the midsummer season is the period beginning on May 1 and ending on September 15;

(b) the summer seasons are the periods beginning on April 16 and ending on April 30 and beginning on September 16 and ending on September 30;

(c) the intermediate seasons are the periods beginning on April 1 and ending on April 15 and beginning on October 1 and ending on October 31; and

(d) the winter season is the period beginning on November 1 in one year and ending on March 31 in the next year.

#### *Posting of Certificates*

**20.** The authorized representative of a vessel that holds a Great Lakes and Inland Waters of Canada Load Line Certificate shall ensure that the certificate is framed and posted in a conspicuous place on board the vessel.

### PART 3

## REPEALS AND COMING INTO FORCE

### *Repeals*

**21. The *General Load Line Rules* ([see footnote 1](#)) are repealed.**

**22. The *Load Line Regulations (Inland)* ([see footnote 2](#)) are repealed.**

**23. The *Load Lines Regulations (Sea)* ([see footnote 3](#)) are repealed.**

**24. The *Load Line Rules for Lakes and Rivers* ([see footnote 4](#)) are repealed.**

*Coming Into Force*

**25. These Regulations come into force on the day on which section 2 of the *Canada Shipping Act, 2001*, chapter 26 of the Statutes of Canada, 2001, comes into force.**

SCHEDULE 1  
(Paragraphs 17(1)(a) and 18(a))

CONDITIONS OF ASSIGNMENT

INTERPRETATION

1. The following definitions apply in this Schedule.

"breadth" means the maximum breadth of a vessel, measured amidships to

(a) in a vessel with metal shell plating, the moulded line of the frame; or

(b) in any other case, the outer surface of the shell plating. (*largeur*)

"efficiently constructed" means designed, constructed and maintained in accordance with the requirements of a classification society. (*de construction efficace*)

"enclosed superstructure" means a superstructure that is efficiently constructed and weathertight. (*superstructure fermée*)

"forward perpendicular" means the perpendicular taken at the forward end of the length of a vessel and coinciding with the fore side of the stem on the waterline on which the length is measured. (*perpendiculaire avant*)

"height of the superstructure" means the least vertical height measured at the side from the top of the superstructure deck beams to the top of the freeboard deck beams. (*hauteur de la superstructure*)

"Position 1" means a position exposed to weather and sea on

(a) the freeboard deck or a raised quarter-deck;

(b) a superstructure deck or a trunk deck forward of a point one-quarter of the vessel's length from the forward perpendicular; or

(c) a trunk deck that is less than standard height above the freeboard deck.  
(*emplacement de la catégorie 1*)

"Position 2" means a position exposed to weather and sea on

(a) a superstructure deck aft of a point one-quarter of the vessel's length from the forward perpendicular; or

(b) a trunk deck whose height is equal to or greater than standard height above the freeboard deck and aft of a point one-quarter of the vessel's length from the forward perpendicular. (*emplacement de la catégorie 2*)

"standard height" or "Hs" means  $1.80 \text{ m} + L/300$ . (*hauteur normale ou Hs*)

"standard sheer" means standard sheer as determined in accordance with regulation 38(8) of Annex I to the 1966 Convention. (*tonture normale*)

"Type A vessel" means a vessel in which

(a) no cargo ports or similar shell openings are below the freeboard deck;

(b) there are only small main deck openings fitted with efficiently constructed watertight hatchway covers;

(c) no dimension of a main deck cargo opening is greater than 1.9 m and the total area of each main deck cargo opening does not exceed  $1.7 \text{ m}^2$ ; and

(d) there are no more than two main deck cargo openings to a single cargo space.  
(*bâtiment du type A*)

"Type B vessel" means a vessel that is not a Type A vessel. (*bâtiment du type B*)

"weathertight" means designed to prevent water from penetrating a vessel in any sea condition. (*étanche aux intempéries*)

## STABILITY AND OTHER INFORMATION

**2.** A vessel that carries bulk or liquid cargo shall carry the information required by regulation 7.2 of Chapter VI of the International Convention for the Safety of Life at Sea, 1974 and the Protocol of 1988 relating to that Convention, as amended from time to time.

## ACCESS OPENINGS

**3.** Access openings in bulkheads at the ends of enclosed superstructures shall

(a) be fitted with efficiently constructed weathertight doors that are permanently attached to the bulkhead so that the whole structure is at least equivalent in strength to a bulkhead with no openings;

(b) have means for securing the doors weathertight that are permanently attached to the bulkhead or the doors and are operable from both sides of the bulkhead; and

(c) have sills at least 300 mm above the deck.

## HATCHWAYS

4. (1) Hatchways shall have efficiently constructed coamings

(a) at least 460 mm above the deck, in the case of coamings in Position 1; or

(b) at least 300 mm above the deck, in the case of coamings in Position 2.

(2) Subsection (1) does not apply if the hatchway is fitted with a watertight cover.

(3) Except for open-hopper dredges, hatchways in Position 1 or Position 2 shall be fitted with efficiently constructed weathertight hatchway covers.

(4) If weathertight covers on hatchways are made of mild steel, the maximum allowable stress shall be calculated using the following loads:

(a) in the case of vessels that are 110 m in length or over, a load not less than 12 kPa on hatchways in Position 1 and not less than 9.6 kPa on hatchways in Position 2;

(b) in the case of vessels that are 24 m in length, a load not less than 9.6 kPa on hatchways in Position 1 and not less than 7.2 kPa on hatchways in Position 2; and

(c) in the case of vessels of intermediate length, a load obtained by interpolation from the loads referred to in paragraphs (a) and (b).

(5) The maximum allowable stress calculated for the loads in subsection (4) shall not exceed the minimum ultimate strength of the material using a safety factor of 4.25.

(6) Hatchway covers in Position 1 or Position 2 shall be so designed as to limit deflection to not more than 0.0028 times the span under the loads referred to in subsection (4). Mild steel plating that forms the tops of the covers shall not be thinner than one per cent of the spacing between stiffeners or 6 mm, whichever is greater.

(7) Coamings and hatchway covers of exposed hatchways on decks above the superstructure deck shall be efficiently constructed.

(8) The strength and stiffness of hatchway covers made of materials other than mild steel

shall be at least equivalent to those of mild steel.

(9) The means for securing and maintaining the weathertightness of hatchway covers shall be such that the weathertightness can be maintained in any sea conditions.

#### CARGO PORTS AND OTHER SIMILAR OPENINGS

**5.** (1) Cargo ports and other similar openings in the shell of a vessel below the freeboard deck shall be fitted with watertight doors that are as strong as the structure to which they are attached.

(2) Cargo ports and other similar openings above the freeboard deck shall be fitted with weathertight doors that are as strong as the structure to which they are attached.

(3) The lower edges of cargo ports and other similar openings shall not be below a line drawn parallel to the freeboard deck at side that has the upper edge of the uppermost load line at its lowest point.

#### MACHINERY SPACE OPENINGS

**6.** (1) Machinery space openings in Position 1 or Position 2 shall be enclosed by efficiently constructed steel casings.

(2) Access openings in the casings required by subsection (1) shall

(a) be fitted with efficiently constructed weathertight covers that are permanently attached and operable from both sides of the opening and have their lower edge at least 300 mm above the deck;

(b) if the opening is a doorway, meet the requirements set out in section 3; or

(c) if the opening is a funnel or machinery space ventilator that needs to be kept open for the essential operation of the vessel, be fitted with a coaming at a height above the deck of at least

(i) 3.8 m in Position 1, or

(ii) 1.8 m in Position 2.

#### AIR PIPES

**7.** (1) If air pipes to tanks extend above the freeboard deck or superstructure decks, the exposed parts of the pipes shall be efficiently constructed and the height from the deck to the point on the pipe where water may downflood shall be at least 760 mm on the freeboard deck, 600 mm on raised quarter-decks and 300 mm on other superstructure decks.

(2) Air pipes shall be fitted with permanently attached means of closing.

## VENTILATORS

- 8.** (1) Ventilators and their coamings in Position 1 or Position 2 serving spaces below freeboard decks, decks of enclosed superstructures or trunk decks shall be efficiently constructed.
- (2) The height of ventilator coamings shall be at least 760 mm above the deck in Position 1 and at least 600 mm above the deck in Position 2.
- (3) Ventilator openings shall have permanently attached weathertight means of closing.
- (4) Subsection (3) does not apply in respect of ventilators in Position 1 with coamings that extend 3.8 m or more above the deck or to ventilators in Position 2 with coamings that extend 1.8 m or more above the deck.

## SIDE SCUTTLES

- 9.** (1) Side scuttles to spaces below the freeboard deck or to spaces within enclosed superstructures shall be fitted with hinged inside deadlights so that they can be closed watertight.
- (2) The sill of each side scuttle shall be above a line that is drawn parallel to the freeboard deck at side and has its lowest point 2.5 % of the breadth above the summer fresh water load line or 500 mm above that line, whichever is the greater distance.
- (3) The side scuttles and deadlights shall be efficiently constructed.

## MISCELLANEOUS OPENINGS IN FREEBOARD, SUPERSTRUCTURE AND TRUNK DECKS

- 10.** (1) Manholes and flush scuttles in Position 1 or Position 2 or within a superstructure other than an enclosed superstructure shall have watertight covers.
- (2) Openings in freeboard decks other than hatchways, machinery space openings, manholes and flush scuttles shall be protected by
- (a) an enclosed superstructure; or
- (b) an efficiently constructed and weathertight deckhouse or companionway.
- (3) Openings in an exposed part of a superstructure deck or in the top of a deckhouse on the freeboard deck that give access to a space below the freeboard deck or within an enclosed superstructure shall be protected in accordance with subsection (2).

## FREEING PORTS

- 11.** (1) This section applies in respect of wells that could collect water and are formed by bulwarks on the weather parts of the freeboard deck or superstructure decks.
- (2) If the sheer in way of the well is standard sheer or greater than standard sheer, drainage shall be provided by way of freeing ports with an area on each side of the vessel of at least
- (a) "A" for each well on the freeboard deck or on the raised quarter-deck; and
- (b) one-half of "A" for each well on superstructure decks other than raised quarter-decks.
- (3) The value of "A" is calculated in square metres as follows:
- (a) if the length of the bulwark in way of the well is 20 m or less, 0.7 plus 0.035 times the length of that bulwark; and
- (b) in any other case, 0.07 times the lesser of
- (i) the length of the bulwark in way of the well, and
- (ii) 70 per cent of the length of the vessel.
- (4) The freeing port area required by subsection (2) shall be increased by 0.04 m<sup>2</sup> per metre of length of the well for each metre that the height of the bulwark exceeds
- (a) 600 mm, in the case of vessels that are 73 m in length or less;
- (b) 1 200 mm, in the case of vessels that are 146 m in length or more; and
- (c) in the case of vessels that are of intermediate length, the height obtained by linear interpolation between the heights set out in paragraphs (a) and (b).
- (5) In the case of vessels greater than 146 m in length with an average height of bulwark of less than 900 mm, the freeing port area required by subsections (2) and (4) shall be decreased by 0.04 m<sup>2</sup> per metre of length of well for each metre by which the average height of the bulwark is less than 900 mm.
- (6) The freeing port area required by subsections (2), (4) and (5) shall be increased by
- (a) in the case of vessels with no sheer, 50 per cent;
- (b) in the case of vessels with standard sheer, zero per cent; and
- (c) in the case of vessels with less than standard sheer, the percentage obtained by linear interpolation between the percentages set out in paragraphs (a) and (b).
- (7) If a vessel does not have guardrails in way of a trunk on an exposed part of the

freeboard deck or has continuous hatchway side coamings between detached superstructures, the freeing port area shall be at least

(a) 20 per cent of the total area of the bulwarks if the breadth of the trunk or hatchways is 40 per cent or less of the breadth of the vessel;

(b) 10 per cent of the total area of the bulwarks if the breadth of the trunk or hatchways is 75 per cent or more of the breadth of the vessel; and

(c) the percentage of the total area of the bulwarks obtained by linear interpolation between the percentages set out in paragraphs (a) and (b) if the breadth of the trunk or hatchways is more than 40 per cent but less than 75 per cent of the breadth of the vessel.

(8) In superstructures that are open at either or both ends, the minimum freeing port area in way of wells shall be determined in accordance with the recommendation set out in interpretation LL. 60 of the Unified interpretations of the provisions of the International Convention on Load Lines, 1966.

(9) The lower edges of the freeing ports shall be as near the deck as practicable.

(10) Two thirds of the required freeing port area for each well shall be located in the half of the well nearest the lowest point of the sheer curve.

(11) Shutters that are fitted to freeing ports shall have

(a) ample clearance to prevent jamming; and

(b) hinges that have pins or bearings of material that is resistant to corrosion.

#### SCUPPERS, DRAINS, INLETS AND DISCHARGES

**12.** (1) Every discharge pipe passing through the shell from spaces below the freeboard deck shall have

(a) an automatic non-return valve fitted at the shell with a positive means of closing that is operable

(i) from above the freeboard deck, or

(ii) from a readily accessible location if the discharge originates in a space that is crewed or equipped with a means of continuously monitoring the level of bilge water; or

(b) two automatic non-return valves, one of which is fitted at the shell and one inboard that is accessible for examination when the vessel is in service.

(2) Every discharge pipe that passes through the shell from within an enclosed superstructure, or from within a deckhouse or companionway required by subsection

10(2), shall

(a) meet the requirements set out in paragraph (1)(a) or (b); or

(b) have an automatic non-return valve fitted at the shell, if the discharge originates in a space that is regularly visited by the crew.

(3) Every scupper, drain or discharge pipe that passes through the shell above the summer fresh water load line at a distance that is less than the greater of 5 per cent of the breadth and 600 mm shall have an automatic non-return valve fitted at the shell.

(4) Subsection (3) does not apply in respect of a scupper, drain or discharge pipe that originates above the freeboard deck if the part of the pipe that is between the shell and the freeboard deck is efficiently constructed.

(5) Every scupper pipe that leads from a superstructure other than an enclosed superstructure, a deckhouse or a companionway required by subsection 10(2) shall drain overboard.

(6) In crewed machinery spaces, every main and auxiliary sea inlet and discharge necessary for the operation of machinery shall have a valve with a positive means of closing that can be controlled locally.

(7) The valves required by this section to have positive means of closing shall have indicators at the operating position to show whether the valve is open or closed.

(8) The pipes to which this section refers shall be efficiently constructed.

(9) The shell fittings and the valves required by this section shall be efficiently constructed.

#### PROTECTION OF THE CREW

**13.** (1) The deckhouses used for the accommodation of the crew shall be efficiently constructed.

(2) All exposed parts of the freeboard and superstructure decks shall be fitted with guardrails or bulwarks that are at least 900 mm in height.

(3) Guardrails shall be fitted

(a) in at least three courses in which the space between the lowest course and the deck does not exceed 230 mm and the other courses are not spaced more than 380 mm apart; or

(b) if the sheer strake projects at least 200 mm above the deck, in at least two courses in which the space between the lower course and the sheer strake or the upper course does not exceed 380 mm.

(4) Guardrail supports shall be placed on the flat of the deck on vessels with rounded gunwales.

(5) Vessels shall have lifelines, gangways or underdeck passages for the protection of the crew while passing to and from their accommodation spaces, the machinery space and all other spaces used in the normal operation of the vessel.

(6) Whenever bulkhead openings are closed, other access shall be provided for the crew to reach accommodation spaces or machinery or other working spaces in enclosed superstructures that are bridges or poops.

(7) If an exposed part of a freeboard deck is in way of a trunk, guardrails that meet the requirements of subsection (3) shall be fitted for one-half the length of the exposed part.

#### SPECIAL CONDITIONS OF ASSIGNMENT FOR TYPE A VESSELS

**14.** Type A vessels shall meet the following requirements:

(a) machinery casings shall have bulkheads with no openings on all sides on the freeboard deck unless

(i) the casings are protected by an enclosed poop or bridge or efficiently constructed deckhouse of at least standard height, or

(ii) the openings meet the requirements set out in section 3 and lead to a space or passageway that is as strong as the casing and from which a second interior access opening that meets the requirements set out in section 3 is provided for access to the engine room;

(b) unless there is fore and aft access below the freeboard deck, a permanent fore and aft gangway shall be fitted at the superstructure deck level between the poop and all other deckhouses used in the normal operation of the vessel;

(c) hatchways on the exposed freeboard or forecastle deck shall have efficiently constructed watertight covers;

(d) vessels shall have guardrails fitted for at least half the length of the exposed parts of the weather deck; and

(e) if superstructures are connected by trunks, guardrails shall be fitted for the whole length of the exposed parts of the freeboard deck.

#### SCHEDULE 2 (Subparagraph 17(1)(c)(i))

#### DETERMINATION OF FREEBOARDS

## INTERPRETATION

1. (1) The following definitions apply in this Schedule.

"after perpendicular" means the perpendicular taken at the after end of the length of a vessel. (*perpendiculaire arrière*)

"depth for freeboard" or "D" means the distance equal to the moulded depth amidships plus the thickness of the stringer plate, with no allowance for sheathing. However, in the case of a vessel that does not have right-angled gunwales or that has rounded gunwales with a radius greater than four per cent of the breadth, that distance shall be adjusted so that the area of the topside section is equal to that of a vessel with right-angled gunwales and with the same round of beam. (*creux de franc-bord ou D*)

"effective length" or "E" means,

(a) in respect of an enclosed superstructure that is not a raised quarter-deck,

(i) if it has a height of  $H_s$  or more, the length of the superstructure, or

(ii) if it has a height of less than  $H_s$ , the length of the superstructure times the quotient of the height of the superstructure divided by  $H_s$ ;

(b) in respect of an enclosed superstructure that is a raised quarter-deck, the lesser of 0.6 L and

(i) if it has a height of  $2/3 H_s$  or more, the length of the superstructure, or

(ii) if it has a height of less than  $2/3 H_s$ , the length of the superstructure times the quotient of the height of the superstructure divided by  $H_s$ ; and

(c) in respect of a trunk,

(i) if it has a height of  $H_s$  or more, the length of the trunk times the quotient of the mean breadth of the trunk divided by the breadth, or

(ii) if it has a height of less than  $H_s$ , the length of the trunk times the quotient of the mean breadth of the trunk divided by the breadth times the quotient of the height of trunk divided by  $H_s$ . (*longueur effective ou E*)

"length of the superstructure" or "S", in respect of a superstructure of a vessel, means the length of the part of the superstructure that is between the forward perpendicular and the after perpendicular of the vessel. (*longueur de la superstructure ou S*)

"summer draught" means the distance measured from the top of the keel of a vessel to the upper edge of the load line that would mark the vessel's summer freeboard referred to in subsection 8(1). (*tirant d'eau d'été*)

"trunk" means an efficiently constructed structure that is on a freeboard deck of a vessel and has a breadth of less than 92 per cent of the breadth of the vessel. (*trunk*)

(2) For the purposes of this Schedule, all length and height measurements shall be in metres and taken to three decimal places.

(3) Words and expressions used in this Schedule and defined in section 1 of Schedule 1 have the same meaning as in that section.

## BASIC FREEBOARD CALCULATION

2. (1) The basic freeboard in millimetres shall be

(a)  $850 \times p_1 \times D$ , in the case of a Type A vessel; and

(b)  $1000 \times p_1 \times D$ , in the case of a Type B vessel.

(2) In subsection (1),  $p_1$  is equal to  $p + (L/D - L/D_s) \times A$  for vessels that are 122 m or less in length and equal to  $p$  for vessels that are more than 122 m in length where

$p$  is the value set out in column 2 of an item of Table 1 to this section for a length set out in column 1 or determined for a length that is intermediate to two lengths set out in column 1 of consecutive items to Table 1 by linear interpolation between those lengths;

$L/D$  is the ratio of length to depth for freeboard except that it shall not be more than

(a) 15 if  $L$  is 122 m or less;

(b) 21 if  $L$  is 214 m or more; or

(c) the ratio obtained for intermediate lengths by linear interpolation between the ratios set out in paragraphs (a) and (b);

$L/D_s$  is the value set out in column 2 of an item of Table 2 to this section for a length set out in column 1 or determined for a length that is intermediate to two lengths set out in column 2 of consecutive items to Table 2 by linear interpolation between those lengths; and

$A$  is the value set out in column 2 of an item of Table 3 to this section for a length set out in column 1 or determined for a length that is intermediate to two lengths set out in column 2 of consecutive items to Table 3 by linear interpolation between those lengths.

## TABLE 1

Item	Column 1 Length of Vessel (metres)	Column 2 Value of "p"
1.	24	0.10957
2.	26	0.11191
3.	28	0.11426
4.	30	0.11661
5.	32	0.11898
6.	34	0.12136
7.	36	0.12375
8.	38	0.12615
9.	40	0.12856
10.	42	0.13098
11.	44	0.13341
12.	46	0.13585
13.	48	0.13831
14.	50	0.14077
15.	52	0.14324
16.	54	0.14573
17.	56	0.14822
18.	58	0.15072
19.	60	0.15324
20.	62	0.15576
21.	64	0.15830
22.	66	0.16085
23.	68	0.16340
24.	70	0.16597
25.	72	0.16854
26.	74	0.17113
27.	76	0.17373
28.	78	0.17633
29.	80	0.17895
30.	82	0.18158
31.	84	0.18421
32.	86	0.18686
33.	88	0.18952
34.	90	0.19219
35.	92	0.19486

36.	94	0.19755
37.	96	0.20025
38.	98	0.20295
39.	100	0.20567
40.	102	0.20840
41.	104	0.21113
42.	106	0.21388
43.	108	0.21664
44.	110	0.21940
45.	112	0.22218
46.	114	0.22496
47.	116	0.22776
48.	118	0.23056
49.	120	0.23338
50.	122	0.23620
51.	124	0.23876
52.	126	0.24125
53.	128	0.24367
54.	130	0.24601
55.	132	0.24827
56.	134	0.25045
57.	136	0.25255
58.	138	0.25457
59.	140	0.25650
60.	142	0.25836
61.	144	0.26014
62.	146	0.26184
63.	148	0.26346
64.	150	0.26500
65.	152	0.26646
66.	154	0.26783
67.	156	0.26913
68.	158	0.27035
69.	160	0.27149
70.	162	0.27255
71.	164	0.27353
72.	166	0.27443

73.	168	0.27524
74.	170	0.27598
75.	172	0.27664
76.	174	0.27722
77.	176	0.27772
78.	178	0.27814
79.	180	0.27848
80.	182	0.27874
81.	184	0.27891
82.	186	0.27901
83.	188	0.27903
84.	190	0.27899
85.	192	0.27886
86.	194	0.27865
87.	196	0.27835
88.	198	0.27797
89.	200	0.27750
90.	202	0.27694
91.	204	0.27683
92.	206	0.27634
93.	208	0.27578
94.	210	0.27517
95.	212	0.27450
96.	214	0.27377
97.	216	0.27299
98.	218	0.27214
99.	220	0.27124
100.	222	0.27028
101.	224	0.26926
102.	226	0.26818
103.	228	0.26704
104.	230	0.26585
105.	232	0.26459
106.	234	0.26328
107.	236	0.26191
108.	238	0.26049
109.	240	0.25900

110.	242	0.25746
111.	244	0.25585
112.	246	0.25402
113.	248	0.25218
114.	250	0.25034
115.	252	0.24850
116.	254	0.24667
117.	256	0.24483
118.	258	0.24299
119.	260	0.24115
120.	262	0.23932
121.	264	0.23748
122.	266	0.23564
123.	268	0.23381
124.	270	0.23197
125.	272	0.23013
126.	274	0.22829
127.	276	0.22646
128.	278	0.22462
129.	280	0.22278
130.	282	0.22094
131.	284	0.21911
132.	286	0.21727
133.	288	0.21543
134.	290	0.21360
135.	292	0.21176
136.	294	0.20992
137.	296	0.20808
138.	298	0.20625
139.	300	0.20441
140.	302	0.20257
141.	304	0.20073
142.	306	0.19890

TABLE 2

Item	Column 1 Length of Vessel (metres)	Column 2 Value of "L/D <sub>s</sub> "
1.	24	6.46654
2.	26	6.64083
3.	28	6.81513
4.	30	6.98942
5.	32	7.16372
6.	34	7.33801
7.	36	7.51231
8.	38	7.68660
9.	40	7.86089
10.	42	8.03519
11.	44	8.20948
12.	46	8.38378
13.	48	8.55807
14.	50	8.73237
15.	52	8.90666
16.	54	9.08096
17.	56	9.25525
18.	58	9.42955
19.	60	9.60384
20.	62	9.77814
21.	64	9.95243
22.	66	10.12672
23.	68	10.30102
24.	70	10.47531
25.	72	10.64961
26.	74	10.82390
27.	76	10.99820
28.	78	11.17249
29.	80	11.34679
30.	82	11.52108
31.	84	11.69538
32.	86	11.86967
33.	88	12.04397
34.	90	12.21826
35.	92	12.39255

36.	94	12.56685
37.	96	12.74114
38.	98	12.91544
39.	100	13.08973
40.	102	13.26403
41.	104	13.43832
42.	106	13.61262
43.	108	13.78691

TABLE 3

Item	Column 1 Length of Vessel (metres)	Column 2 Value of "A"
1.	24	0.008714
2.	26	0.008330
3.	28	0.007954
4.	30	0.007587
5.	32	0.007228
6.	34	0.006878
7.	36	0.006537
8.	38	0.006204
9.	40	0.005880
10.	42	0.005564
11.	44	0.005257
12.	46	0.004959
13.	48	0.004669
14.	50	0.004388
15.	52	0.004115
16.	54	0.003851
17.	56	0.003596
18.	58	0.003349
19.	60	0.003111
20.	62	0.002882
21.	64	0.002661
22.	66	0.002449
23.	68	0.002245
24.	70	0.002050

25.	72	0.001863
26.	74	0.001686
27.	76	0.001516
28.	78	0.001356
29.	80	0.001204
30.	82	0.001060
31.	84	0.000926
32.	86	0.000800
33.	88	0.000682
34.	90	0.000573
35.	92	0.000473
36.	94	0.000381
37.	96	0.000298
38.	98	0.000223
39.	100	0.000158
40.	102	0.000100
41.	104	0.000052
42.	106	0.000012
43.	108	0.000000

#### CORRECTION FOR TYPE B VESSELS

**3.** The basic freeboard for a Type B vessel that is less than 153 m in length and has enclosed superstructures with an effective length of not more than a quarter of the length of the vessel shall be increased by b millimetres where

$$b = 2.5 \times (153 - L) \times (0.25 - E/L)$$

#### CORRECTION FOR SUPERSTRUCTURES AND TRUNKS

**4.** (1) If the sum of the effective lengths of the enclosed superstructures equals L, the basic freeboard shall be reduced by x millimetres where

$$x = (H_s \times 500)$$

(2) If the sum of the effective lengths of the enclosed superstructures and trunks in respect of which the requirements set out in subsection (3) are met is less than L, the basic freeboard shall be reduced by x millimetres where

$$x = (E/2 L) \times (1 + E/L) \times (H_s \times 500)$$

(3) The requirements referred to in subsection (2) are the following:

- (a) the trunk shall be at least as strong as an enclosed superstructure;
- (b) no hatchways shall be in the freeboard deck in way of the trunk other than small access openings with watertight covers;
- (c) the trunk deck shall be a permanent working platform fitted with guardrails;
- (d) if the trunk is detached, it shall be connected to the adjacent superstructures by permanent gangways;
- (e) guardrails shall be fitted in way of the trunk on the weather parts of the freeboard deck for at least half the length of exposed parts of the trunk;
- (f) the trunk shall have a breadth at least 60 per cent of the breadth of the vessel; and
- (g) if there is no superstructure on the vessel, the length of the trunk shall be at least 60 per cent of its length.

#### CORRECTION FOR SHEER

5. Correction in the basic freeboard for sheer shall be determined in accordance with regulation 38 of the 1966 Convention. However, for the purpose of the determination, L shall be the lesser of the length of the vessel and 153 m.

#### CORRECTION FOR BOW HEIGHT

6. (1) The following definitions apply in this section.

"assumed bow height", in respect of a vessel, means the vertical distance at the forward perpendicular between

(a) the top of the exposed deck at side; and

(b) the water line that corresponds to the basic freeboard, as corrected in accordance with sections 3 to 6, where applicable, including any designed trim. (*hauteur d'étrave présumée*)

"standard bow height" means

(a)  $49.417 L \times (1 - L/500)$  mm for a vessel of less than 168 m in length; or

(b)  $8677 - 18.917 L$  mm for a vessel of 168 m or more in length. (*hauteur d'étrave normale*)

(2) Subject to subsections (3) and (4), if the assumed bow height is less than the standard bow height, the basic freeboard shall be increased by the difference.

(3) For the purpose of the definition "assumed bow height", the top of the exposed deck at side is deemed not to include sheer or the height of a superstructure unless

(a) in the case of sheer, it extends for at least 15 per cent of the length of the vessel measured from the forward perpendicular; and

(b) in the case of the height of a superstructure, the superstructure is enclosed and extends from the stem to a point at least 0.06 L abaft the forward perpendicular.

#### CORRECTION FOR DECK LINE

**7.** (1) If the position of the upper edge of the deck line is placed in accordance with paragraph 2(b) of Schedule 3 above the position established by paragraph 2(a) of that Schedule, the basic freeboard shall be increased by the difference between those positions.

(2) If the position of the upper edge of the deck line is placed in accordance with paragraph 2(b) of Schedule 3 below the position established by paragraph 2(a) of that Schedule, the basic freeboard shall be decreased by the difference between those positions.

#### FRESH WATER FREEBOARDS

**8.** (1) The summer freeboard that is applicable during the summer season in fresh water shall be the freeboard determined in accordance with sections 2 to 7.

(2) The midsummer freeboard that is applicable during the midsummer season in fresh water shall be determined by deducting  $y$  millimetres from the summer freeboard where  $y$  is equal to the summer draught in metres multiplied by 25.

(3) The intermediate freeboard that is applicable during the intermediate season in fresh water shall be determined by adding  $y$  millimetres to the summer freeboard where  $y$  is equal to the summer draught in metres multiplied by the quotient of 2540 divided by the greater of 122 m and  $L$ .

(4) The winter freeboard that is applicable during the winter season in fresh water shall be determined by adding  $y$  millimetres to the summer freeboard where  $y$  is equal to the summer draught in metres multiplied by the quotient of 5080 divided by the greater of 122 m and  $L$ .

#### SALT WATER FREEBOARDS

**9.** (1) Salt water freeboards that are applicable to vessels that operate in salt water shall be determined by adding  $y$  millimetres to the corresponding fresh water freeboards where  $y$  is equal to the displacement in fresh water in tonnes at the summer load waterline divided by the product of 4.1 times the tonnes per centimetre immersion in fresh water at the summer load waterline.

(2) If the displacement in fresh water in tonnes at the summer load waterline cannot be determined, one forty-eighth of the summer draught shall be added to the corresponding fresh water freeboards.

#### MINIMUM FREEBOARD

**10.** Despite sections 8 and 9, the freeboard other than the open-hopper dredge freeboard shall not be less than 50 mm.

#### OPEN-HOPPER DREDGES

**11.** (1) The dredging freeboard for open-hopper dredges shall be 62.5 per cent of the summer freeboard for a type B vessel or 150 mm, whichever is greater.

(2) The dredging freeboard for an open-hopper dredge is applicable only when

(a) the dredge is operating not more than 20 nautical miles from the mouth of a harbour of safe refuge;

(b) the height of waves in the area of operation is not more than 3 m or the wind velocity in the area is not more than 65 km per hour; and

(c) the dredge is carrying dredged material with a specific gravity that is not greater than the highest specific gravity of dredged material that the dredge is designed to dredge.

#### SCHEDULE 3 (Paragraph 17(1)(d))

#### LOAD LINE MARKS

#### INTERPRETATION

**1.** Words and expressions used in this Schedule and defined in section 1 of Schedule 1 have the same meaning as in that section.

#### DECK LINE

**2.** The upper edge of the deck line shall

(a) pass through the point where the continuation outwards of the upper surface of the freeboard deck intersects the outer surface of the shell, as illustrated in Figure 1; or

(b) be placed above or below the position established in paragraph (a).

#### LOAD LINE DIAMOND

**3.** (1) A right-angled diamond as illustrated in Figure 2 shall be marked amidships below

the deck line on each side of the vessel.

(2) The diamond shall be

(a) marked with lines 25 mm wide with an outside diagonal measurement of 380 mm;

(b) intersected by a horizontal line that is 540 mm long and 25 mm wide and that has the midpoint of its upper edge coinciding with the midpoint of the diamond; and

(c) placed so that its centre is at a distance below the upper edge of the deck line equal to the summer freeboard referred to in subsection 8(1) of Schedule 2.

## LOAD LINES

4. (1) Horizontal lines, to be known as fresh water load lines, indicating the assigned fresh water freeboards, shall be marked as illustrated in Figure 2. Each line shall be 230 mm long and 25 mm wide and extend forward of and at right angles to a vertical line that is 25 mm wide.

(2) The vertical line referred to in subsection (1) shall be placed 660 mm forward of the vertical diagonal of the load line diamond.

(3) The midsummer fresh water load line shall be placed so that its upper edge marks the assigned midsummer fresh water freeboard and the letters "MS" shall be marked forward of this line.

(4) The summer fresh water load line shall be placed so that its upper edge marks the assigned summer fresh water freeboard and the letter "S" shall be marked forward of this line.

(5) The intermediate fresh water load line shall be placed so that its upper edge marks the assigned intermediate fresh water freeboard and the letter "I" shall be marked forward of this line.

(6) The winter fresh water load line shall be placed so that its upper edge marks the assigned winter fresh water freeboard and the letter "W" shall be marked forward of this line.

(7) If an open-hopper dredge has been assigned a dredging freeboard, the dredging fresh water load line shall be placed directly below the deck line so that its upper edge marks the assigned dredging fresh water freeboard and the letters "WD" shall be marked forward of this line.

(8) If a vessel has been assigned salt water freeboards, salt water load lines shall be marked as illustrated in Figure 2. Each line shall be 230 mm long and 25 mm wide, extend abaft the vertical line, be placed so that its upper edges mark the appropriate assigned salt water freeboards and be marked with letters in the same fashion as for the fresh water load lines but placed abaft the salt water load lines.

(9) If salt water load lines are marked, the letters "SW" shall be marked above these lines and the letters "FW" shall be marked above the fresh water load lines.

DETAILS OF MARKING

5. All load line marks shall be permanently marked on both sides of the vessel in white or yellow on a dark background or in black on a light background.

Figure 1

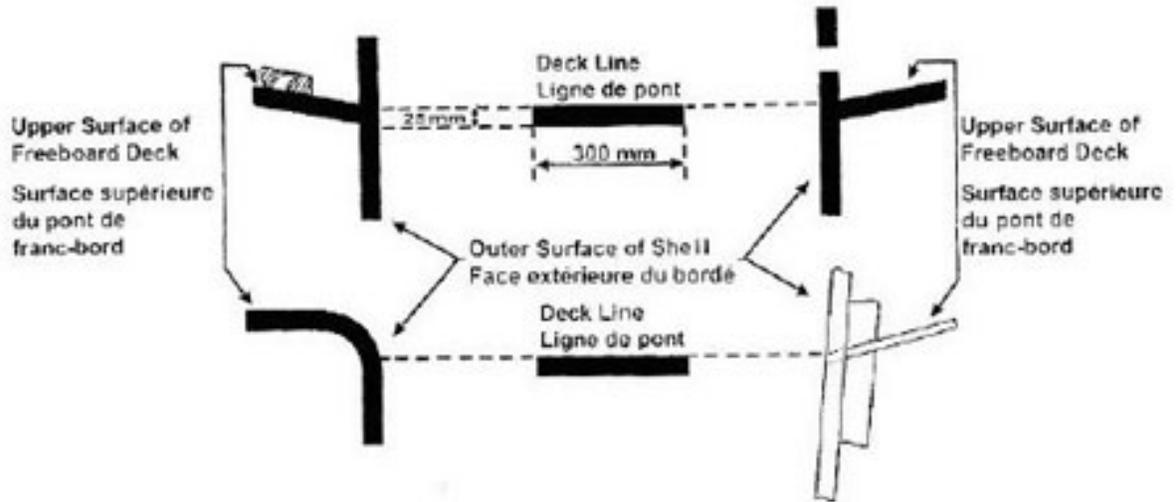
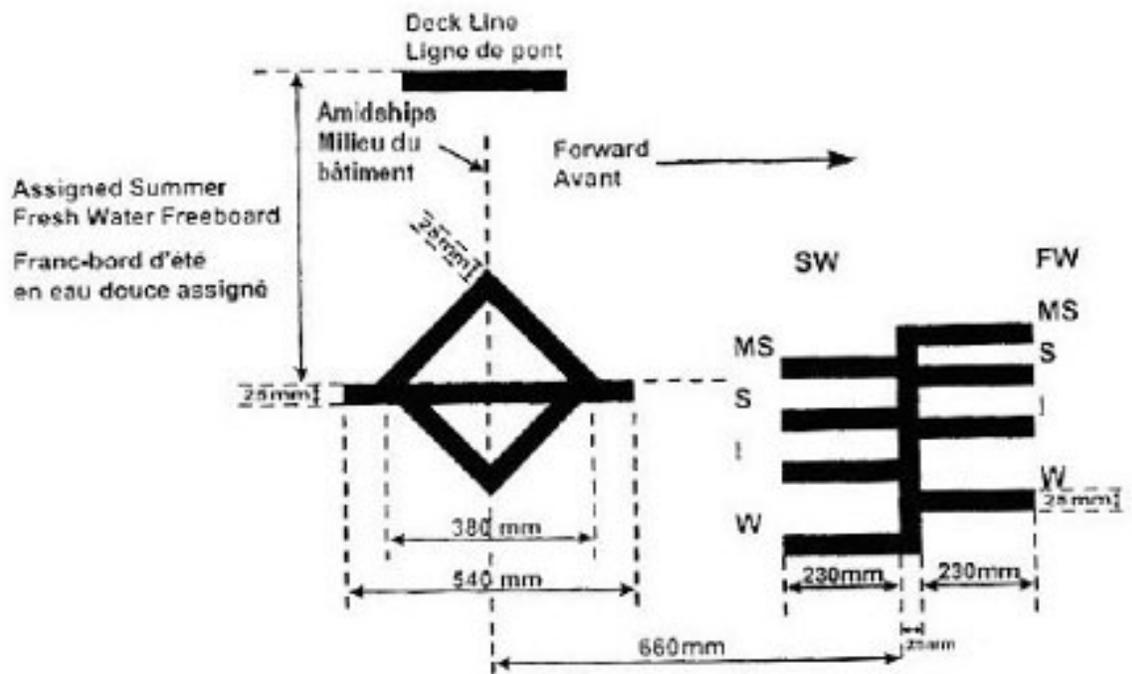


Figure 2



[Footnote a](#)

S.C. 2001, c. 26

[Footnote 1](#)

C.R.C., c. 1425

[Footnote 2](#)

C.R.C., c. 1440

[Footnote 3](#)

C.R.C., c. 1441

[Footnote 4](#)

C.R.C., c. 1442

**NOTICE:**

The format of the electronic version of this issue of the *Canada Gazette* was modified in order to be compatible with hypertext language (HTML). Its content is very similar except for the footnotes, the symbols and the tables.

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