

**AGREEMENT No. 292
(of May 26, 2016)**

“Whereby the Regulation for the Admeasurement of
Vessels and the Panama Canal Tolls System is Approved”

**THE BOARD OF DIRECTORS OF THE
PANAMA CANAL AUTHORITY**

WHEREAS:

Article 18 of Law No. 19 of June 11, 1997, whereby the Panama Canal Authority is organized (the Authority), states that the Board of Directors is responsible for approving the regulations applicable to the admeasurement and inspection of vessels, Canal navigation, marine traffic control, vessel pilotage, and other matters relative to Canal navigation.

Pursuant to this Authority, the Board of Directors approved the Regulation for the Admeasurement of Vessels to Assess Tolls for Use of the Panama Canal under Agreement No. 2 of September 3, 1998, amended and subrogated by Agreement No. 140 of June 21, 2007, and subsequently amended by Agreement No. 182 of March 23, 2009.

After complying with the legal and regulatory requirements, the Board of Directors approved Agreement No. 279 on March 23, 2015, whereby the rules of admeasurement and tolls of the Panama Canal Authority are modified.

In that Agreement, the new regime required adjustments or modifications to the Regulation for the Admeasurement of Vessels to Assess Tolls for Use of the Panama Canal.

That because the proposed amendments entail a considerable number of changes to the existing Regulations, and for ease of reading, it is best to subrogate the current Regulation with a new one.

The Administrator has submitted for the consideration of the Board of Directors a draft agreement with the necessary amendments in order to subrogate Agreement No. 140 of June 21, 2007, subsequently amended by Agreement No. 182 of March 23, 2009 and to adopt a new regulation.

AGREES:

ARTICLE ONE: Agreement No. 140 of June 21, 2007 is subrogated and is subsequently amended by Agreement No. 182 of March 23, 2009 and a Regulation for the Admeasurement of Vessels and the Panama Canal Tolls System is approved as follows:

**THE REGULATIONS FOR THE ADMEASUREMENT OF VESSELS TO ASSESS
TOLLS FOR USE OF THE PANAMA CANAL
(Last modification: May 2016)**

**Chapter I
General Standards and Definitions**

Article 1: These regulations establish the procedures and rules for the admeasurement of vessels, to assess the tolls to be charged by the Panama Canal Authority for the use of the Panama Canal, pursuant to its Organic Law.

Article 2: The words, expressions and acronyms used in these regulations shall have the following definitions:

Appendix. Complementary rules for the determination of the Panama Canal Universal Measurement System (PC/UMS) Net Tonnage, which is an integral part of these regulations.

Dry bulk vessel. Vessel designed to carry dry bulk (such as grain, coal and iron ore).

Vessels with the Capacity to Carry Containers above the Deck. A vessel that is not classified as a full container vessel, but has the capacity to transport containers above the deck. The Authority shall determine whether a vessel belongs in this category, taking into account the information provided by the ship.

Warship. Ship belonging to the naval forces of a State bearing the distinctive exterior insigne of warships of its nationality, under the command of a duly commissioned officer by the government and registered in the Naval List, and operated by a crew on a regular naval discipline.

Passenger vessel. A vessel whose main activity is passenger transportation, which is subject to fixed routes and common knowledge. Normally this type of vessel offers accommodation for more than twelve (12) passengers. Those vessels have been designed exclusively for passenger transportation are eligible for the implementation of a toll per berth. Those passenger vessels, that in addition to passengers carry other cargo, remain under the current PC/UMS toll scheme.

Gas Carrier Vessel. Cargo vessel constructed or adapted and used for carrying any liquefied gas in bulk or other products listed in the table corresponding to the Chapter of the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk or the Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code). There are two types of gas carriers: the LPG, transporting liquefied petroleum gas and the LNG, which

transports liquefied natural gas.

Full Container Vessel. A vessel specifically designed or converted to transport containers above the deck and that has permanently affixed cellular guides in its holds. The Authority shall determine whether a vessel belongs in this category, taking into account the information provided by the client.

Vehicle Carrier. Ship with multiple decks designed to carry cars and trucks by means of ramps.

Chemical Tanker. Ship constructed or adapted for carrying in bulk any liquid product listed in the Chapter corresponding to the IBC Code or the BC Code, as applicable.

Ro-Ro Vessel. Vessel specially designed to carry wheeled cargo, such as trucks, trailers or rolling containers that are loaded and unloaded by means of rolled transshipment (roll on-roll off) with towing vehicles in several decks with connecting ramps or lifts.

Maximum Draft. Deepest point of immersion (in meters) allowed for the hull of a ship when fully loaded.

Cubic Meters of Cargo Carrying Capacity (m^3). A vessel's maximum carrying capacity in cubic meters.

Maximum Berth Capacity (PAX). Total berths for passenger use on a passenger vessel.

Passenger Ship Safety Certificate. Safety certificate issued to every passenger ship.

International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk or Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk. Certificate issued to all chemical tankers engaged in international voyages that complies with the relevant provisions of the International Bulk Chemical Code or the Bulk Chemical Code, as appropriate.

International Convention on Tonnage Measurement of Ships, 1969 (ITC 69). International Tonnage Certificate issued according to the International Convention on Tonnage Measurement of Ships, 1969.

Gas Carrier Code (IGC Code). The International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, which is generally applicable to ships built after December 31, 1976, but before July 1, 1986.

Bulk Chemical Code (BC Code). The Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, which applies to ships built after April 12, 1972,

inclusive, but before July 1, 1986.

International Gas Carrier Code (IGC Code). The International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, which is generally applicable to ships built after July 1, 1986.

International Bulk Chemical Code (IBC Code). The International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, which is generally applicable to ships built after July 1, 1986.

Deck. The uppermost complete deck exposed to weather and sea, which has permanent means of weathertight closing of all openings in the weather part thereof, and below which all openings in the sides of the vessel are fitted with permanent means of watertight closing.

In a stepped deck vessel, the deck will be taken as the lowest line of the deck exposed to weather and its extension parallel to the highest part of the deck.

Summer Displacement. Is defined as the vessel's total weight in metric tons when loaded to its summer draft consisting of the sum of light displacement plus summer deadweight tonnage.

Light Displacement. Is defined as the vessel's weight in metric tons as delivered by the shipyard; that is, excluding fuel, stores, supplies and crew.

Maximum Displacement. Is defined as the vessel's weight in metric tons on a fully loaded condition to its maximum allowable draft with stores, cargo, water, fuel, ammunition, the weight of officers, crew members, passengers and their belongings.

Enclosed Spaces. Those bounded by the vessel's hull, by fixed or portable partitions or bulkheads, by decks or coverings other than permanent or movable awnings. No break in a deck, nor any opening on the vessel's hull, in a deck or in a covering of a space, or in the partitions or bulkheads of a space, nor the absence of a partition or bulkhead, shall preclude a space from being included in the enclosed space.

Excluded Spaces. Notwithstanding the definition of enclosed spaces, the spaces referred to in Part C of Appendix, which are not included in the volume of the enclosed spaces. However, they shall be considered enclosed spaces when they meet any of the conditions stated in the first paragraph of the aforementioned Part.

Weathertight. Water does not penetrate in the vessel, regardless of the condition of the sea.

Watertight. Condition where the vessel is capable of preventing the passage of water through

the structure or closure in any direction under a waterspout for which the surrounding structure is designed.

Berth. Bed or sofa bed to be used by a passenger on a passenger vessel. A bed or sofa bed that accommodates two people counts as two berths.

Breadth or moulded breadth (MB). The maximum breadth of the vessel, measured amidships to the moulded line of the frame in a vessel with a metal shell and to the outer surface of the hull in a vessel with a shell of any other material.

Number of TEU Carried During a Transit (NTT). Is the product of combining the various sizes of containers carried in open spaces above the deck of vessels that are not full container vessels, but have the capacity to carry containers above the deck, maximizing the volumetric space, expressing such volume in TEU units according to the conversion table in Article 10. The Authority reserves the right to verify the NTT to ensure that this data complies with the degree of accuracy required by the Authority.

Passenger. Every person on board, other than the master, members of the crew or other persons employed or engaged in any capacity on board on the business of that vessel.

Complimentary passenger. Person traveling on board the ship, whose financial remuneration is not received or whose transport does not represent commercial benefits for the vessel. This definition does not apply to passenger ships.

Moulded Depth (D). The vertical distance measured from the top of the keel to the underside of the deck at side, with the variations described in Part A of Appendix of these regulations.

Universal Measurement System (UMS). The set of rules, measurements and calculations applicable for determining the gross and net tonnage, adopted in accordance with the 1969 International Convention on Tonnage Measurement of Vessels.

Panama Canal Universal Measurement System (PC/UMS). The system based on the Universal Measurement System, 1969, using its parameters for determining the total volume of a vessel with the additional variations established by the Authority.

TEU (20-foot Container). A unit of measurement or reference equivalent to a 20-foot container whose external length, width, and height measurements are 20, 8, and 8.5 feet, respectively. A TEU represents a volume equal to 1,360 cubic feet.

Number of TEU Carried During a Transit (NTT). Is the product of combining the various sizes of containers carried with cargo transported by full container ships, maximizing the

volumetric space, expressing such volume in TEU units according to the conversion table in Article 10. The Authority reserves the right to verify the NTT to ensure that this data complies with the degree of accuracy required by the Authority.

Total TEU Allowance. It is the total sum of the TEU allowance above deck and TEU allowance below deck.

TEU Allowance below Deck. The total container capacity in TEU that a full container vessel is able to carry in enclosed spaces, including those that may be transported in enclosed spaces above the deck. This capacity is determined by using the combination of the various sizes of the containers that maximize the volume of the space, expressing that volume in TEU units.

TEU Allowance above Deck. The total container capacity in TEU that a vessel is able to carry in open spaces above the deck, not including those containers that may be carried in enclosed spaces above said deck. This capacity is determined by using the combination of the various sizes of the containers that maximize the volume of the space, expressing that volume in TEU units, which shall be adjusted to a condition of visibility of a length, regardless of the visibility requirements established by the Authority.

Summer Deadweight Tonnage (DWT). Maximum load capacity of a ship in metric tons when fully submerged to its summer freeboard. It includes the weight of the cargo, fuel, lubricating oils, supplies, fresh water in tanks, passengers and baggage, crew members and their belongings.

Total volume (V). The enclosed space of the vessel, expressed in cubic meters.

Article 3: The following shall be subject to measurement:

1. The enclosed spaces below deck.
2. The enclosed spaces above deck
3. The maximum capacity of the vessel to carry containers below and above the deck
4. The maximum berth capacity
5. Cubic meters of cargo carrying capacity.
6. Summer deadweight tonnage
7. Maximum displacement.

Article 4: The Administrator of the Authority shall interpret and administer the rules of admeasurement established by these Regulations.

Chapter II

Determination of the Admeasurement of Vessels to Assess Tolls for Use

of the Panama Canal

First Section Requirements

Article 5: For the purpose of admeasurement, any vessel transiting the Canal shall present an ITC 69, or a substitute document deemed acceptable by the Authority, based on a system substantially similar to the one adopted by the aforementioned agreement. In addition, these same vessels shall provide plans, classification certificates and documents with information stating the Total Volume of the vessel, DWT, m³ and PAX or documentation to determine this volume through mathematical calculations.

Passenger vessels, in addition to the previously mentioned requirements, shall provide the Panama Canal Authority with a copy of the Passenger Ship Safety Certificate or a document accepted by the Authority where the maximum berth capacity is determined. In the event these documents do not meet the accuracy guidelines acceptable by the Authority, the alternate method of admeasurement set forth in this Regulations shall be followed.

The chemical tanker shall present, in addition, the International Certificate of Fitness for the Carriage of Dangerous Chemical in Bulk or the Certificate of Fitness for the Carriage of Dangerous Chemical in Bulk, as appropriate, to determine the type of chemical tanker (1, 2, 3 or the combination that may arise).

Vessels, that based on the overall length and Net PC/UMS tonnage pay fixed minimum tariffs, shall be exempted from presenting the documentation stated in this article.

Article 6: In addition to the requirements of the previous article, vessels with the capacity to carry containers shall provide plans, classification certificates, and documentation with sufficient information to determine TEU allowance below deck and TEU allowance above deck, as defined in Article 2 of this Regulation.

The information to which the preceding paragraph makes reference shall be obtained from the Cargo Securing Manual (CSM) and the General Arrangement Plan (GA), or any official document or plan which shall indicate the total number of containers and their measurements. In the event these documents do not meet the accuracy guidelines acceptable by the Authority, the alternate method of admeasurement set forth in this Regulation shall be followed.

All information referenced in this article and the preceding shall be submitted to the Authority when it is requested.

Article 7: Vessels that fail to provide the documentation required in the preceding articles, as well as those with documentation that does not comply with the precision required by the Authority, shall be subject to inspection by the Authority to determine its **V**, pursuant to the PC/UMS Net Tonnage, m³, DWT, PAX, or total TEU allowance, as set forth in this Regulation.

Article 8: The Authority shall establish **V** to calculate the PC/UMS Net Tonnage; further, the Authority shall establish the values of TEU allowance below deck and TEU allowance above deck, as may be applicable. For passenger vessels, the Authority shall establish the **V**, PAX and PC/UMS to PAX ratio. The Authority shall determine the DWT for dry bulk vessels; and m³ for gas carriers.

In calculating the PC/UMS Net Tonnage, TEU allowance below deck and TEU allowance above deck, PAX, DWT, m³ and maximum displacement, the Authority may request and use complementary vessel information. Notwithstanding the above, calculations may be adjusted based on inspections for the accuracy required by the Authority.

If the requested documentation is not provided or does not comply with the precision required by the Authority, the user shall accept the figures resulting from the calculation by the Authority, which, in its judgment, reflects its measurements, as may be applicable.

Second Section Admeasurement

Article 9: The tonnage of a vessel shall consist of the PC/UMS Net Tonnage, TEU allowance below deck and TEU allowance above deck, m³, DWT, PAX and the PC/UMS /PAX ratio, as may be applicable. These will be determined on the basis of the provisions set forth in this Regulation.

The tonnage of novel types of vessels whose construction features make application of the rules unreasonable or impossible shall be determined in a manner that is acceptable to the Authority.

Article 10: PC/UMS Net Tonnage of vessels, shall be calculated by the following formula:

$$\text{PC/UMS Net Tonnage} = K4(V) + K5(V)$$

For all vessels classified by the Authority as passenger vessels, passengers and their luggage shall be considered as cargo; therefore, all areas that have been identified and certified for use, or possible use by passengers, such as balconies, pools and walkways will be included in **V**. For this type of vessel, in the calculation of PC/UMS Net Tonnage, the

definition of “excluded spaces”, according to section 5 of Regulation 2 of the ITC 69, does not apply to such spaces.

For all vessels classified by the Authority as full container vessels, the admeasurement shall be based on the total TEU allowance, which shall be calculated by the following formula:

$$\text{Total TEU allowance} = \text{TEU allowance above deck} + \text{TEU allowance below deck}$$

To determine TEU allowance below deck, TEU allowance above deck, NTT and TTL as may be applicable, the following conversion table will be used.

SIZE	CALCULATION	EQUIVALENCE
20' x 8' x 8.5'	1360/1360	1.00 TEU
20' x 8' x 9.5'	1520/1360	1.12 TEU
40' x 8' x 8.5'	2720/1360	2.00 TEU
40' x 8' x 9.5'	3040/1360	2.24 TEU
45' x 8' x 9.5'	3420/1360	2.51 TEU
48' x 8' x 9.5'	3648/1360	2.68 TEU
54' x 8' x 9.5'	4104/1360	3.02 TEU

Any container whose size is not listed in the preceding table shall obtain its equivalence using the same method of calculation.

For a passenger vessel, toll collection will be applied based on PAX or PC/UMS Net Tonnage. The application of a toll is determined by two design parameters: (a) net tonnage as determined by the ITC 69 and (b) the PC/UMS to PAX ratio.

Vessels above 30,000 gross tons (ITC 69) and whose PC/UMS to PAX ratio is less than or equal to 33, shall pay tolls on a per berth basis. Passenger vessels not complying with these two criteria and those passenger vessels that in addition to the passengers transport other types of cargo, will continue to pay on the basis of PC/UMS tonnage.

For dry bulk vessels, tolls shall be charged using DWT according to what is shown in the capacity plan, deadweight scale, stability book, hydrostatic table or any other document acceptable to the Authority.

DWT will be calculated by the following expression:

$$\text{Summer Deadweight Tonnage (DWT)} = \text{Summer displacement} - \text{Light displacement}$$

For gas carriers, tolls shall be charged on the basis of m³, according to what is shown in the

capacity plan, deadweight scale, stability book, cargo securing manual, any other document acceptable to the Authority.

Article 11: Vessels whose PC/UMS Net Tonnage is determined in accordance with Article 10, may be subject to a new admeasurement if there is a change in the **V**.

Article 12: The full container vessel whose PC/UMS Net Tonnage allowance is determined in accordance with Article 10, shall maintain said total as long as they have not undergone a structural or documentation change affecting the total TEU allowance. In the event of a significant structural or documentation change affecting their carrying capacity, the total TEU allowance shall be determined in accordance with said article.

Vessels with the capacity to carry containers on or above the deck, whose TEU allowance above deck has been calculated as defined in this Regulation and which undergo structural or documentation changes affecting said TEU allowance above deck, shall be determined using the conversion table in Article 10.

Passenger vessels whose PAX was calculated pursuant to Article 10 shall maintain said capacity as long as they have not undergone a structural change or a change in the number of berths. In case there is a change in **V**, PAX and the PC/UMS to PAX ratio will be determined using the relation established in Article 10. In case there is a change in **V**, without affecting the amount of previously established berths, the change will be audited to determine whether or not it has affected the berth capacity.

Vessels whose DWT has been calculated pursuant to Article 10 shall maintain said total as long as they have not undergone structural, stability or hydrostatic property changes that affect the dead weight scale or the waterline.

Vessels whose m^3 has been calculated pursuant to Article 10 shall maintain said total as long as they have not undergone structural changes in the cargo tanks or in their hydrostatic properties that impact their capacity.

Article 13: All volumes included in the calculation of the PC/UMS Net Tonnage shall be measured, irrespective of the fitting of insulation or the like, to the inner side of the shell or structural boundary plating in vessels constructed of metal, and to the outer surface of the shell or to the inner side of structural boundary surfaces in vessels constructed of any other material.

The **V** shall include the volume of the appendages of the vessel and may exclude the spaces open to the sea.

Article 14: All measurements used in the calculation of volumes shall be taken to the nearest centimeter or to one-twentieth of a foot.

The volumes shall be calculated by generally accepted methods for the space concerned, and with the degree of accuracy accepted by the Authority, verifying the calculations in a detailed manner, so that their precision may be corroborated.

Chapter III

Alternative Method for the Admeasurement of Vessels

Article 15: When the ITC 69 or suitable substitute or the necessary documentation to calculate V have not been presented, or when these documents do not meet the standards of accuracy acceptable by the Authority, the vessels will be measured to include the entire cubic contents of V , as is defined in this chapter.

In the event the vessels classified by the Authority as full container vessels or vessels with the capacity to carry containers on or above the deck that have not submitted the Cargo Securing Manual and the General Arrangement Plan, their equivalents, or when these documents do not comply with the standards of accuracy acceptable to the Authority, the TEU allowance below deck and TEU allowance above deck, as may be applicable, shall be established using any other method acceptable to the Authority.

In the event the vessel classified by the Authority as a passenger vessel does not present the documents listed in the first paragraph of this article and/or the Passenger Ship Safety Certificate, or when the documents provided do not meet the standards of accuracy acceptable by the Authority, the Authority will determine V , PAX and the PC/UMS to PAX ratio, using any other method acceptable to the Authority.

In the case that a vessel classified by the Authority as dry bulk vessel does not present the stability book, hydrostatic tables or the capacity plan or when the documents provided do not meet the standards of accuracy acceptable by the Authority, the Authority will determine DWT, using any other method acceptable to the Authority.

In the case that a vessel classified by the Authority as gas carrier does not present the stability book, hydrostatic tables or the capacity plan or when the documents provided do not meet the standards of accuracy acceptable by the Authority, the Authority will determine m^3 , using any other method acceptable to the Authority.

Article 16: The Authority shall endeavor to determine V , TEU allowance below deck and

TEU allowance above deck, DWT, m³, PAX and PC/UMS to PAX ratio as may be applicable, as accurately as possible, on the basis of information available at the time of the calculation, using generally accepted methods for the space concerned and/or for determining allowable TEU within the parameters of accuracy acceptable to the Authority.

Article 17: Vessels that do not present the documentation prescribed by the previous article shall be measured as follows:

1. The volume of structures above the deck may be determined by any method or combination of methods that are acceptable to the Authority. These methods shall include simple geometric formulas, Simpson’s rules and other standard mathematical formulas. If special procedures are used, they must be identified.
2. The volume of the hull under the deck (UDV) shall be determined by using the formula:

$$UDV = \{0.91 \times [(LOA \times MB) \times (D - SLD)]\} + (SLDISP/1.025)$$

If the previous formula proves unworkable, the **V** of the hull below the deck shall be determined by multiplying the product of the LOA, MB and D, as defined in Part G of the Appendix, by the corresponding coefficient indicated in the following table:

LOA in meters	COEFFICIENT
>0 to 30	.7150
>30 to 60	.7250
>60 to 90	.7360
>90 to 120	.7453
>120 to 150	.7328
>150 to 180	.7870
>180 to 210	.8202
>210 to 240	.7870
>240 to 270	.7328
>270	.7453

3. The **V** of a vessel is the sum of the volume of the structures above the deck as determined in accordance with (1) above, and the volume of the hull below the deck, as determined in accordance with the parameters established in (2) above.
4. The figures of the parameters used to calculate the collection of tolls may be

determined by any method or combination of methods that are acceptable to the Authority.

Article 18: Vessels which have had their measurement determined in accordance with Article 15, may apply for re-admeasurement when they present new corrected plans or other pertinent documents acceptable to the Authority to recalculate the vessel's admeasurement.

Chapter IV Certificate of Admeasurement

Article 19: The admeasurement of vessels shall be carried out by the Authority's specialized personnel, or by agents authorized by it. Each transiting vessel shall present to the Authority a complete set of plans, documents, breakdown of total volume and calculation sheets, with the dimensions that served as the basis for obtaining its ITC 69 or its equivalent, and a copy of the same.

In the case of vessels whose tonnage is made based on the parameters of capacity (DWT, m³ and PAX), the vessel shall provide the Authority with plans, deadweight scale, stability book, hydrostatic tables and any other document that provides the corresponding parameter.

Article 20: The Authority shall provide each vessel or its representative or agent, the Certificate of Admeasurement, which shall be carried on board the vessel as proof that it has been inspected and measured.

Article 21: The Authority may correct the Certificates of Admeasurement when a difference is found in the documents or in the inspection for admeasurement, as applicable.

Chapter V Warships, Dredges and Floating Drydocks

Article 22: The toll on warships, dredges and floating drydocks shall be based on their tonnage of actual displacement. To this effect, these vessels shall be required to present documents stating accurately the displacement tonnage at each possible mean draft.

Article 23: The fully loaded displacement of these vessels shall be determined in a manner acceptable to the Authority, and shall be expressed in metric tons.

Article 24: If the user does not produce the necessary documents, the Authority may use any acceptable and practicable method to determine the displacement tonnage.

Chapter VI

Final

Provisions

Article 25: For the purpose of the preparation of the documents required by the Authority, the vessel that fulfills the following conditions shall be considered to be in ballast:

1. It may not carry passengers, with the exception of complimentary passengers. The vessel may not carry cargo, except for effects on the functioning of the ship or for use or consumption by the crew on board, as determined by the Authority.
2. It may not carry fuel for its own consumption in quantities that exceed the capacity of the spaces designed and certified for that use, as shown in the vessel's capacity plan or official documents.
3. The spaces certified and marked as sedimentation tanks to store lubricants or liquid fuels and tanks or fixed compartments shall not be used to load cargo or supplies.
4. Notwithstanding the abovementioned, a vessel of any segment may be considered to be in ballast when it transits with a minimum percentage of vessel utilization as determined by the Board of Directors at the proposal of the Administration. For this purpose, the Administration shall submit beforehand to the Board of Directors the corresponding duly defended and reasoned proposal indicating vessel segment and type, minimum percentage of vessel utilization required to be considered in ballast, and period of time or season of the year during which the present provision is proposed to be applied.

Article 26: Vessels passing through the locks at either end of the Panama Canal and returning to the original point of entry without passing through the locks at the other end of the Canal, shall be considered as having made a full transit. Re-entry of the same vessel shall be considered a new transit.

Article 27: Vessel whose overall length and Net PC/UMS Tonnage is paid according to the minimum fixed tariffs, except those cases provided for in other regulations, shall not be admeasured.

APPENDIX

A. EXPANSION ON THE DEFINITION OF MOULDED DEPTH:

In wood and composite vessels the distance is measured from the lower edge of the keel rabbet. Where the form at the lower section of the midvessel section is of a hollow character, or where thick garboards are fitted, the distance is measured from the point where the line of the flat of the bottom continued inwards cuts the side of the keel.

In vessels having rounded gunwales, the moulded depth shall be measured to the point of intersection of the moulded lines of the deck and side shell plating, the lines extending as though the gunwales were of angular design.

Where the deck is stepped and the raised section of the deck extends over the point at which the moulded depth is to be determined, the moulded depth shall be measured to a line of reference extending from the lower section of the deck along a line parallel with the raised section.

B. MEANING OF THE SYMBOLS USED WITH THE FIGURES IN THIS REGULATION:

O = excluded space

C = enclosed

space

I = space to be considered as an enclosed space.

Hatched in parts to be included as enclosed spaces.

B = breadth of the deck in way of the opening

In vessels with rounded gunwales the breadth is measured as indicated in Figure 11.

C. DEFINITION OF EXCLUDED SPACES:

Are the spaces described below, unless they meet any of the following three conditions, in which case they shall be considered enclosed spaces:

- The space is fitted with shelves or other means for securing cargo or stores.
- The openings are fitted with any means of closure.
- The construction provides any possibility of such openings being closed.

1.a. A space within an erection opposite an end opening extending from deck to deck except

for a curtain plate of a depth not exceeding by more than 25 millimeters (one inch) the depth of the adjoining deck beams, such opening having a breadth equal to or greater than 90 percent of the breadth of the deck at the line of the opening of the space. This provision shall be applied so as to exclude from the enclosed spaces only the space between the actual end opening and a line drawn parallel to the line or face of the opening at a distance from the opening equal to one-half of the width of the deck at the line of the opening (Figure 1):

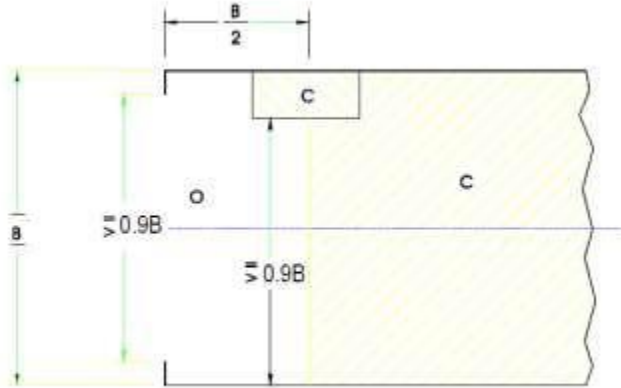


Fig. 1

1.b. Should the width of the space because of any arrangement except by convergence of the outside plating, become less than 90 percent of the breadth of the deck, only the space between the line of the opening and a parallel line drawn through the point where the athwarships width of the space becomes equal to or less than 90 percent of the breadth of the deck shall be excluded from the volume of enclosed spaces. (Figures 2, 3 and 4):

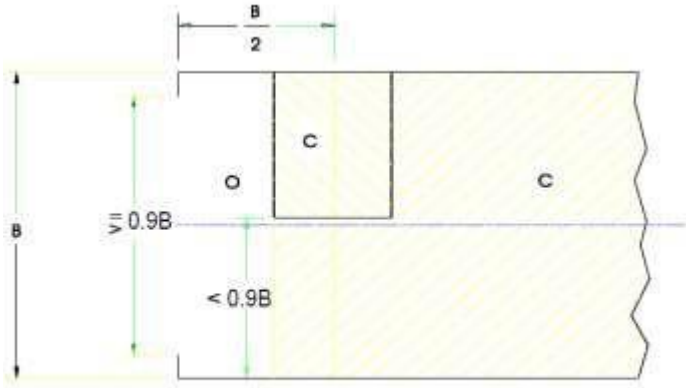


Fig. 2

IMPORTANT NOTICE: Spanish is the official language of the Agreements issued by the Panama Canal Authority Board of Directors. The English translation is intended solely for the purpose of facilitating an overall understanding of the content of the original version for the benefit of those persons who do not speak Spanish. Therefore, for official purposes, please refer to the specific Agreement in its Spanish version.

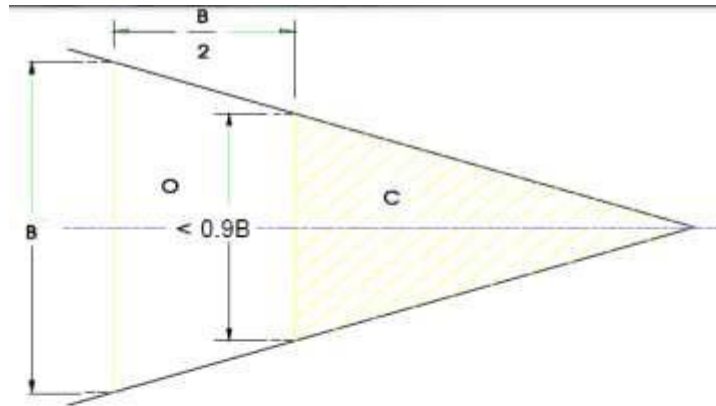


Fig. 3

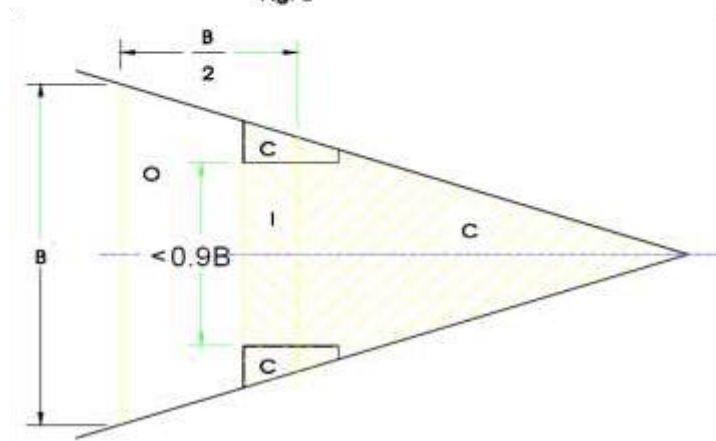


Fig. 4

1.c. Where an interval which is completely open except for bulwarks or open rails separates any two spaces, the exclusion of one or both of which is permitted under paragraphs 1.a and 1.b, such exclusion shall not apply if the separation between the two spaces is less than the least half breadth of the deck in way of the separation. (Figures 5 and 6):

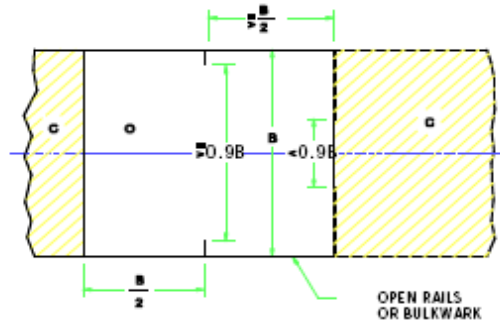


Fig. 5

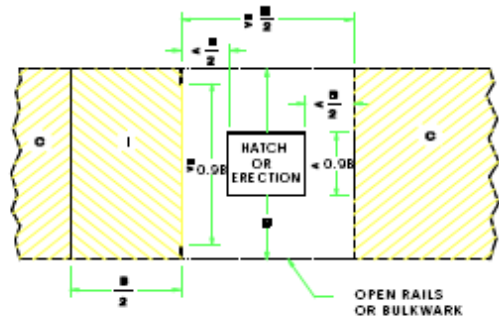


Fig. 6

2. A space under an overhead deck covering open to the sea and weather, having no other connection on the exposed sides with the body of the vessel than the stanchions necessary for its support. In such a space, open rails or a bulwark and curtain plate may be fitted or stanchions fitted at the vessel's side, provided that the distance between the top of the rails or the bulwark and the curtain plate is not less than 0.75 meters (2.5 feet) or one-third of the height of the space, whichever is the greater. (Figure 7).

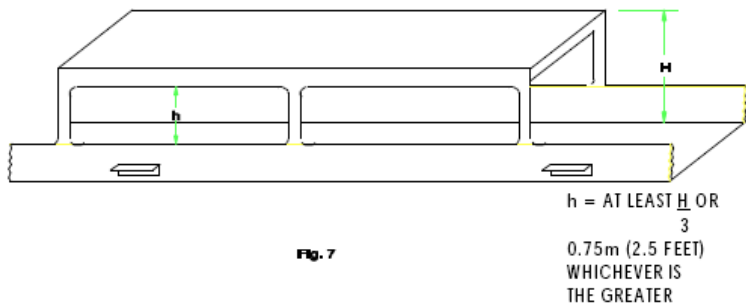


Fig. 7

3. A space in a side-to-side erection directly in way of opposite side openings not less in height

than 0.75 meters (2.5 feet) or one-third of the height of the erection, whichever is the greater. If the opening in such an erection is provided on one side only, the space to be excluded from the volume of enclosed spaces shall be limited inboard from the opening to a maximum of one-half of the breadth of the deck in way of the opening (Figure 8).

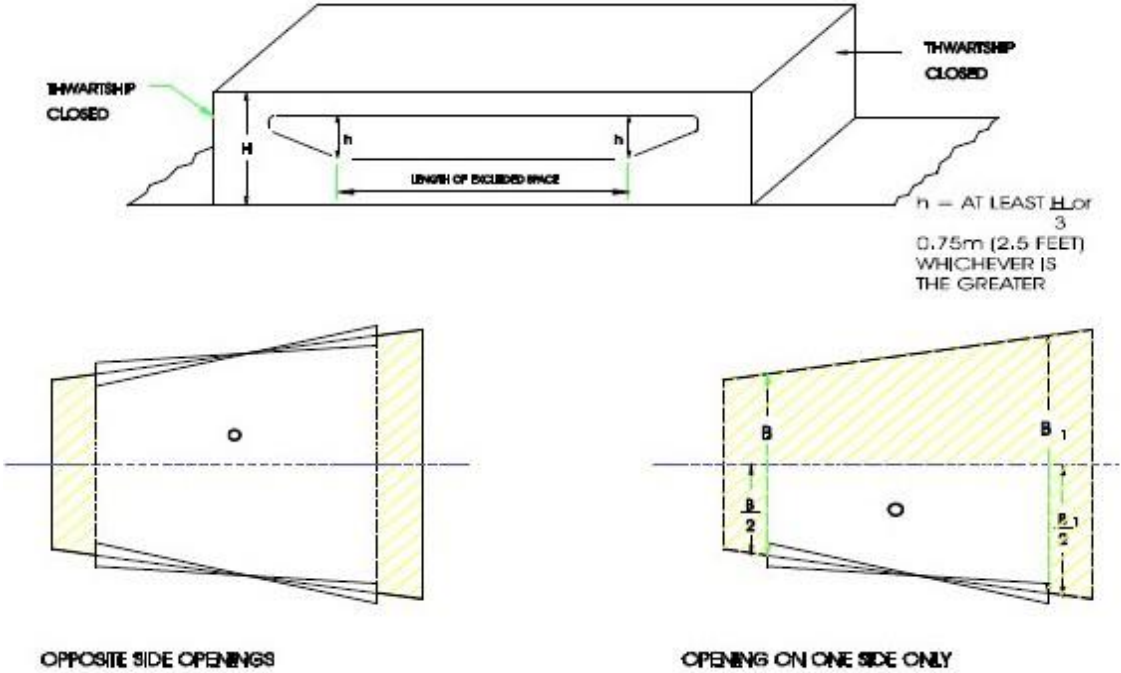


Fig. 8

4. A space in an erection immediately below an uncovered opening in the deck overhead, provided that such an opening is exposed to the weather and the space excluded from enclosed spaces is limited to the area of the opening. (Figure 9).

IMPORTANT NOTICE: Spanish is the official language of the Agreements issued by the Panama Canal Authority Board of Directors. The English translation is intended solely for the purpose of facilitating an overall understanding of the content of the original version for the benefit of those persons who do not speak Spanish. Therefore, for official purposes, please refer to the specific Agreement in its Spanish version.

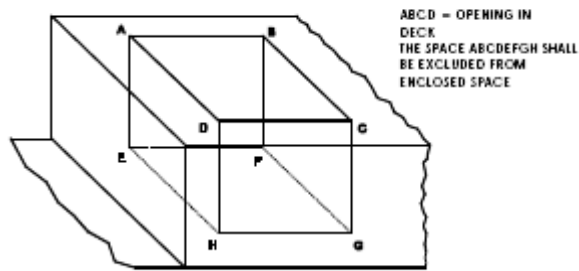


Fig. 9

5. A recess in the boundary bulkhead of an erection which is exposed to the weather and the opening of which extends from deck to deck without means of closing, provided that the interior width is not greater than the width at the entrance and its extension into the erection is not greater than twice the width of its entrance. (Figures 10 and 11).

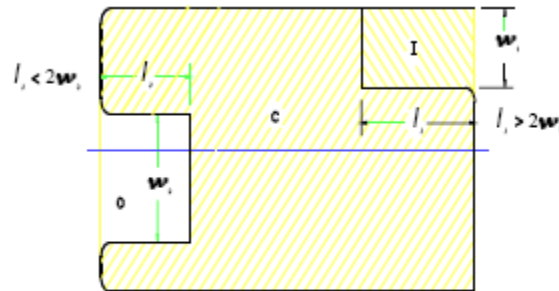


Fig. 10



Fig. 11

D. EXPANSION OF THE DECK:

In a vessel having a stepped deck, the lowest line of the exposed deck and the continuation of that line parallel to the upper section of the deck is taken as the deck.

E. DETERMINATION OF THE PC NET TONNAGE IN ACCORDANCE WITH THE UMS:

Explanation of the component of the formula as stated in Article 10:

$$\text{PC/UMS Net Tonnage} = K_4(V) + K_5(V)$$

a. $K_4 = \{0.25 + [0.01 \times \text{Log}_{10}(V)]\} \times 0.830$

b. $K_5 = [\text{Log}_{10}(\text{DA}-19)] / \{[\text{Log}_{10}(\text{DA}-16)] \times 17\}$

If the number of passengers ($N_1 + N_2$) is greater than 100 or DA is equal to or less than 20.0 meters, then K_5 is equal to zero.

c. V = Total volume of all enclosed spaces of the vessel in cubic meters and is identical to V as specified in the 1969 International Convention on Tonnage Measurement of Ships (ITC 69).

d. DA (Average depth) = The result of the division of the V by the product of the length in meters multiplied by the moulded breadth in meters. $DA = V / (L \times MB)$.

e. L (Length) is defined as 96 percent of the total length on a waterline at 85 percent 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 be greater. In vessels designed with a rake of keel, the waterline on which this length is measured shall be parallel to the designed waterline.

f. MB = Moulded breadth is defined in Article 2.

g. N_1 = Number of passengers in cabins with no more than 8 berths.

h. N_2 = Number of other passengers.

i. $N_1 + N_2$ = Total number of passengers the vessel is permitted to carry as indicated in the vessel's passenger certificate.

F. CHANGE IN THE PC/UMS NET TONNAGE:

The Authority shall perform a fair and equitable volumetric comparison where a vessel does not have total comparative volumes according to ITC 69, or other suitable source of volumetric comparison, to determine if the vessel's structure has undergone a significant change.

G. MEASUREMENT OF VESSELS WHEN TONNAGE CANNOT BE OTHERWISE ASCERTAINED:

For vessel whose net tonnage is calculated based on PC/UMS:

$$\text{UDV} = \{0.91 \times [(\text{LOA} \times \text{MB}) \times (\text{D} - \text{SLD})]\} + (\text{SLDISP}/1.025)$$

Where:

UDV = Volume of the hull below the deck, in cubic meters.

LOA = The Length overall, i.e., the length of the vessel in meters from the foremost to the aftermost points, including a bulbous bow if present.

MB = Moulded breadth in meters as defined in Article 2.

D = Moulded depth in meters as defined in Article 2.

SLD = Summer loaded draft (in meters) i.e., the maximum depth to which the vessel's hull may be immersed when in a summer zone

SLDISP = Summer loaded displacement, i.e., the actual weight in metric tons of the water displaced by the vessel when immersed to her SLD.