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**IMO**

*E*

Ref. T4/5.04

TM.1/Circ.92  
6 October 2008

## **NOVEL TYPES OF CRAFT UNDER REGULATION 1(3)**

### **Information submitted by Panama**

The Secretary-General has the honour to transmit herewith a communication received from the Government of Panama regarding details of the method used to calculate the tonnage of ships to which regulation 1(3) of the International Convention on Tonnage Measurement of Ships, 1969 does not apply.

The Secretary-General would be grateful if steps could be undertaken to bring this information to the attention of the appropriate authorities.

**Translation**

Letter from the Permanent Mission of Panama to IMO, addressed to the Secretary-General, dated 3 September 2008

Ref. No. AMP-OMI-074-08

Dear Sir,

I have the honour to enclose the following information concerning the International Convention on Tonnage Measurement of Ships, 1969:

- A. Number of certificates issued under the provisions of article 15 of the convention;
- B. List of non-governmental agencies authorized to act on behalf of the Panama Maritime Administration in matters relating to tonnage;
- C. Details of the method used to calculate the tonnage of ships to which the 1969 Tonnage Convention does not apply, in terms of regulation 1(3) of that convention.

I should like to request that the Organization kindly acknowledge this letter.

With renewed assurance of my highest esteem,

(Signed)

Liliana Fernández  
Ambassador and Permanent Representative

Enc.: List B as mentioned

**Part B**

**List of non-governmental agencies authorized to act on behalf of the Panama Maritime Administration in matters relating to tonnage**

1. American Bureau of Shipping
2. Bureau Veritas
3. China Corporation Register of Shipping
4. China Classification Society
5. Det Norske Veritas
6. Germanischer Lloyd
7. Hellenic Register of Shipping
8. Indian Register of Shipping
9. Inter maritime Certification Services, S.A.
10. International Naval Survey Bureau (INSB)
11. International Register of Shipping (Panama) Inc
12. Isthmus Bureau of Shipping
13. Korean Register of Shipping
14. Lloyd's Register of Shipping
15. Macosnar Corporation
16. National Shipping Adjuster, Inc.
17. Nippon Kaiji Kyokai
18. Overseas Marine Certification Service, Inc.
19. Panama Bureau of Shipping
20. Panama Maritime Surveyor Bureau Inc.
21. Panama Register Corporation
22. Panama Marine Survey & Certification Services, Inc
23. Panama Maritime Documentation Services Inc.
24. Panama Shipping Registrar Inc.
25. Polski Rejester Statkow
26. Registro Italiano Navale
27. Russian Maritime Register of Shipping
28. Universal Shipping Bureau Inc.



**TONNAGE GUIDE**  
**FOR**  
**SIMPLIFIED MEASUREMENT**



**Coast Guard Marine Safety Center**  
**Tonnage Division (MSC-4)**  
**[www.uscg.mil/hq/msc](http://www.uscg.mil/hq/msc)**

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### 1. PURPOSE

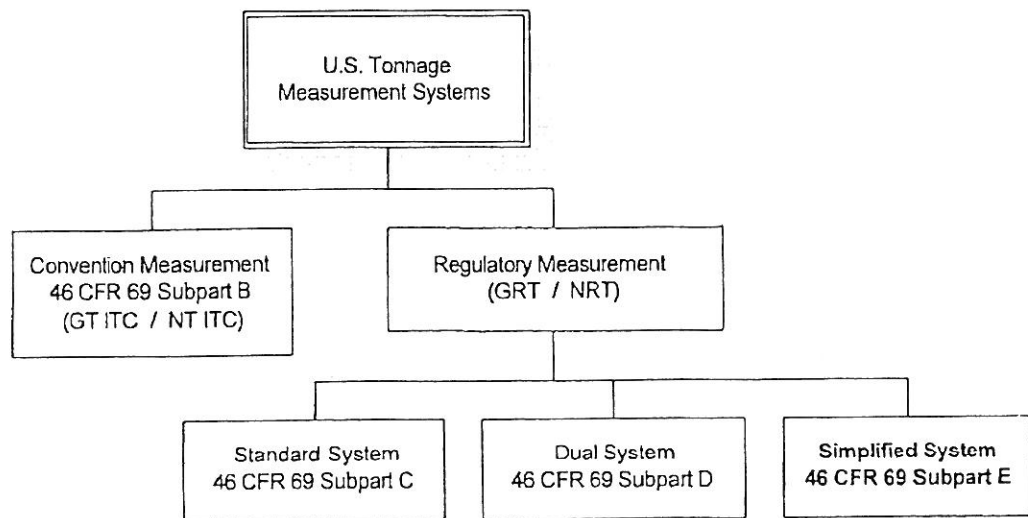
The purpose of this Guide is to explain the Simplified tonnage measurement system with regard to (1) other available tonnage measurement systems, (2) vessel eligibility for Simplified measurement, (3) the use of tonnage in the vessel documentation process, (4) the responsible Coast Guard offices, and (5) calculating Simplified tonnage. This Guide is primarily directed to an audience composed of vessel builders, brokers and owners, mortgage companies and other interested members of the public. This Guide will **not** be used as the basis for Coast Guard tonnage decisions in response to questions and appeals from industry or other government agencies. Such decisions will be deferred to applicable law, regulations, and policy documents such as Marine Safety Center Technical Notes (MTNs).

### 2. GROSS / NET TONNAGE VS. DISPLACEMENT TONNAGE

This Guide addresses gross and net tonnage, which relate to vessel volume and appear on a documented vessel's Certificate of Documentation (COD). Gross and net tonnage is widely used as the basis for vessel regulation and assessment of taxes and fees. Gross and net tonnage is not to be confused with displacement or weight tonnage, often expressed in "pounds", "tons" or "long tons".

### 3 TONNAGE MEASUREMENT SYSTEMS

There are two basic tonnage measurement systems presently available in the United States, namely the Convention and Regulatory systems. The primary system is the Convention or international system, which is derived from the provisions of the International Convention on Tonnage Measurement of Ships, 1969, to which the United States is a party. The Regulatory or national system has three subset systems, namely Standard, Dual and Simplified. The Standard is the oldest system, dating back to the 1860's, and is based on the British "Moorson" system. Dual measurement was developed in the mid 20<sup>th</sup> century to benefit shelter deck vessels by providing alternatives to fitting them with tonnage openings. The Simplified system was initially authorized by Congress in 1966 for recreational vessels to reduce the measurement cost burden for owners and the measurement workload on the government. Later, the Simplified system was extended to certain commercial vessels. Convention tonnage is dimensionless and expressed as GT ITC (or simply GT) for gross tonnage and NT ITC (or simply NT) for net tonnage. Regulatory tonnage is calculated in units of register tons of 100 cubic feet per ton and expressed as GRT for gross register tons and NRT for net register tons.



#### **4 FORMAL VS. SIMPLIFIED MEASUREMENT**

“Formal” measurement is the process by which a vessel owner employs an authorized tonnage measurement organization and its surveyors to measure the vessel under the Convention, Standard or Dual systems. For “formal” measurement, the measurement organization performs an onboard survey, uses a series of detailed volumetric calculations to determine the tonnage, and issues appropriate tonnage certificates. This work is done for a fee, which is paid by the vessel owner. Fees vary, but generally range from several hundred to several thousand dollars, depending on the vessel's size, complexity and/or other factors. For documented vessels, the measurement organization also sends copies of tonnage certificates to the National Vessel Documentation Center (NVDC), so that tonnage information can be entered into the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) computer system and printed on the COD. Simplified measurement is the process by which tonnages are based on the vessel's principal dimensions and other characteristics provided by the vessel owner. For documented vessels, the required information is submitted to the NVDC for entry into MISLE. MISLE calculates the tonnages, which are printed on the COD. For undocumented vessels, Simplified tonnage is calculated on an “as-needed” basis by interested parties, and is not certified on Coast Guard documents.

#### **5. MEASUREMENT SYSTEM APPLICABILITY**

A vessel is eligible to be measured under the Simplified measurement system if it is either: 1) under 79 feet in length; or 2) a non-self-propelled or recreational vessel. Some vessels that are 79 feet or over in length may also require measurement under the Convention measurement system. This includes vessels that engage on foreign voyages, as well as recreational vessels that engage on voyages outside the Great Lakes and have keel laid dates after December 31, 1985. The Convention measurement system does not apply to vessels less than 79 feet in length, whereas vessels of any length can be measured under the Standard and Dual systems. For complete requirements on tonnage measurement system applicability, refer to Navigation and Vessel Circular (NVIC) 11-93, Applicability of Tonnage Measurement Systems to U.S. Flag Vessels, at <http://www.uscg.mil/hq/g-m/nvic/index90.htm>

#### **6. MEASUREMENT SYSTEM HEIRARCHY**

For most vessels 79 feet and over in length, the Convention system is the primary tonnage measurement system under the law in the United States. However, law permits vessels to also be measured under the “optional” Regulatory system regardless of length, if requested by the vessel owner, for purposes of applying domestic laws in effect prior to July 19, 1994. For vessels less than 79 feet in length, the Regulatory system is used in all cases.

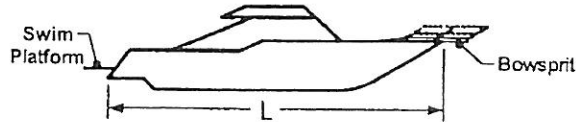
#### **7. REGISTERED DIMENSIONS**

Registered dimensions (i.e., registered length, registered breadth and registered depth) are assigned to a vessel as part of the tonnage measurement process, and appear on tonnages certificates, and/or CODs. Registered dimensions are sometimes used as a basis for regulating a vessel, and/or applying fees. Two different sets of definitions of registered dimensions are used for vessels that are formally measured, depending on when the vessel was measured. For vessels that are simplified measured, the registered dimensions are the overall dimensions of the vessel as defined in this Guide.

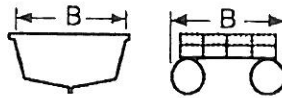


## 8. DEFINITIONS

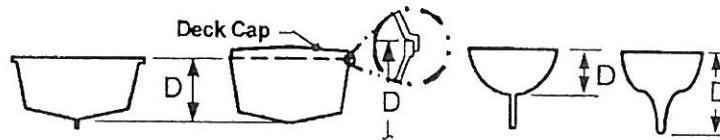
**Overall Length (L)** is the horizontal distance between the outboard side of the foremost part (bow) of the hull and the outboard side of the aftermost part (stern) of the hull. It does not include bowsprits, rudders, outboard motor brackets, swim platforms that do not contain buoyant volume, and other similar fittings and attachments that are not part of the buoyant hull envelope.



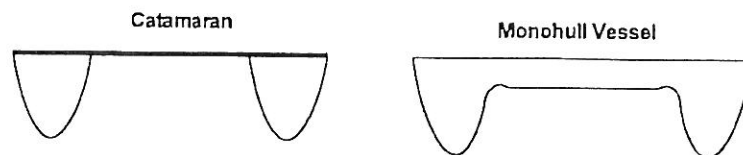
**Overall Breadth** means the horizontal distance taken at the widest part of the hull, excluding rub rails, from the outboard side of the skin (outside planking or plating) on one side of the hull to the outboard side of the skin on the other side of the hull.



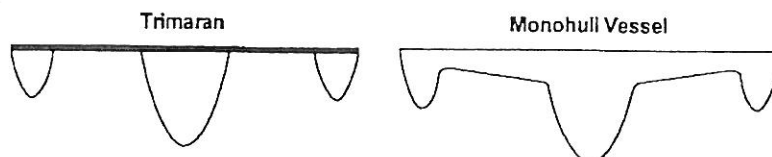
**Overall Depth** means the vertical distance taken at or near amidships from a line drawn horizontally through the uppermost edges of the skin (outside planking or plating) at the side of the hull (excluding the cap rail, trunks, cabins and deckhouses, and deck caps) to the outboard face of the bottom skin of the hull, excluding the keel. For a vessel that is designed for sailing where the interface between the "keel" and the "bottom skin of the hull" is not clearly defined (as is the case with an "integral" or "faired" keel), the keel is included in the "overall depth".



**Twin Hull Vessel (e.g., Catamaran)** means a vessel having two hulls connected only with structure that is not part of the vessel's buoyant hull envelope, such as structural tubing or beams. If the connecting structure is part of the buoyant hull envelope, the vessel as a whole is treated as if it were a single hull (i.e., monohull) vessel.



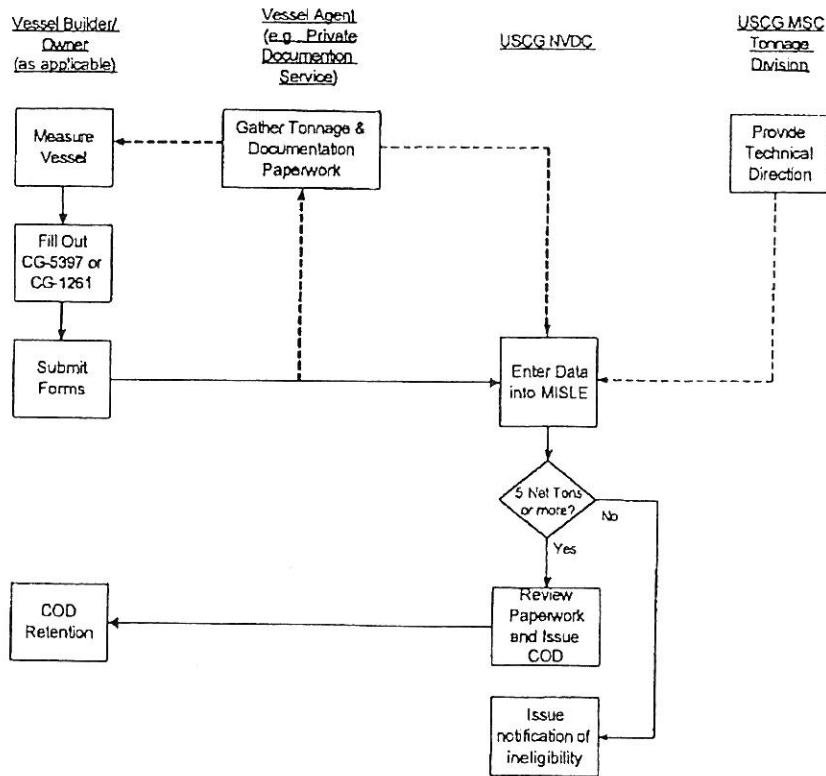
**Tri-Hull Vessel (e.g., Trimaran)** means a vessel having three hulls connected only with structure that is not part of the vessel's buoyant hull envelope, such as structural tubing or beams. If the connecting structure is part of the buoyant hull envelope, the vessel as a whole is treated as if it were a single hull (i.e., monohull) vessel.



### 9. SIMPLIFIED MEASUREMENT PROCESS

For documented vessels, Simplified tonnage is calculated using vessel dimensions and characteristics provided by the owner. This information is obtained from either of the following two forms: 1) Form CG-1261 "Builder Certification and First Transfer of Title", Revision 2-92 or later, which is completed by the builder; or 2) Form CG-5397 "Application for Simplified Measurement", which is completed by the vessel owner, sometimes with the assistance of an agent such as a private documentation service. In cases where the vessel dimensions and characteristics on Form CG-1261 are found to be in error, or do not agree with information on Form CG-5397, the information on Form CG-5397 will take precedence. Forms are submitted to the NVDC along with appropriate documentation forms and fees. Instructions, forms and fees for documenting vessels can be found on the NVDC Website at [www.uscg.mil/hq/g-m/vdoc/instr.htm](http://www.uscg.mil/hq/g-m/vdoc/instr.htm). Upon receipt of the appropriate forms and fees, the NVDC enters the vessel data from either Form CG-1261 or 5397 into the MISLE computer system, which calculates the tonnage. If the vessel tonnage is 5 net tons or more and other documentation requirements are met, the NVDC issues a COD showing the gross and net tonnage and registered dimensions, which is mailed to the owner.

#### Simplified Measurement Process (Documented Vessels Only)



### 10. FIVE NET TON THRESHOLD

The significance of the five (5) net ton (5 NRT or 5 NT ITC) threshold is related to and derived from the regulations in Title 46, Code of Federal Regulations (CFR), Part 67 regarding vessel eligibility and requirements for vessel documentation. Basically, vessels less than 5 net tons are not eligible for documentation, while vessels engaged in certain trades in the U.S. that are 5 net tons or more must be documented. Many recreational vessel owners wish to have their vessel measure over 5 net tons and thus be eligible for documentation as a "vessel of the United States". Refer to the Coast Guard Office of

Boating Safety at <http://www.uscgboating.org> for more information on requirements on registration of recreational vessels, including the advantages and disadvantages for documenting such vessels.

### 11. SIMPLIFIED TONNAGE CALCULATION

Vessel owners who wish to calculate the tonnage of their vessel may do so using either (1) the interactive Form CG-5397 at <http://www.uscg.mil/hq/msc> or (2) the Simplified formulation found below. This is especially recommended for smaller vessels being documented (e.g., those under 35 feet in length), in order to avoid submitting forms and paying fees if the vessel is found to be ineligible for documentation because it measures under 5 net tons.

### 12. GROSS TONNAGE FORMULATION (MONOHULL VESSELS)

The basic Simplified tonnage formula for gross register tons of a monohull vessel is:

$$\text{GRT} = (\text{Hull Volume} + \text{Deckhouse Volume})/100$$

Where:

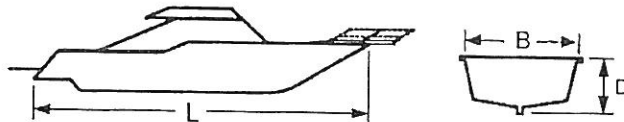
$$\text{Hull Volume} = S \times K \times L \times B \times D$$

$$\text{Deck Structure Volume} = L_s \times B_s \times D_s$$

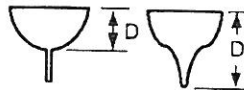
**Note:** For vessels with small deckhouses and other deck structures, the deck structure volume is ignored (treated as "zero" value). Deck structure volume is accounted for only if the volume of the principal deck structure is equal to or greater than the hull volume.

The overall dimensions of the hull are as follows:

- L = Overall Length
- B = Overall Breadth
- D = Overall Depth

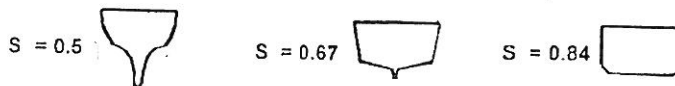


**Note:** D is normally measured from the deck edge down to where the hull meets the keel, except for vessels designed for sailing where the interface between the "keel" and the "bottom skin of the hull" is not clearly defined (as is the case with an "integral" or "faired" keel), for which the depth is measured to the bottom of the keel.



The shape factor (S) is as follows:

- S = 0.5 for hulls designed for sailing (finest hull form)
- S = 0.67 for powerboats, ship-shape and circular hulls
- S = 0.84 for barges and boxed-shaped hulls (fullest hull form)



The keel factor (**K**) is as follows:

**K** = 1.0 for all hull configurations **except** those designed for sailing wherein the Overall Depth includes the keel.

**K** = 0.75 for hulls designed for sailing wherein the Overall Depth includes the keel.

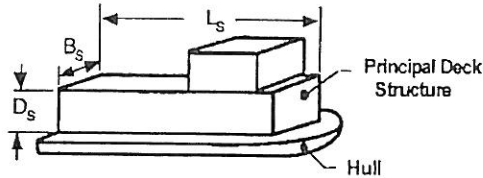


The deck structure dimensions are defined as:

**L<sub>s</sub>** = The average length of the principal deck structure

**B<sub>s</sub>** = The average breadth of the principal deck structure

**D<sub>s</sub>** = The average depth of the principal deck structure



### 13. GROSS TONNAGE FORMULATION (TWIN HULL VESSELS)

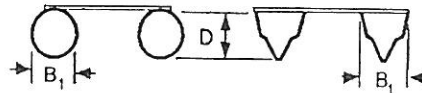
The basic Simplified tonnage formula for gross register tons of a twin hull vessel is:

$$\text{GRT} = (2 \times \text{Hull Volume} + \text{Deckhouse Volume})/100$$

Where all parameters are the same as monohulls above, except that:

$$\text{Hull Volume} = S \times K \times L \times B_1 \times D$$

**B<sub>1</sub>** = breadth of the individual hulls



### 14. GROSS TONNAGE FORMULATION (TRI-HULL VESSELS)

$$\text{GRT} = [(\text{Center Hull Volume} + 2 \times \text{Outer Hull Volume})]/100$$

Where all parameters are the same as monohulls above, except that:

$$\text{Center Hull Volume} = S \times K \times L_1 \times B_1 \times D$$

$$\text{Outer Hull Volume} = S \times K \times L_2 \times B_2 \times D_1$$

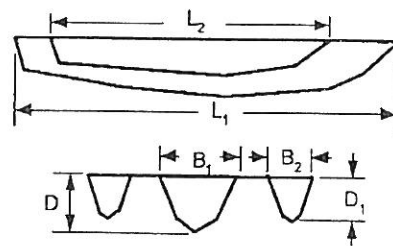
**L<sub>1</sub>** = length of the center hull

**B<sub>1</sub>** = breadth of the center hull

**L<sub>2</sub>** = length of the outer hulls

**B<sub>2</sub>** = breadth of the outer hulls

**D<sub>1</sub>** = depth of the outer hulls



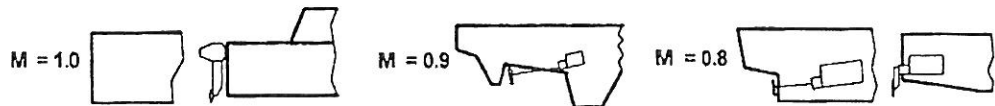
## 15. NET TONNAGE FORMULATION

The Simplified tonnage formula for net register tons for any vessel is:

$$\text{NRT} = M \times \text{GRT}$$

The machinery factor (**M**) is as follows:

- M** = 1.0 for non-self-propelled vessels or propulsion machinery **outside** the hull
- M** = 0.9 for vessels **designed for sailing** with propulsion machinery **inside** the hull
- M** = 0.8 for vessels **not designed for sailing** with propulsion machinery **inside** the hull



## 16. GUIDANCE ON DIMENSIONS

Use the following guidance in obtaining dimensions and calculating tonnages.

- a. **Obtaining Principal Dimensions.** All lengths and depths must be measured in (or projected to) a vertical plane on the vessel centerline axis and breadths must be measured in (or projected to) a the vertical plane at right angles to that axis. Measure the principal dimensions in feet and inches or in decimal feet to the nearest tenth of a foot. Accuracy to the nearest inch or tenth of a foot is acceptable.
- b. **Rounding Dimensions.** If more accurate measurement than to the nearest inch or tenth of a foot is used, follow the procedures for rounding dimensions in Appendix A.
- c. **Truncating Tonnage Values.** Both gross and net tonnage are truncated (not rounded up or down) to the nearest whole number. Truncation means dropping whatever decimals remain to the right of the decimal point, if any, without changing the integer values. In calculating the net tonnage, apply the machinery factor (**M**) to the gross register tonnage before truncation. For example, if the gross tonnage is calculated to be 6.99 (before truncation), and **M** is 0.8, the net tonnage (before truncation) is 5.592. This gives a gross tonnage of 6 and a net tonnage of 5.

## 17. TONNAGE MEASUREMENT QUESTIONS

Questions regarding interpretation of this Guide or any other questions related to tonnage measurement and certification should be directed to the Tonnage Division of the Coast Guard Marine Safety Center in Washington, DC. Before contacting the Marine Safety Center, we encourage you to visit our web site at <http://www.uscg.mil/hq/msc>, which provides links to various policy documents, answers to frequently asked question, and other information which may assist you.

## 18. REFERENCES

The following are useful references related to Simplified Measurement, and are all available on the MSC's web site at <http://www.uscg.mil/hq/msc> (except as noted):

- a. 46 U.S.C. Chapter 145 – “Regulatory Measurement”, Subchapter III – “Simplified System”
- b. 46 CFR 69, “Measurement of Vessels”
- c. MTN 01-99, “Tonnage Technical Policy”
- d. NVIC 11-93, “Applicability of Tonnage Measurement Systems to U.S. Flag Vessels”
- e. CG-5397 “Application for Simplified Measurement”
- f. CG-1261 “Builder Certification and First Transfer of Title” (available on the NVDC's web site at <http://www.uscg.mil/hq/g-m/vdoc/nvdc.htm>)

**APPENDIX**

**English Unit Rounding**

1. Fractions of an inch should be rounded to the nearest half inch, and then converted to tenths of a foot from the conversion table.

**Example 1:**  $2' - 5 \frac{7}{16}" = 2' - 5 \frac{1}{2}" = 2.5 \text{ ft}$

**Example 2:**  $2' - 5 \frac{1}{2}" = 2' - 6" = 2.5 \text{ ft}$

**Example 3:**  $2' - 0 \frac{1}{4}" = 2' - 0" = 2.0 \text{ ft}$

2. Decimals given in hundredths and thousandths should be rounded to the nearest tenth as in the following examples:

**Example 1:**  $10.750 \text{ ft} = 10.8 \text{ ft}$

**Example 2:**  $10.349 \text{ ft} = 10.3 \text{ ft}$

3. Engineering standards should be used for rounding decimals, i.e., 0.05 should be rounded up to 0.1.

**English Fraction to Decimal Conversion Table**

Inches	Feet
½	0.0
1	0.1
1 ½	0.1
2	0.2
2 ½	0.2
3	0.3
3 ½	0.3
4	0.3
4 ½	0.4
5	0.4
5 ½	0.5
6	0.5
6 ½	0.5
7	0.6
7 ½	0.6
8	0.7
8 ½	0.7
9	0.8
9 ½	0.8
10	0.8
10 ½	0.9
11	0.9
11 ½	1.0

**Metric to English Conversion**

If dimensions are given in metric units, the factor 0.3048 should be used to convert meters to feet.

**METERS/0.3048 = FEET**

**CENTIMETERS/30.48 = FEET**

**Example: 4.58 m = 15.0 ft**

**Example: 213.56 cm = 7.0 ft**

DEPARTMENT OF  
TRANSPORTATION  
U.S. COAST GUARD  
CG-5397 (Rev 12-00)

## APPLICATION FOR SIMPLIFIED MEASUREMENT

Use this form to apply to the National Vessel  
Documentation Center for tonnage assignment under the  
Simplified Measurement System

OMB APPROVED  
2115-0086

### I. APPLICABILITY

A vessel is eligible to be measured under the Simplified Measurement System if it is either: 1) under 79 feet in overall length; or 2) a non-self-propelled or recreational vessel. **NOTE: Some vessels that are 79 feet or over in overall length may also require measurement under the Convention Measurement System. This includes vessels that engage on foreign voyages, as well as recreational vessels that engage on voyages outside the Great Lakes and have keel laid dates after December 31, 1985.**

### II. VESSEL DATA AND DIMENSIONS

1. VESSEL NAME \_\_\_\_\_

2. HULL I.D. NO. \_\_\_\_\_  
(also provide Official Number, if available)





3. HULL MATERIAL:

- Wood     Steel     FRP (Fiberglass)  
 Aluminum     Concrete     Other \_\_\_\_\_

4. PROPULSION MACHINERY:

- Located inside hull (e.g. inboard engine or stern drive)  
 Located entirely outside hull (e.g. outboard motor)  
 Non-self-propelled (not fitted with any propulsion machinery)

5. SHAPE OF HULL(S): (for tri-hull vessels, check the block best describing the center hull)

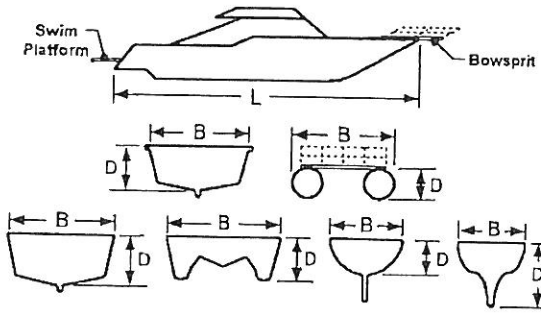
- Powerboat, ship or circular      Sailboat distinct keel (or no keel)   
 Box or barge      Sailboat integral keel (keel is faired to hull) 

6. OVERALL DIMENSIONS:

Overall Length (L) = \_\_\_\_\_ ft \_\_\_\_\_ in

Overall Breadth (B) = \_\_\_\_\_ ft \_\_\_\_\_ in

Overall Depth (D) = \_\_\_\_\_ ft \_\_\_\_\_ in



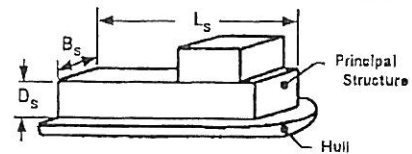
7. ADDITIONAL DIMENSIONS FOR LARGE DECK STRUCTURES:

(Complete only if the volume of the principal deckhouse, cabin or similar structure above the main deck exceeds the hull volume)

Structure Length ( $L_s$ ) = \_\_\_\_\_ ft \_\_\_\_\_ in

Structure Breadth ( $B_s$ ) = \_\_\_\_\_ ft \_\_\_\_\_ in

Structure Depth ( $D_s$ ) = \_\_\_\_\_ ft \_\_\_\_\_ in



8. ADDITIONAL DIMENSION FOR TWIN HULL VESSELS:

(Applies only if there is no buoyant volume in the structure that connects the hulls together.)

Individual Hull Breadth ( $B_1$ ) = \_\_\_\_\_ ft \_\_\_\_\_ in



9. ADDITIONAL DIMENSIONS FOR TRI-HULL VESSELS:

(Applies only if there is no buoyant volume in the structure that connects the hulls together.)

Center Hull Length ( $L_1$ ) = \_\_\_\_\_ ft \_\_\_\_\_ in

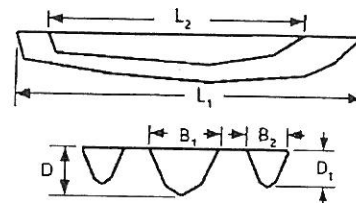
Center Hull Breadth ( $B_1$ ) = \_\_\_\_\_ ft \_\_\_\_\_ in

Center Hull Depth (D) = \_\_\_\_\_ ft \_\_\_\_\_ in

Outer Hull Length ( $L_2$ ) = \_\_\_\_\_ ft \_\_\_\_\_ in

Outer Hull Breadth ( $B_2$ ) = \_\_\_\_\_ ft \_\_\_\_\_ in

Outer Hull Depth ( $D_1$ ) = \_\_\_\_\_ ft \_\_\_\_\_ in



### III. STATEMENT OF REPRESENTATION

I understand that, under the provisions of 46 CFR 69.25, a person making a false statement or representation in this application may be fined up to \$20,000. The vessel is also liable in rem for the penalty. I certify that the information provided by me in answering the questions above is correct.

Owner's printed name \_\_\_\_\_ Owner's signature \_\_\_\_\_ Date \_\_\_\_\_

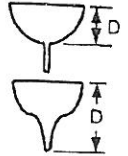


### OVERALL DIMENSIONS

**LENGTH (L)** is the horizontal distance between the outboard side of the foremost part (bow) of the hull and the outboard side of the aftermost part (stern) of the hull. It does not include bowsprits, rudders, outboard motor brackets, swim platforms that do not contain buoyant volume, and other similar fittings and attachments that are not part of the buoyant hull envelope.

**BREADTH (B)** is the horizontal distance taken at the widest part of the hull, excluding rub rails, from the outboard side of the skin (outside planking or plating) on one side of the hull to the outboard side of the skin on the other side of the hull.

**DEPTH (D)** is the vertical distance taken at or near amidships from a line drawn horizontally through the uppermost edges of the skin (outside planking or plating) at the sides of the hull (excluding the cap rail, trunks, cabins and deckhouses, and deck caps) to the outboard face of the bottom skin of the hull, excluding the keel. If your vessel is designed for sailing and the interface between the "keel" and the "bottom skin of the hull" is not at a clearly defined location (as is the case with an "integral" or "faired" keel), include the keel in the depth measurement.



### SIMPLIFIED MEASUREMENT PROCEDURES

1. Under Simplified measurement, a vessel must be 5 net tons or greater to be eligible for documentation (issued a Certificate of Documentation). Gross and net tonnages are measures of volume, and should not be confused with the vessel's weight, which may also be expressed in tons.
2. Gross and net tonnages are calculated by the Coast Guard using the information you provide on the front of this form. The formulas for these calculations are described in Title 46, Code of Federal Regulations (CFR), Part 69, Subpart E, and on the USCG Marine Safety Center (MSC) Web site: [www.uscg.mil/hq/msc](http://www.uscg.mil/hq/msc). Monohull vessels that are less than 25 feet in length are often less than 5 net tons.
3. If your vessel is eligible for documentation using Simplified measurement, complete the front side of this form by printing or typing all required information. Provide dimensions in terms of feet and inches (to the nearest inch). After signing the form, send it to the USCG National Vessel Documentation Center (NVDC) along with application form CG-1258. Only the front side of this form need be submitted to the NVDC. Please notify the NVDC if your vessel will also be measured under the Convention system (as for vessels 79 feet or over in convention length engaged on foreign voyages).
4. If all applicable requirements are met for documentation, the NVDC will issue a Certificate of Documentation with the gross and net tonnage indicated on the certificate.
5. Other U.S. tonnage measurement systems, known as "formal" measurement systems, may yield different tonnages and may be used in lieu of Simplified measurement. Formal measurement requires the employment of a USCG authorized measurement organization and a physical inspection of the vessel by that organization's surveyor. Information on how to contact these organizations is available on the MSC Web site.

### MULTI-HULL VESSELS

For the purposes of Simplified measurement, twin hull and tri-hull vessels are defined as only those with no buoyant volume in the structure that connects the hulls together. In other words, the cross-structure, bridging, platform or "trampoline" connecting the hulls has no measurable depth or buoyancy as shown in the illustrations in Section II, Items 8 and 9 of this form. Cathedral hull forms and other similar configurations with no distinct separation of hulls are not considered multi-hulls in this context.

### NOVEL/UNIQUE CRAFT

Certain novel or unique craft cannot be identified or categorized in the types described on the front of this form. If your vessel is in this category, you should complete Section II, Items 1-4, and Section III of this form and send the form, along with sketches, drawings and/or photographs showing the vessel geometry and overall dimensions, to the USCG Marine Safety Center (MSC) at the address listed below. Send Form CG-1258 and all other information required for vessel documentation to the NVDC, notifying them of your tonnage data submission to the MSC.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number.

The Coast Guard estimates that the average burden for this form is 2 hours. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: Commanding Officer, U.S. Coast Guard Marine Safety Center, 400 7th Street S.W., Washington, DC 20590-0001, or Office of Management and Budget, Paperwork Reduction Project (2115-0086), Washington, DC 20503.



## SURVEY REPORT FOR NON CONVENTION TONNAGE (SIMPLIFIED MEASUREMENT SYSTEM - SMS)

Only the following vessels may be measured by this simplified measurement system:  
self or non-self propelled vessels of less than 24 m (79 feet) in overall length

NAME OF SHIP:		OFFICIAL NUMBER:	CALL SIGNS:	PORT OF REGISTRY:
DATE KEEL LAID:	PROPULSION ENGINE:		SHIP TYPE AS REGISTERED:	
OWNERS:			PLACE OF BUILT:	
BUILDERS:			HULL NUMBER / MATERIAL:	

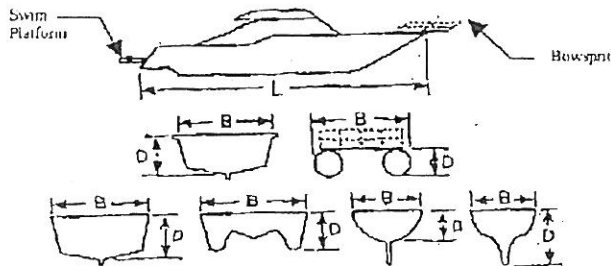
### PART A: VESSEL DIMENSIONS

**1. PROPULSION MACHINERY:**

- Located inside hull (e.g. inboard engine or stern drive)
- Located entirely outside hull (e.g. outboard motor)
- Non-self-propelled (not fitted with any propulsion machinery)

**2. OVERALL DIMENSIONS:**

Overall Length (L) = \_\_\_\_\_ metres  
 Overall Breadth (B) = \_\_\_\_\_ metres  
 Overall Depth (D) = \_\_\_\_\_ metres

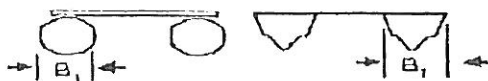


**3. SHAPE OF HULL(s):** (for tri-hull vessels, check the block best describing the center hull)

- Powerboat, ship
- Sailboat district keel (or no keel)
- Box or barge
- Sailboat Integral keel (keel is faired to hull)

**4. ADDITIONAL DIMENSIONS FOR TWIN HULL VESSELS:**

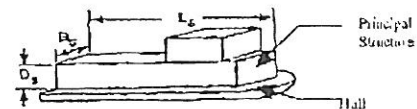
(Applies only if there is no buoyant volume in the structure that connects the hulls together.)  
 Individual Hull Breadth (B<sub>1</sub>) = \_\_\_\_\_ metres



**5. ADDITIONAL DIMENSIONS FOR LARGE DECK STRUCTURES:**

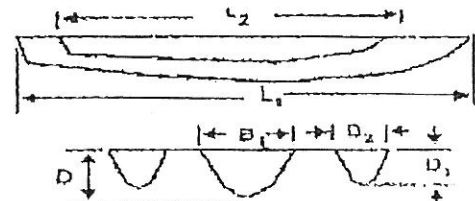
(Complete only if the volume of the principal deckhouse, cabin or similar structure above the main deck exceeds the hull volume)

Structure Length (L<sub>S</sub>) = \_\_\_\_\_ metres  
 Structure Breadth (B<sub>S</sub>) = \_\_\_\_\_ metres  
 Structure Depth (D<sub>S</sub>) = \_\_\_\_\_ metres



**6. ADDITIONAL DIMENSIONS FOR TRI-HULL VESSELS:**

Center Hull Length (L<sub>1</sub>) = \_\_\_\_\_ metres  
 Center Hull Breadth (B<sub>1</sub>) = \_\_\_\_\_ metres  
 Center Hull Depth (D) = \_\_\_\_\_ metres  
 Outer Hull Length (L<sub>2</sub>) = \_\_\_\_\_ metres  
 Outer Hull Breadth (B<sub>2</sub>) = \_\_\_\_\_ metres  
 Outer Hull Depth (D<sub>1</sub>) = \_\_\_\_\_ metres



PART B:

## TONNAGE CALCULATIONS USING THE SIMPLIFIED MEASUREMENT SYSTEM

Determine dimensions, Gross and Net Tonnages from the sketch that most resembles the vessel's hull shape  
(L = LENGTH; B = BREADTH; D = DEPTH). Indicate in metres

L = \_\_\_\_\_ B = \_\_\_\_\_ D = \_\_\_\_\_

**DEFINITION OF DIMENSIONS**

**LENGTH:** ( L ) is the horizontal distance between the outboard side of the foremost part of the stern and the outboard side of the aftmost part of the stem, excluding rudder, outboard motor brackets, and other similar fittings and attachments.

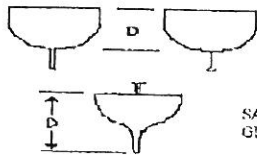
**BREADTH:** ( B ) is the horizontal distance taken at the widest part of the hull, excluding rub rails and deck caps, from the outboard side of the skin (outside planking or plating) on one side of the hull, to the outboard side of the skin on the other side of the hull.

**DEPTH:** ( D ) is the vertical distance taken at or near amidships from a line drawn horizontally through the uppermost edges of the skin (outside planking or plating) at the sides of the hull (excluding the cap rail, trunks, cabins, deck caps and deckhouses) to the outboard face of the bottom skin of the hull, excluding the keel. For a vessel that is designed for sailing and has a keel faired to the bottom of the hull, the keel is included in D if the distance to the bottom skin of the hull cannot be determined reasonably.

**GROSS TONNAGE**

**NET TONNAGE**

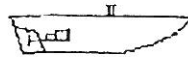
**1. SAILING HULLS**



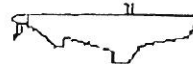
SAILING HULLS  
GROSS =  $\frac{0.51 L B D}{2.83}$

SAILING HULL (KEEL INCLUDE IN D)  
GROSS =  $\frac{0.375 L B D}{2.83}$

GT = \_\_\_\_\_



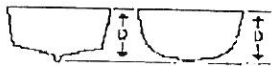
SAILING HULLS  
(PROPELLING MACHINERY IN HULL)  
NET = 0.9 GROSS



SAILING HULLS  
(NO PROPELLING MACHINERY IN HULL)  
NET = GROSS

NT = \_\_\_\_\_

**2. SHIP-SHAPE HULLS**



GROSS =  $\frac{0.67 L B D}{2.83}$

\* GT = \_\_\_\_\_

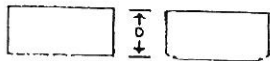
\* See Item 5



SHIP SHAPED, PONTOON  
AND BARGE HULLS  
(PROPELLING MACHINERY  
IN HULL)  
NET = 0.8 GROSS

NT = \_\_\_\_\_

**3. BARGE-SHAPED HULLS**



GROSS =  $\frac{0.84 L B D}{2.83}$

\* GT = \_\_\_\_\_

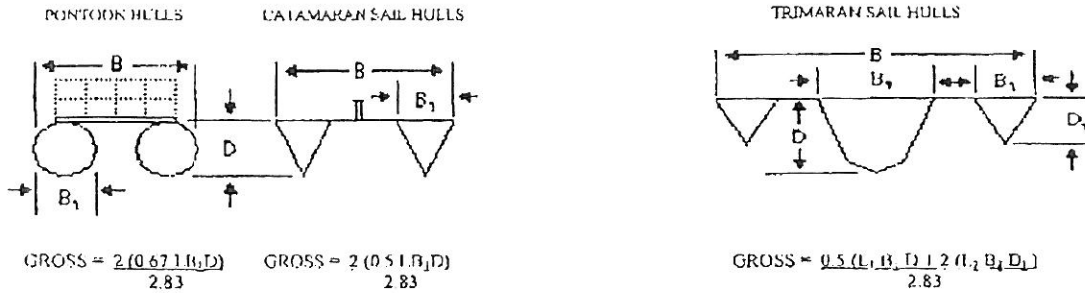
\* See Item 5



SHIP SHAPED, PONTOON  
AND BARGE HULLS  
(NO PROPELLING MACHINERY  
IN HULL)  
NET = GROSS

NT = \_\_\_\_\_

4. **MULTI-HULL VESSELS:** Gross tonnage of a multi-hull vessel is the sum of the gross tonnage of each hull as calculated using the formulas listed above.

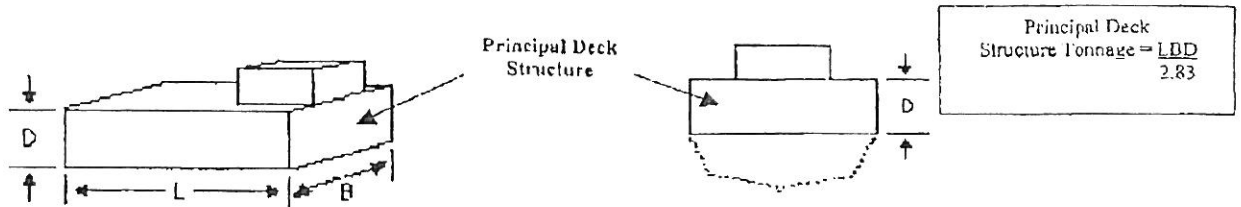


For Net Tonnages see Items 1, 2 and 3 above.

GT = \_\_\_\_\_

NT = \_\_\_\_\_

5. **DECK STRUCTURES:** For most vessels, the formulas listed above account for the volumes of deck structures such as cabins and lockhouses. However if deck structures are excessive in size, the gross tonnage is calculated by adding the principal deck structure tonnage to the gross tonnage (s) of the vessel's hull (s). Deck structures are considered excessive in size if the tonnage of the principal deck structure calculated using the formula below is equal to or exceeds the gross tonnage (s) of the vessel's hull (s).



(\* Applied to GT in Item 2 and 3)

\* GT = GT of Ship's Hull + GT of Principal Structure above main Deck

Place of Survey: \_\_\_\_\_ Date: \_\_\_\_\_ of \_\_\_\_\_ of \_\_\_\_\_  
 (Place of issue of Survey Report)      (Day)      (Month)      (Year)

Name and Signature of authorized surveyor issuing the Survey Report  
*Panama Maritime Documentation Services Inc.*



# PANAMA MARITIME AUTHORITY

International Representative Office, New York  
369 Lexington Ave., 14<sup>th</sup> Floor – New York, NY 10017, USA

Tel. (212) 869-6440

Fax (212) 575-2285

E-mail: jjaramillo@segumar.com

## APPLICATION FOR OPTIONAL SIMPLIFIED MEASUREMENT (Application for Tonnage Certificate for Yachts and Vessels of less than 24 meters)

### Forward completed applications to:

PANAMA MARITIME AUTHORITY  
International Representative Office, New York  
369 Lexington Ave, 14<sup>th</sup> Floor  
New York, NY 10017 U.S.A.

Only the following vessels may be measured by this “ Simplified Method “ :

- 1- Self-propelled commercial vessels of less than 24 meters overall length;
- 2- Barges of any length;
- 3- Pleasure vessels ( Yachts ) of any length whether or not engaged in international voyages.

.....  
Provide information requested below; incomplete applications will be returned.

#### 1- Owner’s / Operator’s name and full mailing address:

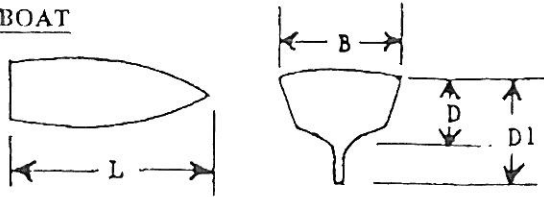
- 2- Vessel name \_\_\_\_\_
- 3- IMO No. \_\_\_\_\_
- 4- Call letters \_\_\_\_\_
- 5- Number of Masts \_\_\_\_\_
- 6- Builder \_\_\_\_\_
- 7- Hull / Model No. \_\_\_\_\_
- 8- Place of Built \_\_\_\_\_
- 9- Year of Built \_\_\_\_\_
- 10- Hull Material \_\_\_\_\_
- 11- Number of Decks \_\_\_\_\_
- 12- Use (Pleasure or Commercial ) \_\_\_\_\_
- 13- \* Designed for Sail ? .....yes ( ) .....no ( ).
- 14- Propelling Power in Hull ? .....yes ( ) .....no ( ).

\* Note: The term “ Designed for Sail “ means a vessel, whether or not equipped with an auxiliary motor, which has the fine lines of a sailing craft and is in fact propelled by sail or capable of being propelled by sail ( other than a mere steadying sail ).

Complete following page

15- Furnish dimensions for the sketch that most resembles the vessel's hull shape.  
 ( L= Length ; B= Breadth ; D= Depth ) , indicate if in feet and inches or meters.

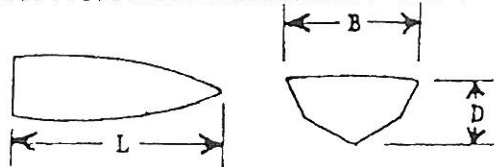
**SAILBOAT**



L = \_\_\_\_\_  
 B = \_\_\_\_\_  
 D1 = \_\_\_\_\_  
 D = \_\_\_\_\_

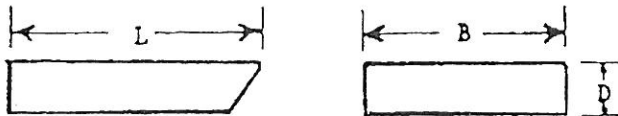
D1 only if actual hull depth ( D ) cannot determined.

**SHIP SHAPE HULL**



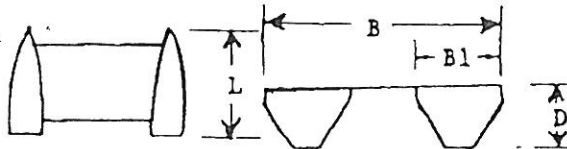
L = \_\_\_\_\_  
 B = \_\_\_\_\_  
 D = \_\_\_\_\_

**BARGE SHAPE HULL**



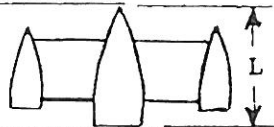
L = \_\_\_\_\_  
 B = \_\_\_\_\_  
 D = \_\_\_\_\_

**MULTI-HULL VESSEL  
 CATAMARAN**

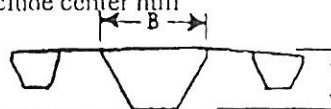


L = \_\_\_\_\_  
 B = \_\_\_\_\_  
 B1 = \_\_\_\_\_  
 D = \_\_\_\_\_

**TRIMARAN**

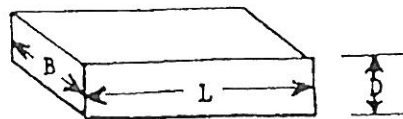


In addition to above Catamaran dimensions include center hull dimensions.



L = \_\_\_\_\_  
 B = \_\_\_\_\_  
 D = \_\_\_\_\_

Are there any deckhouses disproportionate to the hull ( e. g. houseboat, etc.)? ( )yes ( )no. If yes, provide dimensions.



L = \_\_\_\_\_  
 B = \_\_\_\_\_  
 D = \_\_\_\_\_

Note: Under the provisions of law No. 2 of January 17<sup>th</sup>, 1980, a person making a false or fraudulent statement in an application may be fined up to 10,000 dollars.

I certify that all information submitted is correct.

\_\_\_\_\_  
 Signature of Owner or Agent