

SIMPLIFIED MEASUREMENT SYSTEM



INTERPRETATIONS

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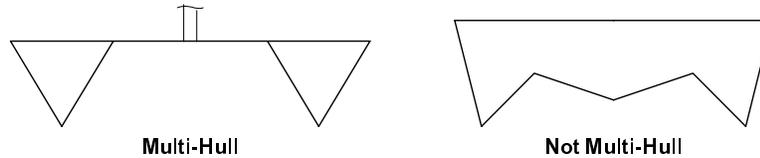
69.201 PURPOSE

This subpart prescribes the procedures for measuring a vessel under the Simplified Measurement System described in 46 U.S.C. chapter 145, subchapter III.

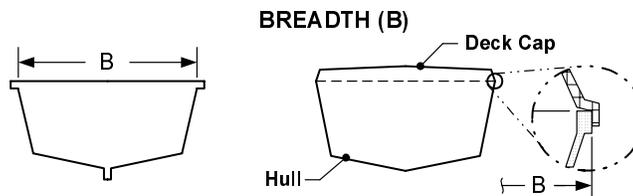
69.203 DEFINITIONS

As used in this subpart, and in Coast Guard Form CG-5397 under § 69.205 –

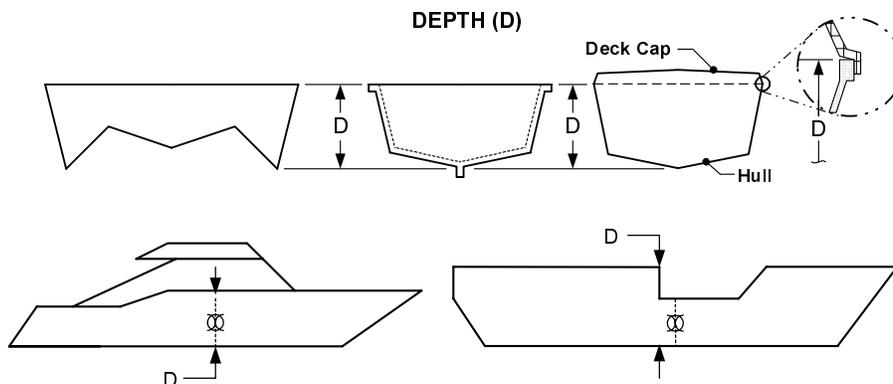
MULTI-HULL VESSEL means a vessel with more than one distinct hull. To be considered a distinct hull, the hull must connect to another hull only with structure that is not a part of the vessel's buoyant hull envelope.



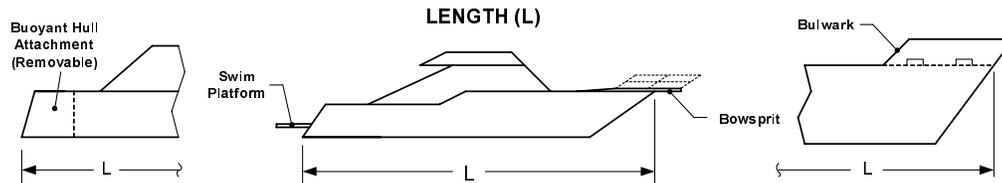
OVERALL BREADTH means the horizontal distance taken at the widest part of the hull, excluding rub rails, from the outboard side of the skin (outside planking or plating) on one side of the hull to the outboard side of the skin on the other side of the hull.



OVERALL DEPTH means the vertical distance taken at or near midships 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) to the outboard face of the bottom skin of the hull, excluding the keel. *Depth is measured at amidships for all cases except those in which there is a longitudinal discontinuity in the deck that occurs within 5% of the overall length on either side of amidships. In such cases, the greater depth is used.* For a vessel that is designed for sailing and has a keel faired to the hull, the keel is included in the "overall depth" if the distance to the bottom skin of the hull cannot be determined reasonably (See § 69.201(a)(5)).



OVERALL LENGTH means the horizontal distance between the outboard side of the foremost part of the stem and the outboard side of the aftermost part of the stern, excluding rudders, outboard motor brackets, and other similar fittings and attachments. *Also excluded from length are non-buoyant attachments such as bulwarks, bowsprits, overhanging decks, swim platforms and stern-wheel supports. Buoyant hull structures both fixed and removable are included in the overall length, and consequently in tonnage.*

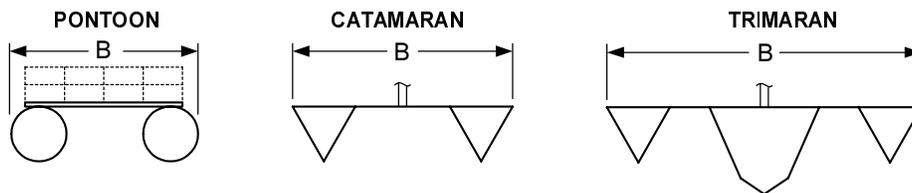


AMIDSHIPS or **MIDSHIPS** means the midpoint of the overall length.

NOTE: The term “overall” as used above for breadth, depth and length differs from the naval architectural term of art for which all extended fittings of the hull are included.

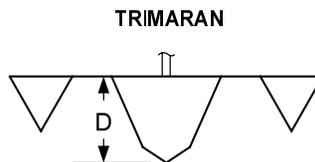
REGISTERED BREADTH means –

- (a) For a single-hull vessel, the vessel’s overall breadth; and
- (b) For a multi-hull vessel, the horizontal distance taken at the widest part of the complete vessel between the outboard side of the skin (outside planking or plating) on the outboardmost side of one of the outboardmost hulls (*e.g., port hull*) to the outboard side of the skin on the outboardmost side of the other outboardmost hull (*e.g., starboard hull*), excluding rubrails.



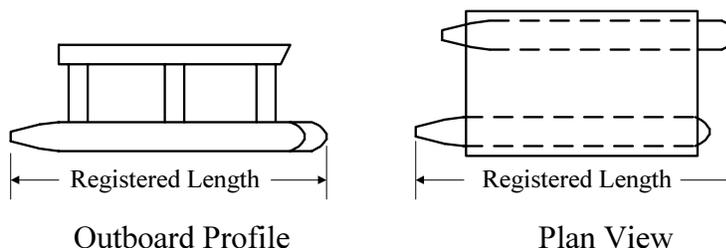
REGISTERED DEPTH means –

- (a) For a single-hull vessel, the vessel’s overall depth; and
- (b) For a multi-hull vessel, the overall depth of the deepest hull.



REGISTERED LENGTH means –

- (a) For a single-hull vessel, the vessel's overall length; and
- (b) For a multi-hull vessel, the horizontal distance between the outboard side of the foremost part of the stem of the foremost hull and the outboard side of the aftermost part of the stern of the aftermost hull, excluding fittings and attachments.



STEM means the foremost boundary of the buoyant hull envelope.

STERN means the aftermost boundary of the buoyant hull envelope.

VESSEL DESIGNED FOR SAILING means a vessel which has the fine lines of a sailing craft and is capable of being propelled by sail, whether or not the vessel is equipped with an auxiliary motor, a decorative sail, or a sail designed only to steady the vessel.

69.205 APPLICATION FOR MEASUREMENT SERVICES

To apply for measurement under the Simplified Measurement System, the owner of the vessel must complete either an Application for Simplified Measurement (form CG-5397), or a Builder's Certification and First Transfer of Title (form CG-1261) which has the information in Part III "Dimensions" completed, and submit it to the National Vessel and Documentation Center (NVDC). *The preceding sentence will be reworded in the next revision of the regulations to state that a vessel owner must submit either an Application (form CG-5397), or a copy of a Builder's Certificate (CG-1261). The former is completed by the vessel owner, and the latter by the vessel builder or manufacturer.*

69.207 MEASUREMENTS

- (a) All lengths and depths must be measured in a vertical plane at centerline and breadths must be measured in a line at right angles to that plane. All dimensions must be expressed in feet and inches to the nearest half inch or in feet and tenths of a foot to the nearest .05 of a foot.

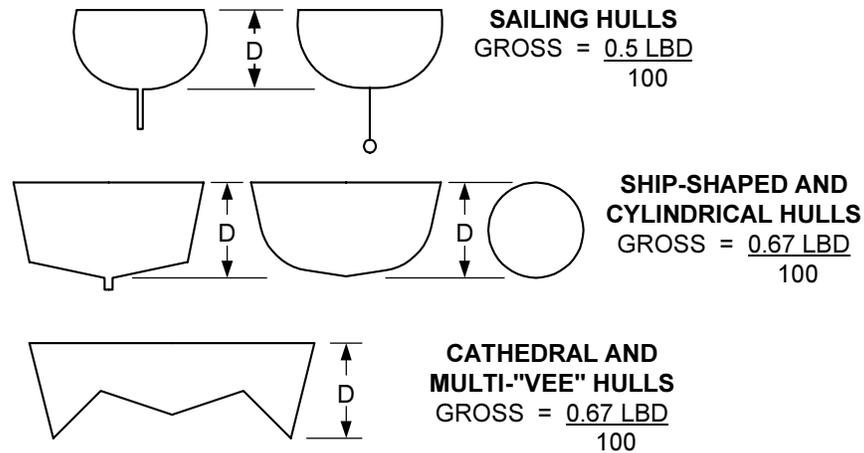
Length is measured in a vertical (longitudinal) plane at the centerline of the hull(s). Depth is measured in a vertical (transverse) plane at right angles to the centerline at or near amidships. Breadth is measured in a vertical (transverse) plane at right angles to the centerline at the widest part of the hull.

- (b) For a multi-hull vessel, each hull must be measured separately for overall length, breadth, and depth and the vessel as a whole must be measured for registered length, breadth, and depth.
- (c) The Coast Guard may verify dimensions of vessels measured under this subpart.

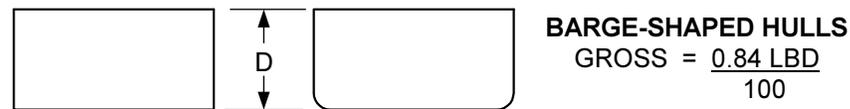
69.209 CALCULATION OF TONNAGES

(a) GROSS TONNAGE

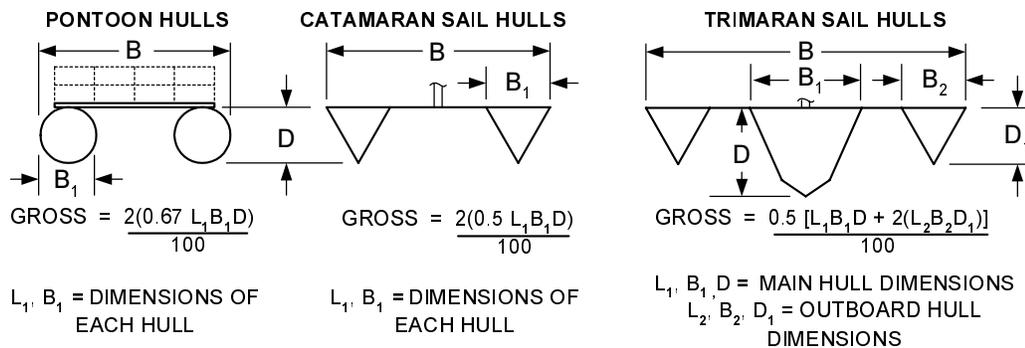
- (1) Except as in paragraph (a)(2) through (a)(5) of this section, the gross tonnage of a vessel designed for sailing is one-half of the product of its overall length, overall breadth, and overall depth (LBD) divided by one hundred (i.e., $0.50 \text{ LBD}/100$), and the gross tonnage of a vessel not designed for sailing is $0.67 \text{ LBD}/100$.



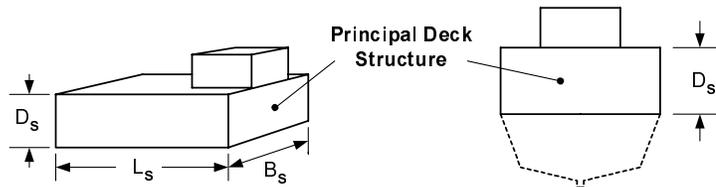
- (2) The gross tonnage of a vessel with a hull that approximates in shape a rectangular geometric solid (barge-shape) is $0.84 \text{ LBD}/100$.



- (3) The gross tonnage of a multi-hull vessel is the sum of all the hulls as calculated under this section.

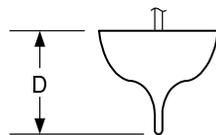


- (4) If the volume of the principal deck structure of a vessel is as large as, or larger than, the volume of the vessel's hull, the volume of the principal deck structure in tons of 100 cubic feet is added to the tonnage of the hull to establish the vessel's gross tonnage. The volume of the principal deck structure of a vessel is determined by the product of its average dimensions.



$$\text{PRINCIPAL DECK STRUCTURE TONNAGE} = \frac{L_s B_s D_s}{100}$$

- (5) If the overall depth of a vessel designed for sailing includes the keel, only 75 percent of that depth is used for gross tonnage calculations.

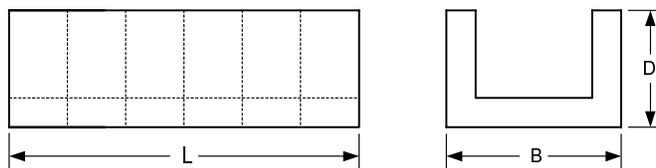


SAILING HULLS (KEEL INCLUDED IN D)

$$\text{GROSS} = \frac{0.75 (0.5 \text{ LBD})}{100}$$

- (6) The gross tonnage of a drydock having wingwalls that are part of the buoyant hull envelope is calculated assuming the depth includes the height of the wingwalls and applying a shape coefficient of 0.84 as follows:

TYPICAL DRYDOCK

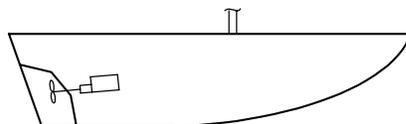


$$\text{DRYDOCK TONNAGE GROSS} = \frac{0.84 \text{ LBD}}{100}$$

(b) NET TONNAGE

- (1) For a vessel having propelling machinery in its hull –

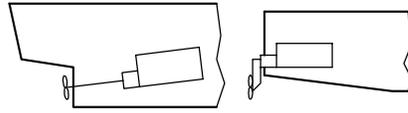
- (i) The net tonnage is 90 percent of its gross tonnage, if it is a vessel designed for sailing; or



**SAILING HULLS
(PROPELLING MACHINERY IN HULL)**

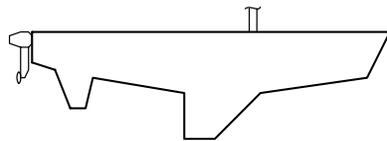
$$\text{NET} = 0.9 \text{ GROSS}$$

- (ii) The net tonnage is 80 percent of its gross tonnage, if it is not designed for sailing.

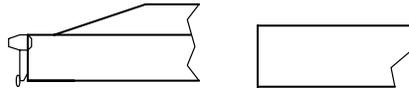


**SHIP-SHAPED, PONTOON AND
BARGE HULLS
(PROPELLING MACHINERY IN
HULL)
NET = 0.8 GROSS**

- (2) For a vessel having no propelling machinery in its hull, the net tonnage is the same as its gross tonnage.



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



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

(c) TONNAGE OF NOVEL CRAFT

The determination of tonnage for novel craft should be referred to the USCG Marine Safety Center. Examples of novel craft are Wing-in-Ground (WIG), SLICE and Small Waterplane Twin Hull (SWATH) craft.