

(l) Arrangement plans.

[CGD 87-015b, 54 FR 37657, Sept. 12, 1989, as amended by CGD 95-014, 60 FR 31606, June 15, 1995]

**§ 69.107 Gross and net tonnages.**

(a) Gross tonnage is the sum of the following tonnages, less certain spaces exempt under §69.117:

- (1) Under-deck tonnage (§ 69.109).
- (2) Between-deck tonnage (§69.111).
- (3) Superstructure tonnage (§69.113).
- (4) Excess hatchway tonnage (§69.115(c)).

(5) Tonnage of framed-in propelling machinery spaces included in calculating gross tonnage (§69.121(d)(1)).

(b) Net tonnage is gross tonnage less deductions under §§69.119 and 69.121.

**§ 69.109 Under-deck tonnage.**

(a) *Defined.* “Under-deck tonnage” means the tonnage of the space below the line of the tonnage deck, as that volume is calculated under this section.

(b) *Method of calculating tonnage.* Under-deck tonnage is calculated by applying Simpson’s first rule using the tonnage length and the areas of the transverse sections prescribed by this section.

(c) *Identifying the tonnage deck.* In vessels with two or less decks, the tonnage deck is the uppermost complete deck. In vessels with more than two decks, the tonnage deck is the second deck from the keel as determined in paragraph (d) of this section.

(d) *Enumerating the decks to identify the second deck from the keel.* Only decks without openings that permit space below to be exempt from inclusion in under-deck tonnage are enumerated. Partial decks are not considered decks for the purpose of enumerating decks. However, the presence of engine and boiler casings, peak tanks, or cofferdams that penetrate a deck do not disqualify the deck from being enumerated.

(e) *Identifying the line of the tonnage deck.* (1) If the tonnage deck runs in a continuous line from stem to stern, the line of the tonnage deck is the longitudinal line at the underside of the tonnage deck.

(2) If the tonnage deck runs at different levels from stem to stern, the

line of the tonnage deck is the longitudinal line of the underside of the lowest portion of that deck parallel with the upper portions of that deck. (See §69.123, figures 1 and 2.) Spaces between the line of the tonnage deck and the higher portions of that deck are not included in under-deck tonnage.

(f) *Tonnage length.* (1) “Tonnage length” means the length of a horizontal straight line measured at the centerline of the vessel from the point forward where the line of the tonnage deck intersects the line of the inboard faces of the ordinary side frames to the point aft where the line of the tonnage deck intersects the inboard face of the transom frames or cant frames. (See §69.123, figure 3.)

(2) For a vessel having a headblock or square end with framing which extends from the tonnage deck to the bottom of the vessel, the tonnage length terminates on the inboard face of the head block or end framing. When a headblock extends inboard past the face of the end side frames or when the headblock plates are excessive in length, the tonnage length terminates at the extreme end of the vessel less a distance equal to the thickness of an ordinary side frame and shell plating. (See §69.123, figure 4.)

(3) For a vessel having a square bow or stern and tonnage deck with camber, the effect of the camber on the tonnage length must be considered. The tonnage length must be measured below the tonnage deck at a distance equal to one-third of round camber and one-half of straight pitch camber.

(g) *Division of vessel into transverse sections.* (1) Except as under paragraph (m)(1)(iii) of this section, the tonnage length is divided into an even number of equal parts as indicated in the following table:

Class	Tonnage length	Divisions
1 .....	50 ft. or less .....	6
2 .....	Over 50 ft. but not exceeding 100 ft	8
3 .....	Over 100 ft. but not exceeding 150 ft.	10
4 .....	Over 150 ft. but not exceeding 200 ft.	12
5 .....	Over 200 ft. but not exceeding 250 ft.	14
6 .....	Over 250 ft. ....	16