

MEASUREMENT OF U.S. VESSELS OF WAR



TONNAGE GUIDE 2

CH-5

TABLE OF CONTENTS

TABLE OF CONTENTS	2
1. PURPOSE	3
2. REFERENCES	3
3. APPLICABILITY	3
4. U.S. TONNAGE MEASUREMENT	3
(a) MEASUREMENT SYSTEMS	3
(b) APPLICABILITY	4
(c) REMEASUREMENT CRITERIA	4
5. PANAMA CANAL MEASUREMENT.....	4
6. SUEZ CANAL MEASUREMENT.....	4
(a) MEASUREMENT SYSTEMS	4
(b) APPLICABILITY	5
(c) FUEL ASSESSMENTS.....	5
7. TONNAGE CERTIFICATE MAINTENANCE.....	5
(a) REPLACEMENT CERTIFICATES.....	5
(b) INACTIVATED VESSELS	5
(c) STRICKEN VESSELS.....	6
(d) FOREIGN MILITARY SALES	6
(e) MISLE DATA SYSTEM	6
8. REQUESTS FOR MEASUREMENT SERVICES.....	6
(a) NEW CONSTRUCTION VESSELS.....	6
(b) EXISTING VESSELS.....	6
9. CONTACT INFORMATION.....	7
10. DISCLAIMER	7
11. FURTHER INFORMATION	7

TONNAGE GUIDE 2

1. PURPOSE

This Guide provides general information on requirements for tonnage measurement of U.S. “Vessels of War” (aka ships of war or warships) for persons responsible for acquiring and managing ship certificates. It specifically addresses measurement under rules or regulations of the United States, the Panama Canal Authority, and the Suez Canal Authority.

2. REFERENCES

- (a) Title 46, United States Code, Sections 2101 and 14104 (46 U.S.C. 2101 and 14104)
- (b) Title 46, Code of Federal Regulations, Part 69 (46 CFR 69)
- (c) Regulation for the Admeasurement of Vessels to Assess Tolls For Use of the Panama Canal, current edition, under agreement of the government of Panama.
- (d) Suez Canal Authority Rules of Navigation, Part IV, as amended
- (e) NAVSEA Technical Manual, series

3. APPLICABILITY

This Guide applies to U.S. Vessels of War as defined in the United Nations Convention on the Law of the Sea (UNCLOS), referenced as ships of war in the International Convention on Tonnage Measurement of Ships 1969, and implemented as reference (a). A Vessel of War is a vessel A) belonging to the armed forces of a country; B) bearing the external marks distinguishing vessels of war of that country; C) under the command of an officer commissioned by the government of that country and whose name appears in the appropriate service list or its equivalent; and D) staffed by a crew under regular armed forces discipline.

Navy combatants, certain Navy auxiliaries not operated by the Military Sealift Command, Coast Guard cutters, and vessels from others services like Army landing craft meet this definition. Other vessels, for example Military Sealift Command ships which are manned by civilian crews, do not, even though these vessels may perform missions similar to those performed by some vessels of war. Subpart 69.15(c) of reference (b) requires the Coast Guard to admeasure all Coast Guard vessels and Navy Vessels of War. Other Vessels of War are admeasured under Coast Guard discretion per paragraph (d) of that subpart.

4. U.S. TONNAGE MEASUREMENT

Tonnage-based navigation, pollution control, sea-service requirements for mariners, and other domestic or port state statutes may apply to vessels of war, necessitating their measurement under the provisions of reference (a). In many cases, a tonnage certificate will be the only internationally recognized document a warship has which identifies it as such. Regulations for tonnage measurement are found in reference (b). Specific tonnage measurement requirements that apply to Vessels of War under United States statutes and regulations are summarized below:

- (a) **MEASUREMENT SYSTEMS** Since the International Convention on Tonnage Measurement of Ships (ITC69) entry to force in 1982, the primary measurement system used for U.S. Vessels of War is the Convention Measurement System. Although Vessels of War are not subject to ITC69, U.S. law and regulations have implemented the associated method of measurement to align with foreign contracting governments. Some existing vessels built prior to the end of the convention’s phase-in date in 1994 may still be operating with an older Regulatory (aka National) Measurement System. Vessels of War under 79ft must be measured under one of the Regulatory Measurement Systems based on applicability, most likely Subpart E “Simplified.” These systems all yield gross and net tonnage values which are reflective of overall size and carrying capacity, respectively, as opposed to displacement (weight).

(b) **APPLICABILITY** Requirements on measurement system applicability are found in reference (b), and summarized as follows:

(1) **Convention System** This is the primary system used to measure self-propelled Vessels of War that are 79 feet and over in overall length, and is based on the measurement system in ITC69.

(2) **Standard and Dual Regulatory Systems** These measurement systems are generally no longer used to measure vessels of war, although U.S. Tonnage Certificates for vessels measured under these systems remain valid.

(3) **Simplified Regulatory System** This measurement system applies to vessels of war of less than 79 feet in overall length, and those 79 feet or more in overall length that are non-self-propelled and engage on domestic and/or Great Lakes voyages only.

(c) **REMEASUREMENT CRITERIA** U.S. Tonnage Certificates do not have expiration dates. They are valid for the life of the vessel, unless the vessel undergoes alterations affecting the structure (such as adding to the superstructure or moving internal bulkheads), service (no longer a Vessel of War), or use of any spaces (such as changing the purpose of any space or layout of any propulsion space). The responsible office should contact the Coast Guard upon intent to alter a vessel. Refer to subpart 69.19 of reference (b) for remeasurement requirements.

5. PANAMA CANAL MEASUREMENT

Neither a Panama Canal Tonnage Certificate nor a Certification of Volumes is issued to a Vessel of War. As needed, the Panama Canal Authority (ACP) takes these values from the vessel's U.S. tonnage certificate convention tonnage values. The ACP began assessing canal transit fees (tolls) on Vessels of War based on their displacement tonnage in 2016, so that a Panama Canal certificate would not be needed.¹ Upon arrival, the ACP may request unclassified documentation showing the full load displacement. The vessel typically produces a publication of the ship's full load displacement / drafts for security purposes, and fees are conservatively estimated based on that value.

The ACP changed its warship policy under Reference (c) in 2024, and no longer considers all warships applicable to this toll structure. Only 'Navy combatants' are now assessed fees based on displacement; others are classified by the ACP as 'naval auxiliaries' and assessed fees as if they were a commercial vessel. This includes other Navy warships, Coast Guard cutters, Army landing craft, and some other vessels that meet the statutory and international treaty definitions of warship. These vessels should still receive a tonnage certificate designating them as a Vessel of War, for which the ACP will follow the associated protocols required by the Panama Canal Treaties of 1977 (Panama Canal Treaty & Neutrality Treaty), despite assessing fees as a 'naval auxiliary.'

6. SUEZ CANAL MEASUREMENT

The Coast Guard issues Suez Canal Special Tonnage Certificates to certify tonnage used by the Suez Canal Authority when assessing canal transit fees under its regulations (reference (d)). The Suez Canal Authority is the entity of the Government of Egypt charged with the administration and operation of the Suez Canal. Specific requirements on tonnage measurement that apply to vessels of war are summarized below:

(a) **MEASUREMENT SYSTEMS** Two methods are used to measure vessels of war which transit the Suez Canal, both of which establish a net tonnage value upon which transit fees are based. This tonnage is a volumetric measure established under the Constantinople Convention of 1888,

¹ One displacement ton is equivalent to one long ton or 35 cubic feet of salt water.

similar to net tonnage assigned under the U.S. Standard Regulatory Measurement system. A brief discussion of each method follows.

- (1) **Rule 1** This method involves detailed measurements of a vessel's interior spaces, and certification of the resulting tonnage by the Coast Guard on a Suez Canal certificate. The Coast Guard transmits this certificate to the vessel.
- (2) **Rule 2** This method uses an empirical formula to calculate net tonnage. The formula is applied by the Suez Canal Authority upon arrival of the vessel at the canal.
- (b) **APPLICABILITY** All vessels of war for which a transit of the Suez Canal is expected during the life of the vessel should be measured under Rule 1. Rule 2 is used only when a vessel of war arrives at the Suez Canal without a valid Suez Canal certificate. **NOTE: Use of Rule 2 may result in higher transit fees and delays.**
- (c) **FUEL ASSESSMENTS** Under certain circumstances, fuel tanks (or portions thereof) that are located in the vessel's inner bottom are listed on the Suez Canal certificate. For the fuel tanks so listed, the Suez Canal Authority may increase the transit fee, depending on whether or not the tanks contain fuel during the transit. If this is done, the Suez Canal Authority will add the tonnage of the fuel tanks that are not in ballast during the transit to the Suez Canal net tonnage that is specified on the front of the Suez Canal certificate. This addition of tankage to the tonnage admeasurement is not necessary for newer vessels of war, since the Coast Guard already includes all double bottom tanks in the vessel's under-deck tonnage.

7. TONNAGE CERTIFICATE MAINTENANCE

The vessel's crew is responsible for maintaining any Panama or Suez Canal certificate issued to the vessel in a secure location on board the vessel, regardless of whether the certificate is a paper or electronic document.² The Coast Guard maintains U.S. Tonnage Certificates, as well as all other tonnage certificates it has issued, in the vessel's permanent files (Federal Tonnage Archive). There is no requirement to maintain a copy of the U.S. certificate onboard, however, the information on it may be applicable to the vessel's operations in U.S. and foreign waters, and may be requested by port operators before the vessel's entry.

- (a) **REPLACEMENT CERTIFICATES** The Coast Guard will provide a replacement electronic copy of a paper certificate, or electronically signed³ digital certificate to the vessel in the event that the certificate is lost. Reissued certificates will be electronic unless a paper version is requested and approved for specific reasons.
- (b) **INACTIVATED VESSELS** For an inactivated vessel which may be used as a "mobilization asset", the Panama and/or Suez Canal certificate should be maintained on board the vessel as described in this section until such time as the vessel is stricken. Any U.S. Tonnage Certificate, or copy thereof, found on board an inactivated vessel not identified as a "mobilization asset" should be destroyed.

² In January 2018, the Coast Guard began issuing electronic tonnage certificates in lieu of paper certificates, consistent with IMO FAL.5/Circ.39/Rev.2 dated 20 April 2016, *Guidelines for the Use of Electronic Certificates*, and CG-CVC Policy Letter 17-09 dated 27 November 2017, *Issuance and Acceptance of Electronic Certificates*.

³ The term "electronically signed" refers to an electronic document formerly issued by the Marine Safety Center which bears a digitized (as opposed to digital) signature. See Marine Safety Center Business Procedure B-12 dated 27 July 2006, *Electronically Signed Marine Safety Center Documents*.

- (c) **STRICKEN VESSELS** Any Coast Guard issued tonnage certificate, or copy thereof, found on the vessel should be destroyed, unless the vessel will be making a Panama or Suez Canal transit for which a previously issued certificate is still valid. In that case, the certificate should be destroyed once the transit is completed and the Coast Guard should be notified.
- (d) **FOREIGN MILITARY SALES** Tonnage certificates issued by the Coast Guard are no longer valid after a vessel of war is transferred to another government. Accordingly, any Coast Guard issued tonnage certificate, or copy thereof, found on the vessel should be destroyed and the Coast Guard should be notified.
- (e) **MISLE DATA SYSTEM** The Coast Guard maintains electronic tonnage certifying documents for vessels of war in its MISLE data system, which can be accessed by Coast Guard field units and certain headquarters components. The Coast Guard Marine Safety Center uploads these documents to MISLE upon their issuance.

8. REQUESTS FOR MEASUREMENT SERVICES

The Coast Guard Marine Safety Center is responsible by regulation for providing tonnage measurement services to Coast Guard vessels and Navy Vessels of War. Other warships are admeasured at the discretion of the Coast Guard. This protocol follows certification requirements in 46 CFR 69 and are generally free of charge to the recipient, regardless of whether it is the federal government or a shipyard. Contact information is provided in Section 9 of this Guide.

- (a) **NEW CONSTRUCTION VESSELS** The appropriate authority, typically the shipyard, should complete a measurement application form and submit it to this office. Forms are available on our website (<http://www.dco.uscg.mil/msc/>). Instructions are provided on the reverse of each form.

(1) Formal Measurement (*Overall Length \geq 79 feet*)

- a. Complete an *Application for Formal Tonnage Measurement*, and submit it to the Coast Guard Marine Safety Center's Tonnage Division (MSC-4) shortly after the keel is laid, along with proof of the Keel Laid Date (or similar stage of construction).
- b. When the design plans are available, but at least 6 months prior to launch, submit the hull geometry model, general arrangements, inboard and outboard profiles, shell expansion, structural plans, and area-volume calcs for spaces.
- c. MSC-4 will complete a tonnage calculation based on the plans and schedule an on-site survey if it is the parent vessel of the class. The yard should plan to have the vessel surveyed on blocks so the principal dimensions (including rudder post location), exterior hull geometry, and general arrangements can be verified. Sister vessels are typically verified by government staff such as Navy SUPSHIP or USCG PRO.
- d. After the vessel is substantially complete, the certificates are issued; typically just before yard trials, or a few weeks before delivery.

(2) Simplified Measurement Application (*Overall Length $<$ 79 feet*) Complete an *Application for Simplified Measurement* (Form 5397) and retain the form as evidence of the vessel's tonnage measurement. A copy of the form may be optionally submitted to MSC-4 for purposes of tonnage data entry into the MISLE system and/or verification.

- (b) **EXISTING VESSELS** A designated representative of the crew or managing agency office should submit a written request for validation of tonnage or remeasurement to MSC-4 whenever the vessel is altered as noted in subpart 69.19 of reference (b).

9. CONTACT INFORMATION

Contact information for vessel tonnage measurement services by the Coast Guard are provide below.

Commanding Officer
Coast Guard Marine Safety Center (MSC-4) Stop 7430
2703 Martin Luther King Jr. Ave SE
Washington, DC 20593-7430
Email (*for all official correspondence*): msc@uscg.mil

Point of Contact:

Ms. Tyler Nedzi, Admeasuring Officer
Voice: (571) 610-6732
Email: Tyler.E.Nedzi@uscg.mil

Alternate Point of Contact:

Mr. Sean Brady, U.S. Tonnage Program Administrator
Voice: (571) 607-5361
Email: Sean.T.Brady@uscg.mil

10. DISCLAIMER

This Guide is intended to provide information to assist industry, mariners, the general public, and the Coast Guard, as well as other federal and state regulators, in understanding statutory and regulatory requirements. It is not intended as, nor should it be construed to represent, a revision of or substitute for applicable statutes or regulations or established interpretations of either.

11. FURTHER INFORMATION

General information on the U.S. Tonnage Measurement Program, including related Coast Guard Marine Safety Center Tonnage publications, is available on the U.S. Tonnage Publications page of our website (<http://www.dco.uscg.mil/msc/>). For further information on Navy vessel measurement, including details on calculating displacement and requirements for tonnage certificate maintenance, refer to Chapter 096 of reference (e), NAVSEA Technical Manual S9086-C6-STM-000 as applicable.



S. T. BRADY
Chief, Tonnage Division
U.S. Coast Guard
By direction