

MEASUREMENT OF NAVY AND COAST GUARD VESSELS



TONNAGE GUIDE 2

CH-4

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1. Purpose

TONNAGE GUIDE 2

1. PURPOSE

This Guide provides general information on requirements for tonnage measurement of Navy and Coast Guard vessels. 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) Suez Canal Authority Rules of Navigation, Part IV, as amended
- (d) NAVSEA Technical Manual, S9086-C6-STM-000

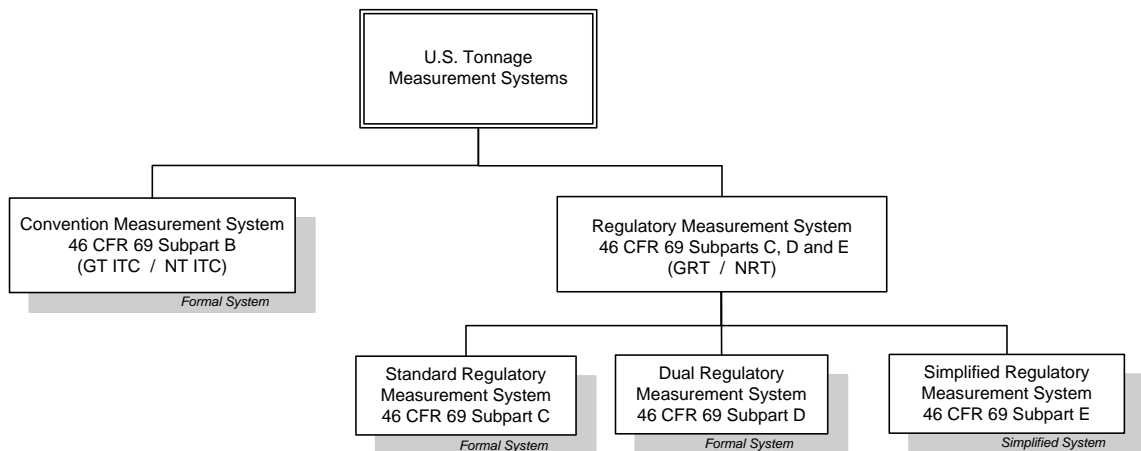
3. APPLICABILITY

This Guide applies to U.S. Navy and U.S. Coast Guard vessels that are categorized as "vessels of war" under the definitions of reference (a). Navy warships, certain Navy auxiliaries not operated by the Military Sealift Command, and Coast Guard cutters and boats meet these definitions, whereas Military Sealift Command vessels (which are manned by civilian crews) do not, even though these vessels may perform missions similar to those performed by some vessels of war.

4. U.S. TONNAGE MEASUREMENT

Tonnage-based navigation, pollution control, sea-service requirements for mariners, and other domestic statutes and regulations, may apply to vessels of war, necessitating their measurement under the provisions of reference (a). The Coast Guard 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** The Coast Guard uses one of four U.S. tonnage measurement systems to measure a vessel of war. These systems all yield gross and net tonnage values which are reflective of overall size and carrying capacity, respectively, as opposed to displacement (weight). The figure below illustrates the relationships between these systems, and is followed by brief descriptions of each.



- (1) **Formal Measurement** There are three formal measurement systems: the Convention Measurement System, the Standard Regulatory Measurement System, and the Dual Regulatory Measurement System. Formal systems employ detailed computational methods using measurements of the entire vessel, and which also take into account the use of vessel spaces. For vessels of war, the Coast Guard certifies gross and net tonnages calculated under these systems on U.S. Tonnage Certificates (formerly Certificates of Admeasurement). The Coast Guard Marine Safety Center enters associated tonnages for each vessel of war into the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) data system.
 - (2) **Simplified Measurement** There is a single simplified measurement system: the Simplified Regulatory Measurement System. This system employs a simplified computational method using hull dimensions as principal inputs. For a vessel of war (or other "undocumented" vessel, gross and/or net tonnage is calculated on an "as-needed" basis by interested parties, and certified on an Application for Simplified Measurement (Form CG-5397).
- (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 of the International Convention on Tonnage Measurement of Ships, 1969.
 - (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 of a significant enough magnitude to warrant remeasurement. Refer to reference (b) for remeasurement requirements.

5. PANAMA CANAL MEASUREMENT

With some exceptions, the Panama Canal Authority (ACP) assesses canal transit fees (tolls) on vessels of war based on their displacement tonnage, so that a tonnage certificate is not issued.¹ Instead, upon arrival, the ACP requests documentation showing the full load displacement (such as the hydrostatic Curves of Form, or for Coast Guard vessels, Part IIA of the cutter's Damage Control book for vessels that are 210 feet or more in length, or the Stability and Loading Data Booklet for vessels that are less than 210 feet in length). Should the information not be available, the ACP may use any acceptable and practicable method, including obtaining displacements from commercial publications (e.g., Jane's Fighting Ships book). One displacement ton is equivalent to one long ton or 35 cubic feet of salt water.

¹ ACP regulations provide for use of displacement tonnage for "warships" which, under a new ACP toll structure effective April 1, 2016, does not include military and naval transports, colliers, supply vessels, and hospital ships. In the past, ACP has treated amphibious warfare ships, military training ships and cutters, and military patrol boats as warships. Conversely, military transports, tank ships, supply and repair ships, buoy tenders, and polar ice breakers have been assessed tolls in a manner similar to commercial vessels (e.g., based on Panama Canal Universal Measurement System (PC/UMS) Net Tonnage appearing on an appropriate Panama Canal tonnage certificate, or deadweight tonnage).

6. SUEZ CANAL MEASUREMENT

The Coast Guard issues Suez Canal Special Tonnage Certificates to certify tonnage used by the Suez Canal Authority to assesses canal transit fees under its regulations (reference (c)). 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 similar to the net tonnage under the U.S. Standard or Dual 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.*
- (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. For newer vessels of war, the Coast Guard 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 along with other official vessel documents, regardless of whether the certificate is a paper or electronic document.² The Coast Guard maintains U.S. Tonnage Certificates in its files, and there is no requirement to maintain a copy of this certificate onboard.

- (a) **REPLACEMENT CERTIFICATES** The Coast Guard will provide an electronic or electronically signed³ replacement Panama or Suez Canal certificate to the vessel in the event that the certificate is lost. If no such electronic document is available, the Coast Guard will provide a certified true paper copy of the certificate as a replacement upon authorization from NAVSEA. Such a replacement bears an embossed official seal of the Coast Guard, and is an acceptable legal document.
- (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

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*.

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.

- (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.
- (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.
- (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 for providing tonnage measurement services for Navy and Coast Guard vessels of war. Contact information is provided in Section 9 of this Guide.

- (a) **NEW CONSTRUCTION VESSELS** The appropriate authority should complete a measurement application form, and submit it (if applicable), as follows. 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* ≥ 79 feet)** Complete an *Application for Formal Tonnage Measurement*, and submit it to the Coast Guard Marine Safety Center's Tonnage Division (MSC-4).
 - (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 the Coast Guard Marine Safety Center's Tonnage Division (MSC-4) for purposes of tonnage data entry into the MISLE system.
- (b) **EXISTING VESSELS** The Commanding Officer, Navigator or other designated representative of the crew should submit a written request for a replacement tonnage certificate to the Coast Guard Marine Safety Center's Tonnage Division (MSC-4).⁴ Email messages are acceptable.

9. CONTACT INFORMATION

Addresses and other contact information for the Navy and Coast Guard vessel tonnage measurement services are provide below.

⁴ There may be unique circumstances under which a tonnage certificate is required but a replacement is not available (e.g., a Suez Canal transit is required for a ship of a class which was not expected to engage in such voyages). In this event, contact the Coast Guard Marine Safety Center's Tonnage Division (MSC-4) for further instructions.

(a) NAVSEA

Commander
Naval Sea Systems Command
Attn: SEA 05P3
1333 Isaac Hull Ave, S.E.
Stop 5145
Washington Navy Yard
Washington, DC 20376

Point of Contact: Mr. Tapan Mazumdar
Office: (202) 781-2038
Cell: (202) 568-4623
Email: tapan.mazumdar@navy.mil

(b) COAST GUARD MARINE SAFETY CENTER

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: Mr. Tony Cao
Voice: (202) 795-6788
FAX: (202) 372-8372
Email: tony.j.cao@uscg.mil

Alternate Point of Contact: Mr. David Karnes
Voice: (202) 795-6789
Email: david.b.karnes@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 the NAVSEA Technical Manual (reference (d)).

P. D. EARECKSON
Chief, Tonnage Division
U.S. Coast Guard
By direction