

MEASUREMENT OF NAVY AND COAST GUARD VESSELS



TONNAGE GUIDE 2

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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

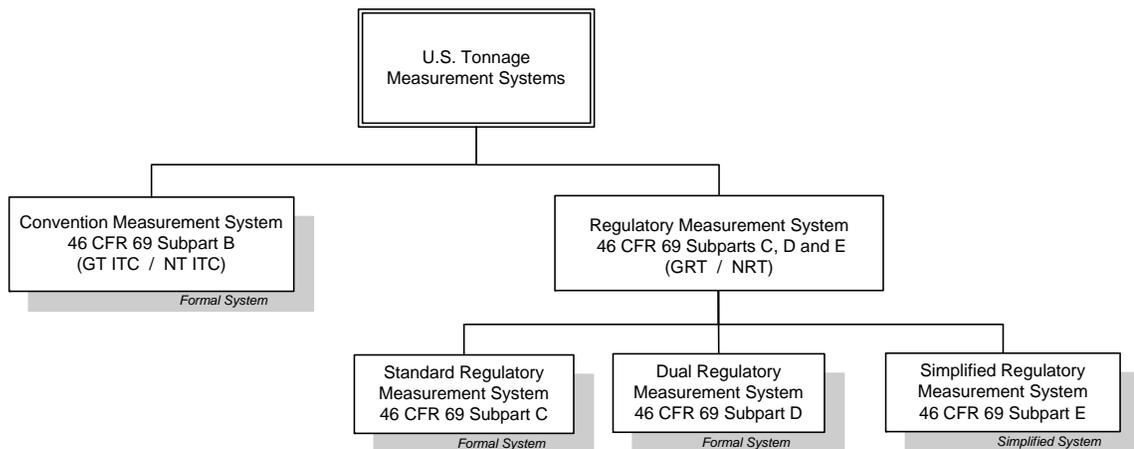
3. APPLICABILITY

This Guide applies to U.S. Navy and U.S. Coast Guard vessels that qualify 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 this definition, 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** One of four tonnage measurement systems is used to measure a vessel of war. These measurement 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 measurement 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. Gross and net tonnages calculated under these systems are certified by the Coast Guard on U.S. Tonnage Certificates (formerly Certificates of Admeasurement). The Coast Guard no longer requires that U.S. Tonnage Certificates, or copies thereof, be transmitted to or maintained aboard vessels of war, although in some instances these documents are still being transmitted to such vessels to fulfill new construction contractual requirements. The associated tonnages for each vessel of war are entered into the Coast Guard Marine Information for Safety and Law Enforcement (MISLE) data system.
 - (2) **Simplified Measurement** This is a single simplified measurement system: the Simplified Regulatory Measurement System. This system employs a simplified computational method using hull dimensions as principal inputs. The Coast Guard does not issue a tonnage certifying document for a vessel of war (or other "undocumented" vessel) measured under this system. Instead, gross and/or net tonnage is calculated on an "as-needed" basis by interested parties.
- (b) **APPLICABILITY** Applicability requirements are found in reference (b), and are 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

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 manner similar to commercial vessels (e.g., based on Panama Canal Universal Measurement System (PC/UMS) or deadweight tonnage), which may involve issuance of a Panama Canal certificate.

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.

6. SUEZ CANAL TONNAGE MEASUREMENT

The Suez Canal Authority assesses canal transit fees on vessels of war of all types using net tonnage as established under its own regulations (reference (c)). This organization 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 Special Tonnage 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 Special Tonnage 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 Special Tonnage 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 Special Tonnage Certificate.

7. TONNAGE CERTIFICATE MAINTENANCE

After receiving a tonnage certificate from the Coast Guard, the certificate should be maintained in a secure location on board the vessel as part of the vessel's official papers. The following additional requirements apply:

- (a) **REPLACEMENT CERTIFICATES** If a Panama or Suez Canal certificate that was transmitted to the vessel by the Coast Guard is lost, the Coast Guard will provide a certified true copy of the document as a replacement for the lost original. These copies bear an embossed official seal of the Coast Guard, and are acceptable legal documents. Lost U.S. Tonnage Certificates are not replaced.
- (b) **INACTIVATED VESSELS** For an inactivated vessel which may be used as a "mobilization asset", the Panama and/or Suez Canal certificate (as applicable) 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 (Certificate of Admeasurement), 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 Canal 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.

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. Requests for these services should be directed as indicated below. Contact information is provided in Section 9 of this Guide.

- (a) **EXISTING NAVY VESSELS** All requests for new or replacement tonnage certificates should be directed to the Naval Sea Systems Command (NAVSEA), Code 05P3, or as otherwise authorized by NAVSEA.
- (b) **EXISTING COAST GUARD VESSELS** All requests for new or replacement tonnage certificates should be directed to the Coast Guard Marine Safety Center's Tonnage Division (MSC-4).
- (c) **NEW CONSTRUCTION NAVY AND COAST GUARD VESSELS** The appropriate authority should complete a measurement application form, and submit it (if applicable), as follows. Instructions are provided on the reverse of each form.
 - (1) **Formal Measurement (*Overall Length* ≥ 79 feet)** Use the *Application for Formal Tonnage Measurement Services* (http://www.uscg.mil/hq/msc/tonnage/docs/Formal_Application.pdf), 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* (<http://www.uscg.mil/hq/msc/docs/CG-5397.pdf>) and retain the form for record. 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.

9. CONTACT INFORMATION

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

(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. Phil Alman
Voice: (202) 781-2038
FAX: (202) 781-4559
Email: philip.alman@navy.mil

(b) COAST GUARD MARINE SAFETY CENTER

Commanding Officer
Coast Guard Marine Safety Center (MSC-4) Stop 7430
7430 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. FURTHER INFORMATION

General information on the U.S. Tonnage Measurement program, including related Coast Guard Marine Safety Center Tonnage publications, is available at: <http://www.uscg.mil/hq/msc/tonnage.asp>. For further information on Navy vessel measurement, including additional details on calculating displacement and requirements for tonnage certificate maintenance, refer to Chapter 096 of the NAVSEA Technical Manual (reference (d)).

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By direction