

MARINE SAFETY: MARINE INSPECTION ADMINISTRATION



**COMDTINST 16000.70
September 2021**



COMDTCHANGENOTE 16000
20 SEP 2021

COMMANDANT CHANGE NOTICE 16000

Subj: CH-3 TO MARINE SAFETY MANUAL VOLUME II, COMDTINST M16000.7B

1. PURPOSE. This Commandant Change Notice publishes the cancellation of Marine Safety Manual Volume II, COMDTINST M16000.7B, and replacement with separate Commandant Instructions, one for each chapter of the existing Manual.
2. ACTION. All Coast Guard unit commanders, commanding officers, officers-in-charge, deputy/assistant commandants, and chiefs of headquarters staff elements shall comply with the provisions of this Commandant Change Notice. Internet release is authorized.
3. DIRECTIVES AFFECTED. With the addition of this Commandant Change Notice, Marine Safety Manual Volume II, COMDTINST M16000.7B, is cancelled.
4. DISCUSSION. The content of Marine Safety Manual remains intact. The primary reason for this change is to allow for timely revision and re-publication of the individual Commandant Instructions.
5. DISCLAIMER. This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is intended to provide operational guidance for Coast Guard personnel and is not intended to nor does it impose legally-binding requirements on any party outside the Coast Guard.
6. MAJOR CHANGES. Sections A through G of Marine Safety Manual Volume II, COMDTINST M16000.7B, are now individual and independent Commandant Instructions. They are listed below.
 - a. Marine Safety: Marine Inspection Administration, COMDTINST 16000.70 (pages A1-1 - A7-43)

DISTRIBUTION - SDL No. 170

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
A																										
B		X			X									X			X									
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D	X	X	X	X							X															
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NON-STANDARD DISTRIBUTION:

- b. Marine Safety: Domestic Inspection Programs, COMDTINST 16000.71 (pages B1-1 – B10-3)
- c. Marine Safety: Inspection of Engineering Systems, Equipment, and Materials, COMDTINST 16000.72 (pages C1-1 – C5-31)
- d. Marine Safety: Port State Control, COMDTINST 16000.73 (pages D1-1 – D7-38)
- e. Marine Safety: International Conventions, Treaties, Standards, and Regulations, COMDTINST 16000.74 (pages E1-1 – E4-3)
- f. Marine Safety: Carriage of Hazardous Materials, COMDTINST 16000.75 (pages F1-1 – F5-35)
- g. Marine Safety: Outer Continental Shelf Activities, COMDTINST 16000.76 (pages G1-1 – G6-24)

7. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.

- a. Commandant CG-47 reviewed the development of this Instruction, and the general policies contained within it, and determined that this policy falls under the Department of Homeland Security (DHS) categorical exclusion A3. No further environmental analysis is necessary in accordance with the U.S. Coast Guard Environmental Planning Policy, COMDTINST 5090.1 (series).
- b. This Instruction will not result in any substantial change to existing environmental conditions or violation of any applicable federal, state, or local laws relating to the protection of the environment. It is the responsibility of the action proponent to evaluate all future specific actions resulting from this policy for compliance with the National Environmental Policy Act (NEPA), other applicable environmental mandates, and the U.S. Coast Guard Environmental Planning Policy, COMDTINST 5090.1(series).

8. DISTRIBUTION. No paper distribution will be made of this Commandant Change Notice. An electronic version will be located on the following Commandant (CG-612) web sites. Internet: <http://www.uscg.mil/directives/>, and CGPortal: <https://cg.portal.uscg.mil/library/directives/SitePages/directives.aspx>

9. PROCEDURE. Cancel Marine Safety Manual Volume II, COMDTINST M16000.7B and replace with COMDTINSTs 16000.70 thru 16000.76.

10. RECORDS MANAGEMENT CONSIDERATIONS. Records created as a result of this Instruction, regardless of format or media, must be managed in accordance with the records retention schedules located on the Records Resource Center CGPortal site: <https://cg.portal.uscg.mil/units/cg61/CG611/SitePages/Home.aspx>.

11. FORMS/REPORTS. The forms called for in this Commandant Change Notice are available in USCG Electronic Forms on the Standard Workstation or on the Internet: <https://www.dcms.uscg.mil/forms/>; CGPortal at <https://cgportal.uscg.mil/library/forms/SitePages/Forms.aspx>; and Intranet at <https://www.dcms.uscg.mil/forms/>.

12. REQUEST FOR CHANGES. Request for changes to the previous mentioned Commandant Instructions may be sent to Commandant (CG-CVC) at HQS-SMB-COMDT-CG-CVC@uscg.mil.

/J. W. MAUGER/
Rear Admiral, U. S. Coast Guard
Assistant Commandant for Prevention Policy

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS****A. AUTHORITY FOR THE INSPECTION OF VESSELS**

1. General

The Coast Guard administers navigation and vessel inspection laws and regulations governing marine safety. It is the Coast Guard's responsibility to inspect the vessels regulated by those laws. Each marine safety unit must maintain current copies of Titles 33 and 46 of the Code of Federal Regulations (CFR). A statute's applicability to a particular vessel is based on many factors, including the vessel's trade, route, length, tonnage, and/or number of passengers. To avoid misunderstandings, the applicability of each statute should be determined with a particular vessel, type of vessel, or operation in mind. Most statutes establish general requirements for inspection and authorize the Coast Guard to prescribe specific standards by regulation. However, certain statutes contain specific requirements for vessel standards and procedures.

2. Authority

46 U.S.C. 3305, 3307, and 3714 provide the legal basis for Coast Guard inspection of vessels that are subject to inspection under 46 U.S.C. 3301. 43 U.S.C. 1356 provides the legal basis for Coast Guard regulations pertaining to vessels engaged in Outer Continental Shelf activities. 46 U.S.C. 3306 and 3703 direct the Secretary of the Department of Homeland Security (DHS) to prescribe regulations to carry out these requirements.

3. Delegation of Authority from SECDHS

DHS has delegated authority to the Commandant of the U.S. Coast Guard to administer certain navigation and inspection laws. The Commandant accomplishes this by prescribing regulations published in Titles 33, 46 and 49 of the CFR. These regulations incorporate international laws to which the United States is signatory (see Part D of this Chapter), as well as various classification society and industry technical standards. Specific authorities and the process by which regulations are adopted, changed, and deleted are described in 33 CFR 1.05 and in the Marine Safety Manual (MSM) Volume I, Administration and Management, COMDTINST M16000.6 (series), Chapter 2.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS****4. Responsibility of the Officer-In-Charge, Marine Inspection (OCMI)**

Under 33 CFR 1.01-20, the Officer in Charge, Marine Inspection (OCMI) has the final authority and responsibility for carrying out vessel inspection functions within the OCMI's zone. Signature authority for certain inspection documents may be redelegated pursuant to 46 CFR 2.01-30. (See MSM, Volume I, Administration and Management, COMDTINST M16000.6 (series), Chapter 2, Paragraph 2.I.2.a.(2).) The flow of functional authority from the Commandant to the OCMI and the OCMI to subordinates is described in 46 CFR 1.01-10 and 1.01-15. Descriptions of the duties and responsibilities of the OCMI and other Marine Inspection (MI) Program personnel are presented in MSM Volume I, Administration and Management, COMDTINST M16000.6 (series).

5. Handling Violations of Other Laws

It is essential that all inspection personnel have a working knowledge of the laws under which they are operating. Certain laws concerning the safety of vessels are administered by other agencies, e.g., the U.S. Customs Service (Jones Act), the Federal Communications Commission, the Occupational Safety and Health Administration, the Bureau of Safety and Environmental Enforcement and the Department of Labor. When a vessel is known to be in violation of laws administered by agencies other than the Coast Guard, the agency having jurisdiction should be notified of the circumstances. In some instances, the Coast Guard and another agency will sign a Memorandum of Understanding (MOU). A MOU prescribes specific procedures to be followed to ensure that inspection and enforcement activities of each agency are complimentary to each agency. See MSM Volume X, Interagency Agreements and Acronyms, COMDTINST M16000.15A (series), for a complete listing of all MOUs. Violations of laws administered by the Coast Guard that do not pertain to marine safety should be reported to the cognizant Coast Guard District Commander.

B. REGULATIONS AND STATUTES

1. Code of Federal Regulations (CFR)

The OCMI should maintain current copies of all rules and regulations affecting vessel inspections for use by inspection personnel. Current year copies of the CFR should be available for inspectors to use in performing their duties. Regulations, and the subsequent changes to them, are not effective until published in the *Federal Register*. The following is a partial list of the CFR subchapters applicable to marine safety and vessel inspection:

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

Title 46 CFR		
Subchapter	Part	Subject
A	1-9	Procedures Applicable to the Public
B	10-16	Merchant Marine Officers and Seamen
C	24-29	Uninspected Vessel
D	30-40	Tank Vessels
E	42-46	Load Lines
F	50-64	Marine Engineering
G	66-69	Documentation and Measurement of Vessels
H	70-89	Passenger Vessels
I	90-106	Cargo and Miscellaneous Vessels
I-A	107-109	Mobile Offshore Drilling Units
J	110-113	Electrical Engineering
K	114-122	Small Passenger Vessels Carrying More Than 150 Passengers or with Overnight Accommodations for More Than 49 Passengers
L	125-139	Offshore Supply Vessels
N	146-149	Dangerous Cargoes
O	150-155	Certain Bulk Dangerous Cargoes
Q	159-165	Equipment, Construction and Material: Specifications and Approval
R	166-169	Nautical Schools
S	170-174	Subdivision and Stability
T	175-187	Small Passenger Vessels
U	188-196	Oceanographic Research Vessels
V	197-198	Marine Occupational Safety and Health Standards
W	199	Lifesaving Appliances and Arrangements

Title 33 CFR		
Subchapter	Part	Subject
A	19	Waivers of Navigation and Vessel Inspection Laws and Regulations
D	80	Navigation Rules
H	105	North Atlantic Passenger Routes
N	140-147	Outer Continental Shelf (OCS) Activities
O	151-159	Pollution
P	160	Ports and Waterways Safety

Title 49 CFR		
Subchapter	Part	Subject
C	171-179	Hazardous Materials Regulations

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 1: AUTHORITY AND PROVISIONS FOR MERCHANT VESSEL INSPECTIONS

2. U.S. Code (U.S.C.), Titles 33, 46, and 50

The OCMI should also maintain current copies of Titles 33, 46, and 50 U.S.C.. The following is a list of significant sections of Titles 33, 46, and 50 U.S.C. applicable to marine safety and vessel inspection:

Title 33 U.S.C.	
Citation	Subject
33 U.S.C. 1221-1232	Statutes for Notice of Arrival and navigation safety regulations.

Title 46 U.S.C.	
Citation	Subject
46 U.S.C. 5101 – 5116	Load line requirements for foreign vessels.
46 U.S.C. 2101(12), 3306(a)(5) and 49 U.S.C. 1801 -1812	Safety requirements for carriage of dangerous articles and substances aboard foreign vessels.
46 U.S.C. 2101(12), (21) and (35), 3504 and 3505	Safety requirements for foreign vessels carrying passengers from any U.S. port to any other place or country.
46 U.S.C. 2101(12), (21), (22) and (35), and Chapter 35	Inspection and certification requirements for all foreign passenger vessels which embark passengers at and carry passengers from a U.S. port. These statutes are also relevant for vessels with valid International Convention For The Safety Of Life At Sea (SOLAS) 74/78 Certificates or Canadian Certificates of Inspection that must be examined to verify compliance with the flag administration's safety verification requirements.
46 U.S.C. 2101(12) and (39), 3301(10) and Chapter 37	Safety requirements that apply, with certain stipulations, to all foreign vessels regardless of tonnage, size, or manner of propulsion, whether or not carrying freight or passengers for hire, that enter U.S. navigable waters while carrying liquid bulk cargoes that are-- a. Flammable or combustible;

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

Title 46 U.S.C.	
Citation	Subject
	b. Oil of any type or in any form, including petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes, except dredged spoil; c. Designated as a hazardous substance under Section 311(b) of the Federal Water Pollution Control Act (FWPCA) (33 U.S.C. 1321); or d. Designated as hazardous materials under Section 104 of the Hazardous Materials Transportation Act (HMTA) (49 U.S.C. 1803).
46 U.S.C. 2101(21) and 3304	Permission for U.S. vessels transporting cargo to carry a limited number of individuals without being considered a "passenger vessel" for most inspection purposes, and extension of this privilege to cargo vessels of those nations that accord reciprocal treatment.
46 U.S.C. 2101(33) and 3301(7)	Directs that safety requirements of 46 U.S.C. Chapter 33 are applicable to seagoing motor vessels of 300 or more GT.
46 U.S.C. 2101(35) and 3301(8)	Safety requirements for foreign small passenger vessels carrying more than six passengers from a U.S. port.

Title 50 U.S.C.	
Citation	Subject
50 U.S.C. 191	Requirements for security of vessels, harbors and waterfront facilities, and provision for control of the movement of foreign vessels in U.S. waters by the local OCMI/Captain of the Port (See MSM Volume VI).

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

C. BOUNDARY LINE AND TERRITORIAL SEA

1. Boundary Lines

- a. 46 U.S.C. 3301(6) and (7) require inspection of seagoing barges and motor vessels whose definitions in 46 U.S.C. 2101(32) and (33) rely on the use of the Boundary Line.
- b. 46 U.S.C. 5102(b)(6) exempts from the load line statutes a U.S. vessel engaged in a domestic voyage that does not cross the Boundary Line, except a voyage on the Great Lakes.
- c. 46 U.S.C. 8304 limits the application of the Officers Competency Certificate Convention, Geneva, 1936, to the high seas, defined as being "seaward of the Boundary Line".
- d. The vessel Bridge-to-Bridge Radiotelephone Act (33 U.S.C. 1201 et. seq.) requires the carriage of radiotelephones on board certain vessels inside the Boundary Line on the navigable waters of the United States (i.e., inside the 3-mile limit).
- e. 33 U.S.C. 152 limits the length of towing hawsers when operating inside the Boundary Line.
- f. 46 U.S.C. 3302(d) exempts certain vessels that operate inside the Boundary Line within the waters of southeastern Alaska and the State of Washington from inspection requirements. In addition to the above, the "Commercial Fishing Industry Vessel Safety Act of 1988" (46 U.S.C. 4502(b)) requires the carriage of safety equipment by certain uninspected commercial fishing industry vessels when operating beyond the Boundary Line.

NOTE: The U.S. Boundary Lines, as specified in 46 CFR Part 7, are used to determine the applicability of the six statutes listed under 46 CFR 7.1 and summarized above.

2. U.S. Territorial Sea

- a. On 28 December 1988, the President of the United States, by virtue of his foreign relations authority and consistent with international law, proclaimed a 12 nautical mile territorial sea.
 - (1) The proclamation did not extend the contiguous zone.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

- (2) The U.S. territorial sea extension applies to waters adjacent to the coasts of the Commonwealth of Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, Commonwealth of the Northern Mariana Islands and any other territory or possession over which the United States exercises sovereignty.
- b. Effect upon Coast Guard enforcement activities. This proclamation extended the territorial sea only for international purposes and did not alter Coast Guard law enforcement activities. The proclamation did not change existing Federal and State laws.
- (1) The statutory definitions and applications of jurisdictional terms such as "territorial seas," "territorial waters," "navigable waters," and other similar terms remain unchanged unless legislation is enacted to change a specific law.
- (2) For the purposes of enforcing U.S. domestic laws, the U.S. territorial sea is 3 nautical miles, the outer limit of the U.S. contiguous zone is 12 nautical miles, and the meaning of U.S. customs waters is unchanged. Accordingly, congressional action is necessary to extend the geographic application of a State or Federal law beyond 3 nautical miles.

**D. INTERNATIONAL CONVENTIONS AND TREATIES RELATED TO MARINE
INSPECTION TO WHICH THE U.S. IS PARTY**

The International Maritime Organization (IMO) is a specialized agency of the United Nations concerned solely with maritime affairs. There are approximately 160 member nations in IMO, including the United States. IMO is responsible for international conventions, treaties, and resolutions to improve maritime safety. The organization consists of an Assembly, a Council, a Secretariat, and five specialized committees. The committee that proposes standards for steering and other technical matters is the Maritime Safety Committee, which meets twice a year. Countries that are party to international conventions and treaties are listed in MSM Volume I, Administration Management, COMDTINST M16000.6 (series), Chapter 11. For information on specific international conventions, treaties, standards, and regulations, see MSM Volume II, Materiel Inspection, COMDTINST M16000.7a (series), Section E.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

1. International Convention For The Safety Of Life At Sea (SOLAS), 1974

- a. The International Convention For The Safety Of Life At Sea (SOLAS), 1974, became binding upon the United States on 25 May 1980.
 - (1) The Convention contains standards and procedures affecting the inspection of certain passenger vessels and cargo vessels making international voyages.
 - (2) The 1978 Protocol to SOLAS 74, adopted by the International Conference on Tanker Safety and Pollution Prevention, modified the original Convention and became effective on 1 May 1981; together they are known as SOLAS 74/78.
- b. Convention requirements. For the most part, the inspection requirements of the Convention, with the exception of radio equipment requirements, have been or are in the process of being incorporated into CFR Title 33 and 46
- c. Thorough knowledge of the Convention's terms is essential to understanding the regulations. For additional guidance on this Convention, see MSM Volume II, Materiel Inspection, COMDTINST M16000.7a (series), Chapters E2, D1, and D7.

2. International Convention on Load Line (ICLL), 1966

- a. General. The International Load Line Convention (ICLL) contains standards for determining loading limits for vessels, the structure of vessels, protection of openings, guard rails, freeing ports, and means of access to crew's quarters. The ILLC has been incorporated into 46 CFR Subchapter E.
 - (1) The ILLC requirements are administered for the Coast Guard by the American Bureau of Shipping (ABS). Other assigning authorities have not been approved by the Commandant except for uninspected fish processing vessels.
 - (2) The MSM Volume IV, Technical, COMDTINST M16000.9 (series), describes the responsibilities of the OCMI and inspection personnel.
- b. Vessel Load Line Amendments of 1986. A double standard has existed since 1968 when the ICLL changed to a length criterion of 79 feet while the 1935 Coastwise Loadline Act remained based on a tonnage criterion of 150 GT. On 21 October 1986, the Omnibus Reconciliation Act of 1986 (Public Law 99-509) was enacted. This included provisions to revise and consolidate laws related to load lines.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

- (1) The Omnibus Reconciliation Act of 1986 brought all vessels under the requirements of the International Voyage Load Line Act of 1973, except in those cases where the additional requirements would not be justified for reasons of safety. The public was given ample opportunity to address implementation of the new law as it may have impacted the provisions of existing regulations and policies. Although certain existing provisions may appear to be eliminated by the new law, many could be continued under the special exemptions provision under 46 U.S.C. 5108.
- (2) The Omnibus Reconciliation Act of 1986 applied to ships 79 feet or more in length on international or domestic voyages, a change from the 150 GT criterion for domestic voyages.
 - (a) Since 1968, vessels of 79 feet or more in length on international voyages have been required to have a load line.
 - (b) New vessels which are 79 feet or more in length, under 150 GT, and on domestic voyages may be assigned a load line, but are not required to have one until the implementing regulations are promulgated.
 - (c) Existing vessels on domestic voyages are subject to load line requirements based on tonnage.
- (3) Until the regulations are amended to conform to the new law, the existing regulations will continue in effect.
 - (a) Previously published policies based on the old regulations or the old law in the MSM and elsewhere will also remain in effect.
 - (b) Additionally, existing limited domestic voyage approvals allowed by local policy, whether or not they are currently in the regulations, may continue in effect.
 - (c) When the new regulations are promulgated and in effect, all vessels on domestic voyages which were built after 1 January 1986 will have to comply with the load line requirements except as specifically exempted. Any existing policies that are discontinued by the rulemaking could, under the new law, also result in certain requirements being applied retroactively to existing vessels.
 - (d) Questions regarding load line application and enforcement should be directed to Commandant (CG-CVC).

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

3. International Convention for the Prevention of Pollution from Ships, 1973 as modified by the 1978 Protocol (MARPOL 73/78)

- a. General. The principal object of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the 1978 Protocol (MARPOL 73/78) is the protection of the marine environment from pollution arising from the deliberate, negligent, or accidental release of oil and other harmful substances. Most of the technical measures, including the requirements for vessels and reception facilities, are included in six annexes to this Convention, as follows:
 - (1) Annex I - Oil.
 - (2) Annex II - Noxious Liquid Substances Carried in Bulk (e.g., chemicals).
 - (3) Annex III - Harmful Substances Carried in Packages.
 - (4) Annex IV - Sewage.
 - (5) Annex V - Garbage.
 - (6) Annex VI – Air Pollution.
- b. Annexes I and II. The Act to Prevent Pollution From Ships (33 U.S.C. 1901 et seq.) is the implementing U.S. legislation for MARPOL and Annexes I and II. Annex I entered into force on 2 October 1983 and Annex II entered into force on 6 April 1987.
- c. Annexes III through VI. These are optional, i.e., a government may, at the time of acceding to or ratifying the Convention, declare that it does not accept any or all of these Annexes. The United States has accepted Annex V, which came into force on 31 December 1988. Annex IV is not yet in force.

4. International Regulations for Preventing Collisions at Sea, 1972 (COLREGS)

The International Regulations for Preventing Collisions at Sea (COLREGS) are published in COMDTINST M16672.2, Navigation Rules, International - Inland. COLREGS prescribe the basic rules that control the behavior of vessels at sea to prevent collisions. Questions concerning the navigation rules should be directed to Commandant (CG-WWM).

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS****5. International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969**

This Convention affirms the right of a coastal nation to take all necessary measures on the high seas to prevent or mitigate the danger to its coastline or related interest from pollution by oil, or the threat thereof, following a maritime casualty. Such actions may only be taken after due consultation with appropriate interests, including the flag state(s) of the ship(s) involved, the owners of the ship(s) or cargoes in question, and, when circumstances permit, independent experts appointed for this purpose. Marine safety personnel may not conduct such interventions without the specific approval of the Commandant. A coastal nation that exceeds these measures is liable to pay compensation for any damages caused by its unilateral actions. The Convention contains provisions for the settlement of disputes through negotiation, conciliation, and arbitration. For further guidance, consult COMDTINST M16000.14 (MSM Volume IX, Marine Environmental Protection, COMDTINST M16000.14 (series)).

6. International Convention for Safe Containers, 1972

This Convention seeks to maintain a high level of safety of human life in the transport and handling of cargo containers, while facilitating their international use in intermodal transportation.

7. Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972

This Convention, commonly known as the "London Dumping Convention," promotes the effective control of all sources of marine pollution. It tasks party nations to take all practical steps to prevent pollution from dumping wastes and other matter liable to create hazards to human health, to harm living resources and marine life, or to interfere with other legitimate uses of the sea. The Marine Protection, Research, and Sanctuaries Act of 1972 (MPRSA, 33 U.S.C. 1401 et seq.) was amended on 22 March 1974 to reflect the provisions of this Convention. MPRSA prohibits or controls the dumping of wastes and other matter, in whatever form or condition. The following is a summary of the key MPRSA requirements:

- a. The dumping of wastes or other matter listed in Annex I of the Convention is prohibited;
- b. The dumping of wastes or other matter listed in Annex II requires special prior permission; and

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

- c. In times of emergency, usually prohibited dumping may occur to secure the safety of lives, vessels, aircraft, or structures at sea.

8. Officers' Competency Certificates Convention, 1936

Every nation that is party to this Convention must establish minimum requirements of professional capacity for the master, chief engineer, and navigating and engineering officers in charge of watches aboard merchant vessels of that country, and must issue certificates of competency to qualified officers. This Convention has been implemented by statute and regulation in 46 U.S.C. 8304 and 46 CFR 15.701, respectively, for vessels of 200 GT or more.

9. Certification of Able Seaman Convention, 1946

This Convention requires persons serving as able seamen aboard merchant vessels of nations party to this Convention to be qualified to perform any duty in the deck department, and to possess certificates of qualification granted in accordance with the provisions of the Convention.

10. STCW 95

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended in 1995 (STCW 95) was adopted on 07 July 1995 and entered into force internationally on 01 February 1997. The major highlights of the 1995 amendments include the following: creation of the STCW Code, changes in tonnage limitations, certification and endorsements, rest periods, requirement of English proficiency, basic safety training, vessel familiarization, and company responsibility

NOTE: See MSM Volume II, Materiel Inspection, COMDTINST M16000.7B (series), Chapter D2, for guidance on exercising control under STCW Article X, and Regulation 1(4) and NVIC 3-98 for guidance on the STCW 95.

11. International Labor Organization (ILO) Convention No. 147

International Labor Organization (ILO) Convention No. 147, The Convention concerning Minimum Standards in Merchant Ships (ILO 147) was adopted at the 62nd session of the International Labor Conference on 13 October 1976. It entered into force internationally on 28 November 1981; upon the United States' deposit of its instrument of ratification, it

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

entered into force on 15 June 1989. ILO 147 serves as an umbrella convention for 15 other ILO conventions concerning a variety of maritime related health, welfare and workplace safety issues. ILO 147 concerns three basic areas: safety standards, including standards of competency, hours of work and manning; appropriate social security matters; and shipboard conditions of employment and shipboard living arrangements. A guidebook, *Inspection of Labour Conditions on Board Ship: Guidelines for Procedure* (ISBN 92-2-107096-4), may be obtained from ILO Publications, The International Labour Office, CH-1211, Geneva 22, Switzerland. See MSM Volume II, Materiel Inspection, COMDTINST M16000.7B (series), Chapter D2, for guidance on exercising control under ILO 147 Article 4 and COMDTINST 16711.12.

**E. PURPOSE OF MARINE SAFETY MANUAL, VOLUME II, MATERIEL INSPECTION,
COMDTINST M16000.7B (SERIES)**

1. Responsibility of the Marine Inspector

It is neither necessary nor possible to memorize the multitude of laws and regulations that the Coast Guard must enforce. However, it is incumbent upon, and the responsibility of, the marine inspector to have a working knowledge of both U.S. and international laws and regulations so that he/she can recognize a deficiency when one occurs and can quickly locate the statutory citation related to a particular requirement.

2. Content

The following chapters contain information and guidance intended to promote consistent interpretation and application of U.S. and international laws and regulations related to merchant vessel inspections. The regulations and the guidance contained in this volume are not intended to cover all contingencies that may be encountered during vessel inspections. This manual generally does not restate requirements that are specifically and clearly covered in the law, Federal regulations, or international conventions. There is no substitute for experience and sound judgment to ensure that good marine practice is being followed. In addition, any information in this volume may be supplemented, altered, or waived in specific cases by the Commandant, district commander, or OCMI. To that end, it is imperative that the OCMI maintain a current and complete library containing the applicable laws and regulations.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

3. Other Guidance

This volume must be used in conjunction with other applicable instructions, notices, and publications such as Commandant Instructions, Law Bulletins, and Navigation and Vessel Inspection Circulars (NVICs). For easy reference, a list of recommended resources is included at the end of this chapter.

F. VESSEL INSPECTION POLICY

1. Inspections

The goal of vessel inspection policy is to protect individuals, their private property, and the marine environment from the consequences of incidents involving materially unsafe vessels. Generally, vessels are inspected while they are not engaged in navigation. However, at times it is more conducive to vessel owners and operators to schedule an in-water inspection, such as an inspection for certification or midperiod inspection, during a leg of a vessel's voyage. OCMI's should take advantage of underway inspections, as they allow the inspector to observe crew performance and witness the operation of a vessel's machinery and other equipment. The inspection of a vessel is intended to determine its reasonable, probable compliance with published minimum safety standards over a projected period of time. The issuance of a Certificate of Inspection (COI) attests to that reasonable probability.

2. Coast Guard Concerns

The Coast Guard's objective is to administer vessel inspection laws and regulations and promote safe, well-equipped vessels that are suitable for their intended service. It is not the Coast Guard's intent to place unnecessary economic and operational burdens upon the maritime industry. When determining inspection requirements and procedures, inspection personnel must recognize and give due consideration to the following factors:

- a. That the burden for proposing acceptable repairs rests upon the vessel's owner, not upon the repair facility or the inspector.
- b. That delays to vessels, which can be costly, need to be balanced against the risks imposed by continued operation of the vessel, with safety of life, property, and the environment always the predominant factors rather than economics.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

- c. That certain types of construction, equipment, and/or repairs are more economically advantageous to the vessel operator and can provide the same measure of safety.
- d. That some repairs can be safely delayed and can be more economically accomplished at a different place and time.
- e. That the overall safety of a vessel and its operating conditions, such as route, hours of operations, and type of operation, should be considered in determining inspection requirements.
- f. That vessels are sometimes subject to the operational requirements of organizations and agencies other than the Coast Guard.
- g. That a balance must be maintained between the requirements of safety and practical operation. Arbitrary decisions or actions that contribute little to the vessel's safety must be avoided.

3. Appeals and Waivers

Decisions made by the OCMI; the District Commander; the Marine Safety Center; a recognized classification society when acting on behalf of the Coast Guard; the National Maritime Center; Director, Great Lakes Pilotage; and vessel documentation matters may be appealed by the affected party as described in 46 CFR 1.03. Pursuant to the 2010 Coast Guard Authorization Act, Pub. L. 111-281, which amended Section 102 of Chapter 5 of Title 14, United States Code, the following section details the requirements for individuals involved in appeals and waivers:

Except for the Commandant of the Coast Guard, any individual adjudicating an appeal or waiver of a decision regarding marine safety, including inspection or manning and threats to the environment, shall—

- (1) be a qualified specialist with the training, experience, and qualifications in marine safety to effectively judge the facts and circumstances involved in the appeal and make a judgment regarding the merits of the appeal; or
- (2) have a senior staff member who—
 - (a) meets the requirements of paragraph (1);
 - (b) actively advises the individual adjudicating the appeal; and
 - (c) concurs in writing on the decision on appeal.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

Efforts to resolve any disagreements should always be made first at the local level. If agreement cannot be reached with the OCMI, the affected party should submit a formal appeal in writing as indicated in 46 CFR 1.03.

G. APPLICABLE TANK VESSEL REQUIREMENTS

When a vessel carries combustible and flammable cargoes in bulk, those portions of the vessel used for the carriage of these cargoes must also meet the requirements of 46 CFR Subchapter D (tank vessels). The following portions of 46 CFR Subchapter D apply to all vessels, if the vessel carries Grade D and above products.

1. 46 CFR 32.45 Electrical Installations

Refer to 46 CFR 32.45: Electrical Installations.

2. 46 CFR 32.50 Pumps, Piping, and Hose for Cargo Handling

Refer to 46 CFR 32.50: Pumps, Piping, and Hose for Cargo Handling.

3. 46 CFR 32.55 Ventilation and Venting

Refer to 46 CFR 32.55: Ventilation and Venting.

4. 46 CFR 32.60 Hull Requirements for Tank Vessels on or After July 1, 1951

Cargo piping and pump room requirements are especially significant. Cargo piping must comply with 46 CFR 32.50-15(a)(1) and 32.50-15 (3)(b) and (c). Cargo piping must not pass through machinery spaces. Combining this with the requirements of 46 CFR 32.60-20(a) necessitates a separate space for the cargo pump. The equipment in this space must comply with 46 CFR 32.45 and 111.105-31. A hazardous area drawing in accordance with 46 CFR 110.25-1(i) is required.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS****H. REQUIRED PUBLICATIONS**

Chapter 2 of the Directives, Publications and Reports Index (DPRI) (COMDTNOTE 5600) lists the effective publications and periodicals that marine safety units must maintain.

I. RECOMMENDED REFERENCES

In addition to the publications listed in the DPRI, OCMI's should maintain the latest editions of pertinent international conventions and standards, industry standards and technical publications deemed necessary for reference and the proper training of personnel. The OCMI should obtain sufficient numbers and varieties of these publications to keep personnel abreast of the latest developments in ship operation, construction, repair, etc. The following publications are considered good reference and training materials that should be maintained, as necessary, based on the individual needs of a unit. In light of the Coast Guard's increasing acceptance of industry developed standards, OCMI's should place special emphasis on obtaining the specific standards listed either in the regulations or below.

1. A Guide to the Non-Destructive Testing of Non-Butt Welds in Commercial Ships, Parts I and II, Ship Structure Committee (SSC).
2. A Guide to Sound Ship Structures, D'Archangelo.
3. American National Standards Institute (ANSI) Steel Pipe Flanges and Flanged Fittings, ANSI B.16.5, American Society for Testing and Materials (ASTM).
4. ANSI Standard for Steel Valves, ANSI B.16.34, ASTM.
5. ANSI Standards for Power Piping, ANSI B.31.1, ASTM.
6. Approved Welding Electrodes, Wire-Flux and Wire Gas Combinations, American Bureau of Shipping (ABS).
7. ASME Boiler and Pressure Vessel Code, The American Society of Mechanical Engineers (ASME).
8. ASTM Standards:
 - i. F-1121-87(2010), International Shore Connections for Marine Applications

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

- ii. F-1122-04(2010), Quick Disconnect Couplings
 - iii. F-1196-00(2013), Sliding Watertight Door Assemblies
 - iv. F-1197-00(2012), Sliding Watertight Door Control Systems
 - v. F-1271-90(2012), Spill Valves for Use in Marine Tank Liquid Overpressure Protection Applications
 - vi. F-XXX2, Tank Vent Pressure-Vacuum Relief Valves
 - vii. F-1273-91(2013), Tank Vent Flame Arrestors
 - ix. F-XXX4, Tank Vent Flame Screens
- 9. Boilerworker First and Chief, Bureau of Naval Personnel (NAVPERS) 10537, U.S. Navy.
 - 10. Carbon Dioxide Extinguishing Systems, NFPA-12, National Fire Protection Association (NFPA).
 - 11. Code for the Construction and Equipment of Mobile Offshore Drilling Units (MODU Code), IMO Resolution A.414(XI).
 - 12. Care of Fire Hose, NFPA-198, NFPA.
 - 13. Code of Safety for Dynamically Supported Craft, IMO.
 - 14. Code of Safety for Diving Systems, IMO.
 - 15. Code of Safety for Special Purpose Ships, IMO Resolution A.534(13).
 - 16. Considerations for the Prevention of Furnace Explosions and Superheater Damage in Merchant Ship Boilers During Light-Offs, T&R R-23, the Society of Naval Architects and Marine Engineers (SNAME).
 - 17. Control of Gas Hazards on Vessels to be Repaired, NFPA-306, NFPA.
 - 18. Dangerous Properties of Industrial Materials, Sax.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

19. Defects and Failures in Pressure Vessels and Piping, Helmut Thielsch. Reinhold Publishing Corp., New York.
20. Dry Chemical Extinguishing Systems, NFPA-17, NFPA.
21. Engineering Materials Handbook, Mantell. McGraw-Hill Book Co., New York.
22. Fiberglass Boat Design and Construction, Scott and DeGraff.
23. Fiberglass Boats, DuPlessis and DeGraff.
24. Fire Hose Coupling Screw Threads, NFPA-194, NFPA.
25. Fire Protection of Vessels During Construction, Repair and Lay-Up, NFPA-312, NFPA.
26. Flammable Liquids Code, NFPA-30, NFPA.
27. Flash Point Index of Trade Name Liquids, NFPA-325A, NFPA.
28. Foam Extinguishing Systems, NFPA-11, NFPA.
29. General Information for Grain Loading, International Cargo Gear Bureau, Inc.
30. Guide for Construction of Shipboard Elevators, ABS.
31. Guide for Container Equipment Inspection, Institute of International Container Lessors, Ltd.
32. Guide for Inert Gas Installations on Vessels Carrying Oil in Bulk, ABS.
33. Guide for Repair, Welding, Cladding and Straightening of Tail Shafts, ABS.
34. Guide for Centralized Control and Automation of Ship's Steam Propulsion Plant, T&R R3-23, SNAME.
35. Guide for Shipboard Centralized Control and Automation, ABS.
36. Guide for Steel Hull Welding, American Welding Society (AWS).
37. Guide for Underwater Inspection in Lieu of Drydocking Survey, ABS.
38. Guidelines for the Design and Construction of Offshore Supply Vessels.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

39. Halon 1301, National Fire Prevention Association, NFPA-12A, NFPA (1987).
40. Handbook of Ship Calculations, Construction and Operation, Hughes.
41. Handbook of Test Methods and Practices, Naval Ship Systems Command (NAVSHIPS) 918828, U.S. Navy.
42. Handbook of Wooden Boat Construction, Chapelle.
43. Handbook on Sanitation of Vessel Construction, PHS No. 393, U.S. Public Health Service (USPHS).
44. Handbook on Sanitation of Vessels in Operation, PHS No. 68, USPHS.
45. Inert Gas Systems, IMO Publication, 1983 Edition, Reprinted 1987.
46. Inspection Manual, NFPA.
47. International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code). The IBC Code is mandatory under both Chapter VII of SOLAS and Annex II of MARPOL 73/78 for chemical tankers constructed on or after 1 July 1986.
48. International Gas Carrier (IGC) Code. The IGC Code is mandatory under Chapter VII of SOLAS for gas carriers constructed after 1 July 1986.
49. Bulk Chemical (BCH) Code. The BCH Code is mandatory under Annex II of MARPOL 73/78 for chemical tankers constructed before 1 July 1986.
50. International Convention for Safe Containers, IMO.
51. International Safety Guide for Oil Tankers and Terminals (ISGOTT), 3rd Edition, International Chamber of Shipping.
52. Introduction to Steel Shipbuilding, Baker.
53. Lloyd's Register of Shipping Rules and Regulations for the Classification of Yachts and Small Craft (Lloyd's Rules).
54. Manual of Safe Practices in Offshore Operations, Offshore Operations Committee.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

55. Marine Chemists Directory (current year), NFPA.
56. Marine Design Manual for Fiberglass Reinforced Plastics, McGraw-Hill.
57. Marine Engineering, Harrington. SNAME, 1971.
58. Marine Engineers Handbook, Lamberton and Marks.
59. Modern Ships, John M. LaDage. Cornell Maritime Press.
60. National Electrical Code, NFPA-70, NFPA.
61. National Electrical Safety Code, Handbook H 30, National Bureau of Standards, U.S. Department of Commerce.
62. Nondestructive Testing Handbook, Vol. I and II, R. C. McMaster, ed. The Society for Nondestructive Testing; Roland Press.
63. Personnel Qualification and Certification in Nondestructive Testing, Recommended Practice No. SNT-TC-1A, American Society for Nondestructive Testing.
64. Pleasure and Commercial Motor Craft, NFPA-302, NFPA.
65. Portable Fire Extinguishers, NFPA-10, NFPA.
66. Principles of Magnetic Particle Testing, Betz.
67. Principles of Naval Architecture, SNAME.
68. Principles of Penetrants, Betz.
69. Provisional Rules for the Approval of Filler Metals for Welding Higher Strength Steels, ABS.
70. Radiographs of Welds, International Institute of Welding (IIW).
71. Recommended Practice for Electrical Installations on Shipboard, Standard No. 45, Institute of Electrical and Electronic Engineers (IEEE).
72. Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk, Annex II of MARPOL 73/78.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

73. Requirements for Radiographic Inspection of Hull Welds, ABS.
74. Requirements for the Certification of the Construction and Survey of Cargo Gear on Merchant Vessels, ABS.
75. Requirements for the Certification of the Construction and Survey of Self-Unloading Cargo Gear on Great Lakes Vessels, ABS.
76. Rules and Regulations for the Classification of Yachts and Small Craft, Lloyd's Register of Shipping.
77. Rules for Building and Classing Aluminum Vessels, ABS.
78. Rules for Building and Classing Bulk Carriers for Service on the Great Lakes, ABS.
79. Rules for Building and Classing Mobile Offshore Drilling Units, ABS.
80. Rules for Building and Classing Reinforced Plastic Vessels, ABS.
81. Rules for Building and Classing Steel Barges for Offshore Service, ABS.
82. Rules for Building and Classing Steel Vessels, ABS.
83. Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways, ABS.
84. Rules for Building and Classing Steel Vessels Under 61 Meters, ABS.
85. Rules for Building Wooden Hulls, ABS.
86. Rules for Nondestructive Inspection of Hull Welds, ABS.
87. Safety and Health In Dock Work - Code of Practice, The International Labor Organization (ILO).
88. Safety Code for Elevators, Dumbwaiters and Escalators, ANSI.
89. Safety Manual for Marine Oil-Fired Watertube Boilers, The National Safety Council.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

90. Safety of Life At Sea (SOLAS 48, 60 and 74), IMO.
91. Ship Design and Construction, SNAME, 1980.
92. Ship to Ship Transfer Guide (Petroleum), International Chamber of Shipping/Oil Companies International Marine Forum.
93. Ship to Ship Transfer Guide (Liquefied Gases), International Chamber of Shipping/Oil Companies International Marine Forum.
94. SOLAS 74/83, Consolidated Text.
95. SOLAS 74, 1983 Amendments, Vol. III (IGC Code).
96. SOLAS 74, 1988 and 1989 Amendments.
97. Specifications by the American Society for Testing and Materials (All Parts), ASTM.
98. Standard Marking System for Valves, Fittings, Flanges and Unions, MSS-SP 25, The Manufacturers Standardization Society (MSS).
99. Standards for the Installation of Sprinkler Systems, NFPA-13, NFPA.
100. Standards for Marine-Type Electric Lighting Fixtures, Subject 595, Underwriters Laboratories, Inc. (UL).
101. Standards and Recommended Practices for Small Craft, American Boat and Yacht Council, Inc., (ABYC).
102. Standards of the American Welding Society, (AWS).
103. Standards of the Compressed Gas Association, (CGA).
104. Standards of the Marine Department, Underwriters Laboratories, Inc.
105. Standards of the Tubular Exchanger Manufacturers Association, (TEMA).
106. Static Electricity, NFPA-77, NFPA.
107. Steel Construction Manual, The American Institute of Steel Construction.
108. Storage and Handling of Liquefied Petroleum Gases, NFPA-58, NFPA.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS**

- 109. Tanker Handbook for Deck Officers, C. Baptist.
- 110. Threshold Limit Values for Chemical Substances and Physical Agents in the Workroom Environment, (Annual) American Conference of Governmental Industrial Hygienists.
- 111. United States Code Annotated, Title 46.
- 112. Welding Handbook, Sections 1-5 (latest editions), AWS.
- 113. Wire Rope and Strand, Federal Specification RR-W410C.
- 114. X-Ray Standards for Production and Repair Welds, NAVSHIPS 250-692-2, U.S. Navy.

NOTE: Various maintenance manuals published by the manufacturers of boilers, turbines, aluminum components, etc., are also useful resources.

J. UNITED STATES MARITIME ADMINISTRATION (MARAD)

The Merchant Marine Act of 1936 (46 App. U.S.C. 1101 et seq.), as amended by the Merchant Marine Act of 1970, states that it is United States policy to foster the development and encourage the maintenance of a merchant marine. The agency charged with implementing this policy is the U.S. Maritime Administration (MARAD). In September 1981, MARAD became an agency of the Department of Transportation. Liaison between MARAD and the Coast Guard is intended to promote attainment of the mutual goal of merchant vessel safety.

K. HAZARDOUS MATERIAL DETERMINATIONS AND AUTHORITY

The regulations for combustible and flammable liquids carried on a vessel fall under either or both of the statutes discussed in the following paragraphs. For greater detail on the carriage of hazardous materials, see MSM II, Materiel Inspection, COMDTINST M16000.7A (series), Section F.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 1: AUTHORITY AND PROVISIONS FOR
MERCHANT VESSEL INSPECTIONS****1. Hazardous Materials Transportation Act (HMTA) of 1974**

The Hazardous Materials Transportation Act (HMTA) of 1974 can be found in 49 U.S.C. 1801-1812. For packaged material, the HMTA defines a hazardous material as "a substance or material that has been determined by the Secretary of the Department of Transportation (SECDOT) to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated" (see 49 CFR 171.8). This is a very broad definition and includes many commodities that may not be allowed for shipment in bulk.

2. 46 U.S.C. 2101

For the purpose of bulk transportation, Title 46 U.S.C. defines a hazardous material as any liquid material or substance that is:

- a. Flammable or combustible;
 - b. **Designated a hazardous substance under Section 311(b) of the FWPCA**, as amended (33 U.S.C. 1321); or
 - c. Designated a hazardous material under Section 104 of the HMTA (49 U.S.C. 1803).
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USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS**A. ASSIGNMENT OF MARINE INSPECTORS**

1. Introduction

Many factors have a bearing on the number of inspectors that are assigned to an inspection. One inspector (either deck or engineering) is usually sufficient to inspect small vessels such as tank barges, seagoing barges, or small passenger vessels. Larger vessels or those requiring an accelerated inspection may require two inspectors (deck and engineering) and perhaps more, as the need arises. The number and technical qualifications of inspectors necessary to conduct an adequate inspection or examination is at the discretion of the Officer in Charge, Marine Inspection (OCMI).

2. Training and Experience

Every inspector is considered either a deck inspector or an engineering inspector. The OCMI should ensure that all inspectors are cross-trained, within the limits of their capabilities, to serve in both capacities. Thus, an engineering inspector will normally be expected to be capable of making examinations such as the checking of repairs to a lifeboat. A deck inspector will likewise be expected to be capable of making simple engineering examinations, such as checking a fire pump.

3. Overseas Inspections

The United States is routinely asked to conduct inspections in overseas locations where our inspectors may be exposed to potential threats to their physical security. Coast Guard inspectors are easily identified as Americans and, if identified as Coast Guard officers, easily associated with the military. Although we have a responsibility to U.S. ship owners and operators and seafarers to carry out our commercial vessel safety mission, we are also responsible for ensuring the safety of our people. OCMI's must also keep in mind the potential impact that overseas inspection decisions may have on both local and national policy. Sector and Activity Commanders should follow the procedures outlined below when responding to requests for overseas inspections.

- a. Requests for overseas inspections. Requests for overseas inspections should be routed within each office at a sufficiently high level to address the policy issues involved.
- b. General requests. General requests inquiring whether the Coast Guard is sending inspectors into certain areas should be answered carefully to ensure that the

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS

response does not include a statement that the Coast Guard is not traveling to a particular country. This can, and has, caused political consternation both within our government and with foreign governments. Responses to this type of general request should contain statements to the effect that no general Coast Guard travel bans exist and that inspector availability and assessment of the threat to personnel is done on a specific, case-by-case basis.

- c. Threat assessment. The latest threat assessments should be reviewed when considering requests to conduct inspections of specific ships or in specific areas. To obtain these, contact district (oil), the International Affairs Office at Coast Guard Headquarters.
- d. The State Department also issues travel advisories for U.S. citizens. The Citizens Emergency Center at the State Department in Washington, D.C. provides general information on possible danger areas for U.S. citizens around the world. They may be contacted at (202) 647-5225.
- e. Message notification. If a preliminary decision is made to send an inspector overseas, then the OCMI must request country clearance from the cognizant U.S. Embassy or Consulate by message in accordance with COMDTINST 5000.5E.
- f. The message must include the name of the inspector, the dates of travel, the purpose of the travel, a statement regarding whether assistance by post officials is/is not envisioned, and the name, position title, and telephone number of a contact person. See Figure 2-1 for the required message format and wording.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS**FIGURE 2-1: SAMPLE COUNTRY CLEARANCE REQUEST MESSAGE**

FROM: YOUR PLA
TO: AMEMBASSY (IN CAPITAL LETTERS)
USDAO (IN CAPITAL LETTERS)
INFO: AMCOUNSUL (IF NEAR TO DESTINATION)
APPROPRIATE UNIFIED COMMAND (SEE LIST BELOW)
COMDT COGARD WASHINGTON DC//G-CI/G-OIN/G-OIS//
COGARD INTELCOORDCEN WASHINGTON DC
COMLANTAREA OR COMPACAREA COMMANDER
DISTRICT COMMANDER
SECSTATE WASHINGTON DC
ACTEUR, FESEC, MARSEC, GANTSEC IF APPROPRIATE
UNCLAS//N05050// (NOTE: ALL COMMANDANT TRAVEL SHOULD BE
"CONFIDENTIAL.")
SUBJ: COUNTRY CLEARANCE REQUEST FOR COAST GUARD PERSONNEL
IAW THE DOD FOREIGN CLEARANCE GUIDE, REQUEST CLEARANCE AS
FOLLOWS:
A. CITIES AND COUNTRIES TO BE VISITED.
B. FULL NAME, GRADE, POSITION TITLE, AND SECURITY CLEARANCE OF
VISITOR(S).
C. SPECIFIC PURPOSE OF VISIT. (INCLUDE WHETHER CLASSIFIED
INFORMATION WILL BE DISCLOSED AND THE AUTHORITY FOR
DISCLOSURE). (AVOID ACRONYMS. A FULL EXPLANATION IN EASILY
UNDERSTOOD TERMS IS REQUIRED.)
D. DATE AND NATURE OF INVITATIONS ON WHICH VISIT IS BASED, IF
APPROPRIATE.
E. PROPOSED ITINERARY, INCLUDING ESTIMATED DATES/TIMES OF
ARRIVAL AND DEPARTURE AND MODE OF TRANSPORTATION AT EACH
PLACE.
F. ALTERNATE VISIT DATE, IF VISIT CANNOT BE ACCOMMODATED AT
PREFERRED TIME.
G. NAME, GRADE, AND POSITION TITLE OF KEY PERSONNEL TO BE VISITED.
H. LOGISTICAL/ADMINISTRATIVE SUPPORT REQUIRED, INCLUDING
BILLETING AND GROUND/AIR TRANSPORTATION. (IF NONE REQUIRED,
FOLLOWING STATEMENT SHOULD BE INCLUDED: "ALL ARRANGEMENTS
FOR TRAVEL AND ACCOMMODATIONS ARE BEING HANDLED BY
TRAVELER; NO POST ASSISTANCE IS ANTICIPATED").
I. NAME AND PHONE NUMBER OF CG POINT OF CONTACT.
J. COMPLETE EXPLANATION IF REQUEST DOES NOT MEET REQUIRED LEAD
TIME.
K. INCLUDE THE FOLLOWING STATEMENT "WE WILL ASSUME THAT
COUNTRY CLEARANCE IS GRANTED UNLESS A NEGATIVE REPLY IS

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS

RECEIVED" IN ALL MESSAGES WITH THE EXCEPTION OF MESSAGES TO AUSTRIA, BRAZIL, CUBA, FINLAND, LEBANON, NORTHERN IRELAND, PERU, RUSSIA AND SWEDEN. NOTE: THIS LIST MAY ALTER DUE TO POLITICAL CHANGES, CONSULT G-CI IF IN DOUBT.

USCINCLANT NORFOLK VA//J55// FOR CARIBBEAN
USCINCCENT MACDILL AFB FL// FOR MIDDLE EAST, EGYPT, HORN OF AFRICA AND PAKISTAN
USCINCEUR VAIHINGEN GF//ECJ4-SAA//FOR EUROPE (INCLUDING TURKEY, ISRAEL, LEBANON), AFRICA, RUSSIA
USCINCPAC HONOLULU HI//J5//FOR PACIFIC, AUSTRALIA, ASIA, INDIAN OCEAN COUNTRIES, RUSSIA
USCINCSO QUARRY HEIGHTS PM//SCCG//FOR CENTRAL AND SOUTH AMERICA

No Unified Command Notification Required for MEXICO or CANADA, HOWEVER, PLEASE NOTE: Coast Guard personnel requesting clearance to Canada should address their request

TO: AMEMBASSY OTTAWA//ECON//

INFO: USDAO OTTAWA CA

NOTE: Coast Guard Personnel are EXEMPT from obtaining DOD Special Area Clearance.

- g. Overseas examinations of foreign vessels. Title 46 U.S.C. 3317 authorizes the Coast Guard to be reimbursed for examinations of foreign vessels conducted at foreign ports or places at the request of the owner or managing operator of the vessel.
- (1) Based on this authorization, the Coast Guard conduct those overseas examinations on foreign vessels which will prove most beneficial to our Port State Control efforts while conserving time and resources.
 - (2) Activities which may warrant overseas travel include initial control verification exams of passenger vessels and examinations of other vessels of particular interest due to their unique design or type of cargo carried (e.g., liquefied gases). Most other foreign vessel exams will be conducted in U.S. ports.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS

- (3) Field units which receive requests for overseas examinations of foreign vessels must contact Commandant (CG-CVC-2) for approval. Commandant (CG-CVC-2) will evaluate the request, and, if it is approved, will coordinate/organize any augmentation teams necessary to assist the field unit to perform the examination.
- h. Denial of overseas inspection request. If a preliminary decision is made not to send an inspector, Commandant (CG-CVC-2) should be notified before any further action is taken. Commandant (CG-CVC-2) will contact the cognizant Coast Guard offices to ensure that all available information has been considered, and then advise the OCMI of any new information that bears on the preliminary decision. Responsibility for the final decision rests with the OCMI. Commandant (CG-CVC-2) must be advised of the final decision.
- i. Inspector's responsibilities. When traveling overseas, the inspector should make his or her own travel arrangements directly with transportation carriers. The use of foreign carriers is also permitted to obtain indirect routing around high risk areas.
 - (1) Inspectors may use their own means of payment or a Government-issued credit card issued under the Travel Charge Card Program to facilitate overseas ticketing.
 - (2) Currently, these government-issued credit cards indicate that the holder is an employee of the U.S. Government. For this reason, inspectors should use discretion with this card.
 - (3) Cognizant OCMI should ensure expeditious reimbursements of expenses with the district travel office in accordance with the Joint Travel Regulations.
- j. Reporting of overseas inspections. Marine Safety Information System (MSIS) reports for inspections conducted overseas must have the proper country code indicated in the appropriate field of the Marine Inspection Activity Report (MIAR).

4. Performance of Reimbursable Overtime by Civilian Marine Inspectors

Depending on workloads and the availability of trained personnel, it may, at times, be necessary to assign civilian marine inspectors to duties that may involve the payment of overtime compensation.

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS

- a. Computation for services. 46 U.S.C. 2111 is to be used for computing overtime compensation for services performed after hours, on Sundays, and on holidays. Saturdays are considered normal work days. Overtime, other than that specifically provided for in Title 46, is computed according to 5 U.S.C. 5542.
- b. Reimbursements from industry. Reimbursements from industry for overtime services by civilian inspectors are not to be viewed as an offset to the district's civilian overtime ceiling. 46 U.S.C. 2111 requires that overtime is paid to the employee out of annual appropriations and that reimbursements from industry are deposited in the U.S. Treasury. Rather than sidestepping the district's civilian overtime ceiling, the provisions of the statute will actually cause the overtime account to be drawn down more rapidly as payments to civilian documentation officers and inspectors are considerably more generous than those paid to other employees.
- c. Availability of district funding. Presently, there are no means by which the Coast Guard may recover the deposits of overtime reimbursements from the Treasury. This may create a problem when overtime funding is no longer available at the district level. Until a means is established to recover the reimbursements deposited in the Treasury to supplement the overtime ceilings, Commandant (G-MOC) should be contacted regarding the possibility of providing program funds to cover overtime expenses for the purpose of preventing any disruption in our services.
- d. Assignment of civilian inspectors. When assigning civilian inspectors, OCMI's should exercise care to ensure that the same companies are not repeatedly burdened with the extra cost while others escape the added expense altogether. This will avoid the appearance of unfairly treating any particular party. Also, a written acknowledgement must first be obtained from the vessel operators that they will reimburse the Government for overtime costs.

B. Regulations

The marine inspector is bound to encounter situations in which regulations that seem applicable are actually inappropriate for the situation or not in the best interest of overall safety. During the inspection of a vessel, an inspector must take care to ensure that each regulation being applied is relevant to the vessel and situation. Inspectors should be alert to such situations. Before requiring changes based on such a judgment call, an inspector should seek advice from the Chief, Inspection Division (CID), the Chief, Prevention Department (PDH) or the OCMI. When in doubt, the OCMI should request advice from the District Commander (or the Commandant, via the chain of command).

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS**C. INSPECTION DEFICIENCIES**

The guidance outlined below is not intended to provide detailed instruction on how to use the MISLE database. The MISLE Portal page (<https://cgportal2.uscg.mil/communities/misle/SitePages/Home.aspx>.) and various TRACEN Yorktown Marine Inspection “C” Schools are designed to provide user guides and various levels of training on the specific uses of MISLE.

Marine inspectors should follow the guidance provided in the CG-CVC-1 Mission Management System (MMS) work instruction for properly documenting deficiencies in MISLE. This instruction is located on the MISLE Portal page under the MISLE User Guides tab.

1. Definition

A deficiency is any failure to meet minimum requirements of the vessel inspection laws or regulations. An item (equipment, system, component, or structure) is considered deficient if:

- a. It is presently unsatisfactory to the inspector; or
- b. It has a reasonable possibility of becoming unsatisfactory prior to the next required inspection (COI, annual, periodic or hull examination).

2. Notice of Deficiency Using Vessel/Facility Inspection Requirements, Form CG-835

- a. If, during the course of any vessel inspection or examination, the vessel or its equipment is found not to comply with the requirements of vessel inspection laws or regulations, the inspector should point out the deficiencies and discuss all required corrective actions with the vessel's owner or the owner's representative.
 - (1) When necessary, depending on the seriousness of the deficiency, the inspector should explain that failure to correct the deficiencies before completion of the inspection or examination may result in refusal to issue, or withdrawal, of the vessel's Certificate of Inspection (COI).

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS

- (2) The marine inspector should advise the vessel owner/representative that they may speak to the OCMI about any deficiency that will not be corrected by the date specified on the deficiency report. Depending on the nature of the deficiency, the OCMI may then decide whether or not to extend the compliance deadline.
 - (3) When authorized by the OCMI, deferment of correction of minor deficiencies may be settled by discussions between the vessel owner/representative and the inspector. If the owner or his or her representative desires further clarification or reconsideration of any requirements, that person should consult the OCMI.
 - (4) Deficiencies that may affect the vessel's seaworthiness, are unusually complex, or may indicate a problem with a system or item on other vessels, shall be entered into MISLE as soon as possible. Deficiencies must be entered in MISLE even if they were corrected prior to the end of the inspection. Entering corrected deficiencies allows for the effective use of the safety performance tracking capability afforded by MISLE.
- b. The master/representative of the vessel must be notified of any deficiencies the marine inspector finds. Other officers with primary interest in the inspection, such as the chief mate or chief engineer, should also be kept fully informed, even though a port engineer or other owner's representative may be more directly concerned with correction of the deficiencies.
- (1) The inspector's notification of the deficiency may be verbal or in writing, as circumstances dictate (see A2.C.3 below). Written notification of the requirement to correct a deficiency shall be on Vessel/Facility Inspection Requirements, Form CG-835, IAW 46 CFR 2.01-10.
 - (2) The original copy of Vessel/Facility Inspection Requirements, Form CG-835 should be issued to the vessel's master or, if not available, to either the chief engineer or the owner/representative. If issued to the owner/representative, that person's capacity with respect to the vessel (title), should be noted on the form.
- d. When a vessel is permitted to depart with outstanding deficiencies following an inspection, the inspector shall ensure the time period for correction of those deficiencies is clearly annotated on the CG-835 form. The inspector shall ensure that outstanding deficiencies and any corrected deficiencies that may have directly affected the seaworthiness of the vessel, are entered into MISLE as soon as possible.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS

- (1) On subsequent visits to the vessel, inspectors shall determine the status of any outstanding requirements by reviewing the vessel's record of deficiencies in MISLE prior to boarding the vessel. If there is a question regarding any outstanding requirements, the issuing office should be contacted. Deficiencies from prior exams should be cleared if they are corrected, or reissued with a new compliance date.
- (2) Whether deficiencies are corrected or not, the witnessing inspector must make explanatory entries for each deficiency with the port, date, and his or her signature on the Vessel Inspection Record. MISLE should then be updated and the issuing office will be notified automatically by MISLE.
- (3) Monthly reports should be pulled to ensure there are no outstanding requirements issued from your office.

3. When to Issue Vessel/Facility Inspection Requirements, Form CG-835

- a. Notice of Vessel/Facility Inspection Requirements, Form CG-835 must be issued to cover outstanding deficiencies in the following cases:
 - (1) When it is apparent that the correction of a deficiency may be subject to controversy between the ship owner or operator and the Coast Guard.
 - (2) When it is desirable to make exact requirements a matter of record.
 - (3) When some deficiencies have not been corrected by the end of the inspection and are permitted to remain outstanding.
 - (4) When deficiencies have not been corrected before the vessel proceeds to another inspection zone for completion or continuation of an inspection.
 - (5) When it is anticipated that an inspection will be completed by another inspector.
 - (6) When the owner's representative requests a written requirement to cover items considered by the inspector to be deficiencies.
- b. When deficiencies are not controversial and corrective action is being taken, the inspector may use discretion in determining whether or not to issue them on a CG-835 form. However, the deficiencies should still be documented and entered into MISLE so the data can be used to identify trends in the future. Written

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS

requirements on form CG-835 should not be issued at the request of the owner's representative or a crewmember to cover repairs or changes initiated by the owner when such repairs or changes would not have been required by the inspector. However, when such repairs or changes are undertaken, they must be accomplished to the satisfaction of the inspector.

4. How to Write Deficiency Requirements

- a. Inspectors should exercise special care when writing requirements to correct deficiencies.
 - (1) The master should be notified, in clear and concise language, of the nature of a deficiency and the steps that must be taken to correct it.
 - (2) Unless statutes, regulations, instructions, or established marine practice dictate otherwise, the method of correction should be left to the discretion of the owner or the owner's representative, subject to the inspector's approval.
- b. Basis for requirements. Vessel/Facility Inspection Requirements, CG-835 requirements should be based on specific regulatory requirements. Where the regulations allow, requirements may be based on the discretion of the OCMI. Requirements should be clearly worded so that the master, chief engineer, or owner will understand the deficiency to be corrected. Requirements that cannot be supported by regulations or definitive OCMI policy should not be issued.
- c. Completeness. Each written requirement should clearly describe the deficiency and include the required corrective action (e.g. repair in kind, prove proper operation). Requirements will normally have completion dates based upon policy established by the OCMI.
 - (1) The inspector should avoid vague statements, such as "Bring into compliance with 46 CFR."
 - (2) A statement of the inspector's authority (law or regulation) is not necessary on Vessel/Facility Inspection Requirements, Form CG-835 unless specifically required by the OCMI. However, when a particular law or regulation contains information that might clarify the terms of the requirements or suggest alternate means of compliance, reference to such sources may be made. It is recognized that requirements may be written under conditions requiring haste or circumstances where reference to authorities is not feasible.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS

- d. Local modifications. In some inspection zones, standard wording has been adopted for frequently recurring requirements on Vessel / Facility Inspection Requirments, Form CG-835. This practice has proven to be advantageous to inspectors and vessel owners and operators, particularly in the inspection of small passenger vessels.
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5. Notations in Inspection Reports

Refer to MSM Volume II, Material Inspection, COMDTINST M16000.7A (series), Chapter A3 for instruction on making notations in inspection reports.

6. Letters of Outstanding Deficiencies

- a. Deficiencies may remain outstanding at the completion of an inspection or examination provided that they are not contrary to law, and, in the OCMI's opinion, they will not materially affect the safety of the vessel or the environment during the time they remain uncorrected. These deficiencies will normally fall into the following categories:
- (1) Minor requirements, such as those for signs or small repairs, that can be readily accomplished by the ship's crew.
 - (2) Relatively minor items of equipment that are not then available but have been placed on order.
 - (3) Repairs that can be safely postponed and accomplished where those interested can most conveniently perform them.
 - (4) Deficiencies that remain outstanding when a vessel moves from one zone to another to complete an inspection.
 - (5) Deficiencies that can be more readily corrected when the vessel is in drydock.
 - (6) Deficiencies on vessels being laid up and placed out of operation.
 - (7) Deficiencies that are being appealed.
- b. Notification procedures. Upon completion of the inspection or examination, all deficiencies for which a Vessel/Facility Inspection Requirements, CG-835 was issued must be entered into MISLE.

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS

- c. Extensions of time. Time limits for deficiency corrections may be extended for good cause by the issuing OCMI, the district commander, or the Commandant. The time limit on a deficiency should not normally be extended by another OCMI or district commander without the agreement of the OCMI who issued the requirement. In no case should a requirement be modified or cancelled by a person other than the issuing OCMI.
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7. Deficiencies Reported by the Crew

- a. General. All licensed officers are required by 46 U.S.C. 3315 to assist the marine inspector and to point out all known defects and imperfections. Inspectors should ask the master and chief engineer about deficiencies and should be receptive to all reports of deficiencies made by the ship's officers and crew.
- (1) Each reported deficiency should be investigated and corrective action required when appropriate. The inspector should include a note concerning each complaint of deficiency in the inspector's report.
 - (2) Inspectors should be aware that 46 U.S.C. 3315 prohibits the disclosure of the sources of information about deficiencies.
- b. Approaches from safety committees. Many vessels have safety committees under company or union sponsorship that meet regularly to consider safety matters. Almost all of these, particularly where materiel items are involved, are of concern to the Coast Guard.
- (1) It is likely that inspectors will be approached by spokespersons of ships' safety committees, either verbally or by written petition. When such contact is made, the inspector must note those matters and inform the OCMI of the complaints and actions taken.
 - (2) This is necessary because copies of complaints are often forwarded to various officials, including the Commandant and members of Congress. The Commandant may then contact the OCMI for additional information.
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USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS**8. Condemning Equipment in Use**

- a. OCMI should not condemn or impose additional or different requirements on approved equipment or other inspection items that another OCMI has passed or accepted, except in the following cases:
 - (1) When deficiencies exist and were undiscovered due to inspection errors or omissions.
 - (2) When the item has since been damaged or has otherwise deteriorated to such an extent that it is no longer fit for the service intended.
 - (3) When the requirements of law or regulation have changed and the change is retroactive.
 - (4) When the route or service of the vessel is being changed, or alterations are being made to the vessel that make changes necessary for compliance with different regulations.
 - (5) When directed by the Commandant.
 - b. Resolution of disputed approvals. When an OCMI considers equipment or other inspection items previously approved by the Commandant or an OCMI to be unsuitable because of workmanship, arrangements, or design, the OCMI should attempt to resolve the matter between themselves.
 - (1) If the problem cannot be resolved, no further action should be taken until a decision has been made by the cognizant district commander(s).
 - (2) When district commanders cannot reach agreement, the matter should be referred to Commandant (CG-CVC).
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9. Deficiencies Overlooked at Prior Inspections

Deficiencies that were overlooked, by error or omission, during a previous inspection or by previous inspectors during the same inspection should normally be required to be corrected. The inspector should consult previous inspection records and contact the previous inspectors to determine the status of the item(s) in question. The current inspector should ensure that the item has not been previously approved or accepted as satisfactory before making additional requirements. The vessel owner should be given all possible consideration in the correction of items found to be deficient because of

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS

inspection errors or omissions. Unless immediate correction of such items is considered critical to the safety of the vessel, the OCMI should allow a reasonable amount of time for their correction.

10. Changing of Inspectors During Inspections

Changing inspectors during an inspection should be avoided. When circumstances require such a change, there must be a clear understanding between the inspectors concerning approved items and outstanding deficiencies. Proper use of the Inspection Book, CG-840 and Vessel/Facility Inspection Requirements, Form CG-835 will facilitate this understanding. The relieving inspector should not change requirements imposed by the first inspector or impose additional requirements concerning items previously approved or accepted as satisfactory, unless the relieving inspector has received authority from the OCMI; Chief, Prevention Department; or the CID. These officers should confer with the first inspector before authorizing a change in requirements or imposing additional requirements.

11. Resolution of Requirements Between Inspection Zones

- a. General procedures. When a vessel changes inspection zones during an inspection, or when any deficiencies issued by one OCMI may be completed in another zone, the requirements issued by the first OCMI must be passed to the next OCMI. If a vessel changes its home port or primary port of operation to another zone, the OCMI should ensure that any outstanding inspection cases are filed and that deficiencies are entered into MISLE.
 - b. Monitoring procedures. OCMI's must ensure that any deficiency requirements issued in another zone are completed. The OCMI who issued the notice of deficiency and the OCMI who last certificated the vessel will be notified automatically by MISLE that the requirements have been satisfied.
- (1) Additional requirements should not normally be imposed on a vessel approved in one zone when it moves to another zone for a similar operation and route.
 - (a) When there is disagreement between OCMI's as to deficiencies or requirements, the matter should be referred to the district commander(s) for resolution.
 - (b) If the district commander(s) cannot reach agreement, the matter should be referred to Commandant (CG-CVC).

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS

- (2) Unless the situation is extremely hazardous, additional requirements should not be imposed before the matter is resolved. When an OCMI finds it necessary to change or impose additional requirements because of hazardous conditions, he or she should notify the first OCMI, the district commander(s) and Commandant (CG-CVC) by phone or email.
- c. Transfer of records. When previous inspection records will help resolve questions concerning a vessel inspected in another zone, the OCMI should obtain a copy of such records.

D. SPECIAL CONSIDERATIONS

1. Introduction

The vessel inspection regulations include provisions for special actions and considerations for certain circumstances. In many cases, the Commandant or district commander holds the discretion to give special consideration. In some cases, the OCMI is given this authority and may further delegate the authority to inspectors. Other regulations authorize the inspector to make discretionary rulings on matters within the limits of unit policy. Provisions for special consideration should be used to provide practical application of the regulations and avoid unreasonable requirements, actions, or decisions unnecessary to maintaining an adequate degree of safety. This policy applies only to those regulations that expressly authorize these special provisions, i.e., 46 CFR 30.15, 70.15, 90.15, 108.105, 175.15, and 188.15.

2. OCMI's Role

Certain sections of the small passenger vessel regulations in 46 CFR Subchapters T and K authorize the OCMI to permit departures from specific requirements when warranted by special circumstances or arrangements. OCMI's must recognize that local practices have often proved safe and appropriate for local conditions, even if they do not conform specifically to regulations.

SECTION A: MARINE INSPECTION ADMINISTRATION**CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS****3. Inspector's Role**

In their inspection reports, marine inspectors should note all items that require interpretations of regulations, and on which the OCMI, district commander, or the Commandant has given an interpretation or decision. Such items include equivalents, substitutions, acceptance of non-approved equipment, non-standard fuel tanks, certain marine engineering items, etc. Inspectors should also enter a note in MISLE to document the decision for future reference.

E. MAINTENANCE OF VESSEL INSPECTION RECORDS

1. Required Records

46 U.S.C. 3310 requires the Coast Guard to keep adequate inspection records. The OCMI should ensure that records of all actions pertaining to vessel inspection are maintained as required. Directives and file systems should be maintained in accordance with the Coast Guard Directives System, Commandant Instruction (COMDTINST) M5215.6 (series) and COMDTINST 5210.5 (series). Inspection records and files should be retained, destroyed, or transferred as required by the Paperwork Management Manual, COMDTINST M5212.12. (See Chapter 3).

2. Transfer of Records Between OCMI's

The inspection records covering the initial construction and inspection of all vessels, except those inspected under 46 CFR Subchapters T and K, must be maintained by the OCMI conducting the initial inspection, subject to the disposal instructions in COMDTINST M5212.12. With the exception of the vessels noted in the following paragraph, all current records, except those for the initial inspection, must be transferred to the zone where a vessel transfers its principal port of operation. Vessels inspected under 46 CFR Subchapters T and K should also have their initial inspection files transferred to the OCMI of the zone in which the vessel currently operates. When a vessel's principal area of operation shifts from one zone to another, its files must be transferred permanently from the first OCMI to the OCMI of the vessel's new zone. In the case of a vessel that has temporarily shifted principal zones of operation, the files should be temporarily transferred when they are needed to resolve inspection questions. When transferring original files, the transferring office must retain copies in the event of mail loss or damage. Further, the receiving OCMI should ensure the vessel is added to the unit's Fleet of Responsibility (FOR) in MISLE.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 2: ADMINISTRATION OF MERCHANT VESSEL INSPECTIONS**3. Certified Copies of Inspection Records**

- a. At times, certified copies of inspection records will be needed for court proceedings. These certified copies may be made by a photographic copying process, or by copying the record word for word when the record consists of entries on a form and the same type of form is available. The copy requiring certification should be certified by the OCMI (or acting OCMI) in a manner similar to the following (any questions concerning certification should be referred to the district legal officer):

"I hereby certify that the attached is a true copy of the original record of inspection covering the inspection of the SS WHIZZ between 8 and 12 May 1985, on file in my office, and of which I am the custodian.

Signed and dated at Philadelphia, PA this 15th date of May, 1985.

(Signature)

By John Doe, Captain, U.S. Coast Guard
Officer in Charge, Marine Inspection
Philadelphia, PA."

- b. Certification of copies. If practical, the certified copy should be stamped with the Coast Guard seal.
- (1) The certification must be attached to the record. It is not necessary to certify each page of an inspection report.
 - (2) Instructions with regard to charges for certification of documents are contained in 33 CFR 1.25 and 49 CFR 7.91. For policy concerning the release of investigative records to a court, see MSM Volume V, Investigations and Enforcement, COMDTINST M16000.10A (series).
 - (3) See Figure A2-2 for a sample certification of true copy.

FIGURE 2-2**CERTIFICATE OF TRUE COPY**

(To be included in future revision)

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS**A. VESSEL INSPECTION REPORTS AND RECORDS**

1. Standard Forms

Standard inspection record and report forms, whether manually typed or generated through the Marine Information for Safety and Law Enforcement (MISLE), are the primary media for transmitting information from the marine inspector to the Officer in Charge, Marine Inspection (OCMI). The OCMI is legally responsible for the certification of vessels. These standard inspection record and report forms should--

- a. Eliminate or reduce the collection and duplication of unnecessary information;
 - b. Provide uniform guides that may be modified to accommodate local conditions and needs for administration or for a particular inspection; and
 - c. Serve as the permanent record of inspections and certifications.
-

2. Use of Standard Forms

Due to the variety of vessel types and inspection requirements, it is important that the inspection forms do not limit or otherwise delineate the scope of an inspection. OCMI's are vested with the authority to modify the use of standard forms in order to meet local needs. For such modifications, the OCMI should maintain the primary objective of reducing the paperwork load on both the inspectors and the clerical staff. Practices to eliminate or reduce paperwork that are prohibited by instructions governing the use of forms must not be used.

B. VESSEL INSPECTION DOCUMENTS

This chapter also provides guidance to standardize entries on inspection documents that are issued to and maintained on board commercial vessels. To avoid potential problems from time lags in recording inspection data, a MISLE activity must be opened at the start of every vessel inspection rather than when the inspection is completed. This will assist vessel file users to determine if a required inspection is past due or has been undertaken in another OCMI zone. At a vessel's initial inspection for certification, the inspector should review all pertinent MISLE products to ensure that all information that should appear on the Certificate of Inspection (COI) and other documents is obtained for entry into MISLE. At each subsequent annual, periodic, drydock/hull exam, or inspection for certification, the inspector should review the COI and other vessel documents to verify their accuracy. The inspector should ensure that any changes that have occurred, such as change in owner or operator, propulsion, operating area, etc., are properly documented prior to the issuance of either an amended or new COI, or other documents.

SECTION A: MARINE INSPECTION ADMINISTRATION**CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS****C. VESSEL INSPECTION DOCUMENTATION**

1. General Discussion

The accuracy and completeness of inspection reports is vital. These reports serve as public records of vessel inspections and reflect upon the professionalism of the inspector, the marine inspection program, and the Coast Guard as a whole. A MISLE activity is required for all inspections. Inspectors should follow the provisions of this section when preparing optional inspection booklets, CG-840, available on the CG Portal at the Commandant (CG-CVC) Web site. To help document inspection activities, use of the most recent version these booklets is encouraged.

2. Use of Booklets

Each 840 booklet is set up in outline form to serve a memory-jogging tool with appropriate reference citations. The booklets are considered job aids; however, the inspector may use a booklet as a draft record of the items checked during an inspection for later transfer to MISLE. The booklets were developed to be as complete as possible, with the goal of covering all items that should be examined during a particular inspection. However, the booklets may not encompass all facets of a particular vessel. Inspectors are cautioned against relying only on the items listed in a booklet in order to conduct a thorough inspection (see other chapters in this manual for further guidance in carrying out the various types of inspections).

3. Merchant Marine Inspection Requirement Form CG-835

Vessel/Facility Inspection Requirements, Form CG-835 is used to record all vessel conditions, equipment, or materials that do not comply with the requirements of statutes, regulations, or "good marine practice." See MSM Volume II, Materiel Inspection COMDTINST 16000.7 (series), Chapter A2 for additional guidance on the issuance of this form. Copies of all issued Vessel/Facility Inspection Requirements, Forms CG-835 should be included with the MISLE activity documentation and filed in the vessel's "hard copy" file.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

- a. Outstanding deficiencies issued on Vessel/Facility Inspection Requirements, Form CG-835. Outstanding deficiencies issued on Vessel/Facility Inspection Requirements, Form CG-835 must also be entered in MISLE.
 - (1) A numbered block in an inspection booklet should not be initialed if an item is unsatisfactory. In such cases, the inspector should describe the deficiency on the blank page opposite the item, with the date of the entry.
 - (2) If the deficiency is corrected prior to completion of inspection, the numbered block may then be initialed, but the deficiency must still be entered into MISLE.
 - (3) If the item is not completed satisfactorily before completion of the inspection, and a requirement is issued on Merchant Marine Inspection Requirement Form CG-835, this should likewise be noted on the page opposite the item.
- b. Partially completed items. Partially completed items should either be noted in the 840 booklet or in the inspection narrative in such a way that the status of each item can be easily understood by other inspectors.
- c. Remarks. The inspector must make any remark entries in the “Remarks” inspection narrative section (including inspection narrative) for each inspection visit to a vessel.
- d. Inspectors are encouraged to use a personal notebook or working copy of the CG-840 booklet to record daily remarks on inspections that last several days, weeks, or months. This will assist the inspector in drafting the final narrative summary at the conclusion of the inspection. Personal notebooks are the property of the individual inspector and need not be retained, submitted for review, or included in the official record.
- e. Duplication in the inspection narrative of the check-off blocks in the Inspection Books, CG-840 is unnecessary. If an item is found satisfactory and the block is initialed by the inspector, repetition of that information in the inspection narrative is redundant. However, if repairs or replacements were required to make the item satisfactory, then a brief note in the inspection narrative inspection narrative may be appropriate.
- f. Information that will assist subsequent inspectors in the conduct of their inspection should be included in the inspection narrative. For example, identification of which specific components were examined among a random sampling of a large group would aid future inspectors in their selection of which components to examine at their inspection.

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

Examples of entries:
“Visited vessel in company with [owner’s representative] on [Date] at [Place] to conduct drydock examination for credit. This is a standard single-skin tank barge, with 8 integral cargo tanks, a void space in the forward rake, and a box void aft as shown by sketch. There is one cylindrical 7500 gallon diesel fuel tank on deck. The barge is approved for the carriage of Grade B and lower products.”
“Examined all pressure/vacuum valves and flame screens after they were opened for inspection; all were found satisfactory with the exception of those noted on page [blank page number opposite the inspection item].”
“Examination of the vessel’s eight combination fire nozzles revealed they were in good condition and suitable for this type of vessel, which requires only the solid stream nozzle. However, as these nozzles (described on page 9) are not Coast Guard approved, the matter was referred to the OCMI. After I witnessed a test that indicated superior performance of these nozzles compared to the approved straight-bore, the OCMI permitted acceptance under special consideration provisions of 46 CFR 175.25-1.”
“All items listed on pages 4 through 7 were inspected and found satisfactory except as noted.”
“Visited vessel to inspect progress of construction of the hull and internal structural members. All work was proceeding satisfactorily in accordance with approved plans. Several areas in the port fuel tank were marked for pickup welding.”
“Witnessed a satisfactory 4 foot hydro on No. 2 P cargo tank, including examination of hull and deck area in way of tank. A final inspection of the vessel’s entire underwater body was made prior to launching and found satisfactory. Initial drydock examination completed.”
“Initial inspection for certification completed with four (4) outstanding deficiencies noted by attached Vessel/Facility Inspection Requirements, Form CG-835s. Issued temporary Certificate of Inspection this date and recorded information in Bridge Record Card.”

g. Inspectors must record the following additional items:

- (1) Spaces not entered. The inspector should make an entry in the inspection narrative regarding spaces that were inaccessible during an inspection for certification or annual and periodic inspections.
 - (a) All inspectors should make a pre-inspection check of previous inspection books and/or MISLE data to discover which spaces, if any, have not been entered in the recent history of the vessel.
 - (b) Because of careful recordkeeping, such a review of inspection books and MISLE data should produce an inventory of spaces entered/not entered throughout a vessel’s history. Arrangements should be made to facilitate

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

inspection of those spaces that are due for inspection to ensure the structural integrity of the vessel.

- (2) Extensive repairs/alterations. The inspector should briefly describe any extensive repairs/alterations in the inspection narrative. The inspector may attach a copy of shipyard specifications to the inspection report in lieu of writing a detailed description of the repair or alteration in the inspection narrative (e.g., “Extensive bottom and side shell plating required replacement due to general wastage. See attached specifications.”).
- h. Record of inspection page. The inspector must indicate on this page whether or not the vessel is fit for its intended route. The inspector should print his/her name on the record of inspection page and then sign where indicated.
 - (1) If the vessel is not considered fit for service, then the Chief, Inspection Department should be notified as soon as possible.
 - (2) The record of inspection page should also include the name of the vessel representative who accompanied the inspector during the inspection and that individual’s contact information.
- i. Record of unsatisfactory conditions or deficiencies identified. The process of recording deficiencies detected during the course of an inspection has always been conducted informally by marine inspectors through personal records, notes, or, in some cases, a formal work list which is provided to the owner’s representative. By standardizing this existing process, we can make productive use of this valuable, and previously lost, information.
 - (1) As marine inspection program managers, representatives of the various Headquarters Divisions are often called upon by legislators and others in and out of government to produce records which show the value added by the marine inspection program.
 - (2) It is a mistake to interpret the scarcity of deficiencies noted in MISLE as proof that the Coast Guard does not find anything wrong during vessel inspections. MISLE records only show deficiencies that remain outstanding after the conclusion of an inspection, a number which ideally should be zero. Nonetheless, it is important to document and present a complete picture of the marine inspector’s role in detecting vessel safety deficiencies.
 - (3) There are several advantages to increased visibility of the marine inspector’s role. This additional information will improve the Coast Guard’s ability to measure and monitor areas that are problematic and should become the focus of policy, procedures, or regulation. The Coast Guard will also be able to better

SECTION A: MARINE INSPECTION ADMINISTRATION**CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS**

focus training for inspectors on vessels and/or systems with high deficiency rates. Finally, this information will enable us to evaluate the effectiveness of the owners/operators, classification societies, and other flag administrations in carrying out their maritime safety responsibilities.

- (4) In addition to the information the inspection narrative, inspectors must complete a list of deficiencies identified during an inspection. This list must include all deficiencies noted by the inspector, including those corrected on the spot, those corrected prior to completion of the inspection, and those outstanding at the completion of the inspection. If the inspector prefers, they may use the inspection narrative section of the Inspection Book, CG-840 or a local form to list their deficiencies in place of the sample form provided.
- (5) At the conclusion of the inspection, the inspector must ensure that all deficiencies identified during the inspection are entered into MISLE.

D. PERFORMANCE OF AUTOMATED MACHINERY AND EQUIPMENT

See 46 CFR Part 62 for automation regulations. Upon completion of underway tests of initial installations, the inspector must submit a letter reporting the performance of the vessel's automated machinery and equipment to Commandant (CG-CVC) in accordance with COMDTINST 16711.1 (series). See Chapter 6 of this volume and NVICs 1-69, 7-73, and 6-84 for additional information concerning automated main and auxiliary machinery.

E. U.S. PUBLIC HEALTH SERVICE (PHS) INSPECTION RECORDS

The Public Health Service (PHS) promulgates official certificates for sanitary inspections of commercial vessels. These certificates may be retained onboard.

F. LOCALLY MAINTAINED RECORDS

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS**1. Measurement of Furnaces, Form CG-836**

When the OCMI deems it necessary, the inspector should complete Form CG-836 after inspecting a firetube boiler. The completed report should be retained in the vessel's file.

2. Renewals of Fusible Plugs

When fusible plugs are renewed at other than the inspection for certification and no marine inspector is in attendance, the vessel's Chief Engineer must submit a written report to the OCMI. The OCMI must ensure that the report is complete and consistent with the information requirements of 46 CFR 2.20-40(c) and 52.01-50(k). These reports should be included in the vessel's inspection records.

G. MARINE INFORMATION FOR SAFETY AND LAW ENFORCEMENT (MISLE)**1. Purpose**

The purpose of MISLE is two-fold: to build safety performance histories of vessels, marine facilities, involved parties, and hazardous cargoes; and to focus and redirect marine safety activities and resources using these histories in analysis of safety degradation patterns and equipment failures.

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS**H. CERTIFICATE OF INSPECTION (COI), STANDARD MISLE FORM****1. COI Entries—First Page**

Information entered in the MISLE Vessel File Operating Details (VFOD) comprises the majority of page one of a COI. VFOD is where the OCMI specifies manning, route, number of passengers permitted for a vessel, as well as details regarding the carriage of passengers and cargo. The VFOD is divided into three sections used to collect information that will appear on the COI. The first section is used to specify the route of the vessel (using the Route Code), number of passengers permitted, and minimum crew required. For passenger vessels authorized for multiple routes with varying crew and passenger restrictions, the summary section should contain the crew and passenger requirements for the most restrictive of the routes authorized (e.g., if authorized 149 passengers on a “Coastwise” route and 99 passengers on an “Oceans” route, specify the Oceans route requirements). The second section of the VFOD specifies the manning requirements for the vessel. As above, if the vessel is authorized for multiple routes, the manning requirement for the most restrictive route must be entered. The third section of the VFOD is used to specify the details regarding the vessel's route, manning, cargo and passenger carriage, and any other conditions of operation. In this section, the OCMI may specify manning and passenger carriage restrictions for vessels authorized for multiple routes. Consult the applicable MISLE Transaction Guides for specific details concerning other MISLE products to be used for making entries.

2. Amplifying Guidance on Particular Portions of the COI

- a. Passengers – general. It is the OCMI’s responsibility to determine the number of passengers that a vessel can accommodate and can carry with prudence and safety. (As explained in the following paragraphs, this does not apply to ferryboats.)
 - (1) The OCMI should not permit the number of passengers allowed to exceed that allowed by law or regulation. The number allowed should be based on specific criteria including, but not limited to, the vessel's intended operating area, lifesaving equipment carried, stability, deck area and or rail space.
 - (2) Maximum number on ferry vessels. 46 U.S.C. 3501 provides an exception for the number of passengers permitted to be carried on a ferry vessel, as stated on its COI. The maximum number of passengers permitted on a ferry will appear on the COI as "FERRY" when "FERRY" is entered as the Vessel Use Code in the Vessel File Design product (VFDD).

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

NOTE: When stability is a factor in limiting the maximum number of persons that can be carried safely on any ferry vessel, the total number of persons permitted aboard should be stated in the stability letter.

- b. Persons on board other than the minimum operating crew. This policy is intended to give uniform guidance on how the manning data should be entered in MISLE for persons other than the minimum required crew.
- (1) Other required crew. Other required crew consists of maintenance persons the OCMI has required due to special design or operation of a vessel. The number required should be listed with a specific description in the space provided.
 - (2) Other persons in crew. Other persons in crew are licensed and documented crew employed onboard to operate and maintain the vessel in addition to the minimum number of crew set by regulatory requirements. This includes persons in the stewards' department, additional licensed or documented crew which the owner wishes to carry to perform maintenance while underway, and hotel staff.
 - (3) Persons in addition to crew. These are individuals in addition to the crew on an inspected vessel which is not required to be inspected as a passenger vessel. This term includes persons onboard a vessel who are not employed in the business of the vessel. These persons are not required to hold a merchant mariner's certificate. Reference is made to 46 U.S.C. 3304 concerning the number of individuals in addition to the crew permitted on vessels other than passenger carrying vessels.
 - (4) Industrial personnel and scientific personnel. Industrial and scientific personnel are distinct from passengers, other required crew, other persons in crew, and persons in addition to crew. The number of industrial and scientific personnel employed aboard a vessel affects its structural fire protection requirements. For definitions of industrial and scientific personnel, see 46 CFR 90.10-15 and 46 CFR 188.10-71, respectively.
 - (a) If an industrial vessel of 300 GT or more is carrying over 12 industrial personnel, or an oceanographic research vessel is carrying over 16 scientific personnel, the vessels must be inspected for compliance with applicable structural fire protection regulations. The number of authorized industrial and scientific personnel must be identified, and their duties specifically described, on the COI through the MISLE VFOD "free form" blocks.
 - (b) Artificially inflating the other persons in crew and/or persons in addition to crew categories to avoid compliance with structural fire protection regulations or passenger vessel regulations is not permitted.

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

- c. Reduced crews. When reduced crews are authorized for less than 24-hour operation, the OCMI must make a COI endorsement under "Route Permitted and Conditions of Operation." Multiple endorsements may be made on a vessel's COI when necessary to address changes in conditions or employment. For additional information, consult the MSM, Volume III, Marine Industry Personnel COMDTINST M16000.8B (series).
- d. Small passenger vessels. See MSM Volume III, Marine Industry Personnel COMDTINST M16000.8B (series) Chapter 19 for detailed guidance on manning.
- e. See MSM Volume II, Materiel Inspection COMDTINST M16000.7 (series), A3.H.3.a below for information regarding allowable reductions in the carriage of child size life preservers when extended size devices are carried onboard.
- f. Automation. When the OCMI has approved a reduced manning level on the basis of an installation of automated control or monitoring systems, the COI must be appropriately endorsed in accordance with 46 CFR 62.50 and MSM Volume III, Marine Industry Personnel, COMDTINST M16000.8B, Chapters 21 and 23.
- g. Route permitted and conditions of operation. This is the narrative portion in which the major route designation is stated, i.e., oceans coastwise; Great Lakes; lakes, bays and sounds; or rivers.
- h. Limitations imposed or extensions granted on routes based on reasons like stability criteria, unique construction, operating areas, or operating characteristics of the vessel should be described by bodies of water, geographic points, distances from shore or geographic points, duration of voyage, daylight operation only, etc. Further conditions of operation, where applicable, would include manning endorsements and any other special endorsements deemed necessary by the OCMI.

NOTE: The route code entered does not map into the narrative portion.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONSi. Barges.

- (1) Financial responsibility. Prior to the Oil Pollution Act of 1990 (OPA 90), the financial responsibility requirements of the Federal Water Pollution Control Act, as amended, provided for a reduction in the liability limits on inland oil barges for the removal of oil discharged into U.S. waters. For this purpose, inland oil barges were defined as non-self-propelled vessels carrying oil in bulk as cargo and certificated to operate only in the inland waters of the United States. OPA 90 removed these limits of liability. Therefore, for financial responsibility/liability purposes, it is not necessary to distinguish between inland oil barges and other oil barges on a COI.

NOTE: This reminder replaces previous text (superseded by OPA 90) regarding reduced financial responsibility for inland oil barges. Routes should continue to be limited for other reasons such as design and class limitations.

- (2) Permissive crewing. Where a vessel owner/operator voluntarily elects to crew a barge not otherwise required to be crewed, the vessel's Route Permitted and Conditions of Operation section of the COI should be endorsed: "The vessel may carry [##] persons as maintenance persons with no duties connected with the navigation of the vessel." On seagoing barges over 100 GT, the endorsement should include the statement: "All maintenance persons must possess a merchant mariners certificate, and a minimum of 75 percent of those persons aboard must be U.S. citizens." This endorsement may be further modified to limit the route on which personnel may be aboard based upon load line, lifesaving equipment, or other relevant factors.
- (3) Watchstanders. It is unnecessary to endorse a watchstander on tank barges, as he/she is to be included in the crew requirements.
- (4) Carriage of vehicles. Endorsements for the carriage of vehicles on tank barges may be stated as "Permitted to carry vehicles - total weight 8,000 kg per unit; axle load 2,500 kg per axle. Vehicles may not be operated."

3. COI Entries - Attachments

Attachments to the COI are issued when there is more information required for a particular vessel than will fit onto the first page. This includes additional endorsements (see MSM Volume II, Materiel Inspection, COMDTINST M16000.7 (series), A.3.H.4 below) and information on vessel particulars such as cargo authority and/or loading restrictions for tank vessels/barges, lifesaving and fire fighting equipment, machinery inspection status, stability letter, and pressure vessels. The following provides information on some

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

of the more frequently used and/or critical detail products. This is by no means an all encompassing list; review the MISLE user guide to ensure that each vessel has all applicable information entered accurately.

a. Lifesaving details.

- (1) The number of persons for which lifesaving equipment is to be provided should normally be the same as the total persons carried; however, for ferry vessels, this figure should be the same as the number of life preservers required. It is only necessary to list the minimum number of items required by regulations; excess equipment does not need to be listed.
- (2) NVIC 14-92 deals with use and carriage of lifejackets (life preservers) with height/weight limits that are lower than the traditional 41 kg (90 lb) for adults. Lifejackets with other, lower height/weight limits marked on them may be used to meet mandatory carriage requirements for persons as the label indicates. Adjustments to carriage requirements for life preservers may be made on the COI according to NVIC 14-92. When lifejackets on board have a lower limit of 1.45 m (57 in) or less, only 5 percent additional child-size devices must be carried on vessels with no limitation on adult or child passengers on its COI. Carriage of a mixture of lifejacket models/styles with lower size limits is not acceptable as the basis for reducing child-size lifejacket carriage requirements.
- (3) Children and COI Endorsements. If no child-size lifejackets are carried on board, the vessel's COI must be endorsed--
 - (a) "For the carriage of ADULTS ONLY"; or
 - (b) "For the carriage of persons taller than XX m or weighing over WW kg. Replacement lifejackets must have an approval for all persons over XX m/WW kg or a smaller lower limit."

NOTE: When the paragraph (b) endorsement is used, the height/weight limits (XXX m/WW kg) are 1.45 m/34kg (57 in/75 lb) for the life preservers listed in enclosure (2) of NVIC 14-92. For life preservers with lower limits below 1.45 m (57 in), the height/weight limits must be taken from their label. A zero ("0") should be entered for the number of child's lifejackets in the Lifesaving Details section of the COI.

- (4) The total number of persons that can be accommodated must be according to the nameplates on the items. The capacity of the rescue boat need not be included. A lifeboat suitable for rescue purposes must be listed as a lifeboat.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

- (5) This data should reflect the number of items that are actually carried to meet the minimum total capacity (number of persons) required by regulation. The total capacity of the required items must be listed.

b. Cargo authority.

- (1) Carriage of oil. Each U.S. tankship and integrated tug/tank barge unit of 20,000 or more deadweight tons permitted to carry "oil" (46 U.S.C. 2101(20)) has the cargo authority is listed on its COI to specify the type of cargo it is authorized to carry, the applicable subchapter, and the loading constraints related to structure and stability.
- (a) The proper authorization endorsement is determined from the applicable regulations in 33 CFR Part 157 and 46 CFR 32.53. Cargo grade restrictions are entered under "Highest Grade."
- (b) The value for "Capacity" must be that of all integral cargo tanks, and the "Units" must be in barrels.
- (c) If the vessel carries 46 CFR Subchapter O cargo, then the appropriate CFR Part must be indicated. Data regarding "Loading Constraints" will be provided by Commandant (G-MSC) and is to be entered as appropriate.
- (d) Special cargo restrictions and/or exemptions, such as those found in 46 CFR 36.01-5 and 46 CFR 38.01-5 must be listed by endorsement under "Route Permitted and Conditions of Operation." The following are samples of appropriate wording for "Authorization" entries:
- i. "Crude oil and flammable or combustible liquids."
- ii. "Products and flammable or combustible liquids other than crude oil."
- iii. "Products and combustible liquids."
- iv. "Crude oil, products, and flammable or combustible liquids."
- v. "Flammable liquids other than oil."
2. MARPOL Annex II/Noxious liquid substances (NLS). See NVIC 03-06 for information on applicable certificates, cargo record books, and endorsement to the Certificate of Inspection.
- (a) "See "Cargo Authority" Located In "Conditions of Carriage."

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

- (b) Conditions of Carriage. The following statement should appear at the beginning of the COI "Conditions of Carriage" section: "Per 46 CFR 150.130, the person in charge of the barge (vessel) is responsible for ensuring that the compatibility requirements of 46 CFR 150 are met."
 - (c) Once all the tank groups' characteristics and requirements have been verified by an inspector as matching those on a tank vessel's LAC, the following text from the MSC's plan approval letter should be entered in VFCC under another "Cargo Authority" heading: "Only those cargoes named in the vessel's list of authorized cargoes bearing marine safety center approved stamp dated (date) may be carried, and then only in the tanks indicated."
3. Inland tank barges. The following statement should appear at the beginning of the COI of an inland tank barge under "Conditions of Carriage": "Per 46 CFR 150.130, the person in charge of the barge (vessel) is responsible for ensuring that the compatibility requirements of 46 CFR 150 are met. Cargoes must be checked for compatibility using the figures, tables, and appendices of 46 CFR 150 in conjunction with the reactive group numbers from the 'React Grp' column listed above the 'Specific Dangerous (i.e., hazardous) cargo authority' section."
 4. Vessels not in compliance with MARPOL Annex II. A self-propelled vessel or oceangoing non-self-propelled vessel, certificated under Subchapter D and which is not in compliance with the MARPOL Annex II regulations, should have a COI endorsement that excludes the carriage of NLS cargoes, e.g., "Vessel may not carry cargoes that are designated as NLS in 46 CFR 30.25, Table 30.25-1, 33 CFR 151.47, and 33 CFR 151.49." The standard cargo authority entered for the COI of these vessels is only by grade(s) of flammable or combustible liquids and does not distinguish NLS cargoes.
- c. Hull examination and drydock details. The intent of this guidance is to avoid the forward migration of the hull examination dates from COI to COI. Hull examination dates/intervals should be entered in MISLE serving as an attachment to the COI. The "Next Exam" date entries shall reflect the last day of the month the drydock or ISE is credited (i.e. completed). For example: a 2 year interval salt water environment drydock examination is completed 05May15, the "Next Exam" date shall reflect 31May17. And, in turn, at the next drydock interval, say if the drydock exam was completed 14May 2017 (actual), then in turn, the "Next Exam" would be set to 31May2019. No forward migration of dates. But, when the examination (actual) extends into the following month (i.e. delayed), the "Next Exam" dates shall reflect the last day of the month for the allowable period from the "Last Exam" entry. For example: if the drydock examination is due by 31May15 but the examination is actually conducted (credited) 10Jun15, the

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

“Next Exam” date should reflect same month of when the examination was due. So, the “Next Exam” date shall reflect 31May17 (and not 30Jun17).

- d. Additional marine inspection details. Other vessel particulars and systems such as fixed fire fighting systems, steering gear, and machinery can be entered into MISLE by referring to the MISLE user guide.**

4. COI Entries - Additional Endorsements

- a. Military Sealift Command (MSC) vessels. The following entries should be made for MSC vessels that are certificated:
- (1) For vessel service, enter PUBLIC VESSEL only if the following conditions are met
 - (a) The vessel is Navy owned and operated by a MSC civilian crew; or
 - (b) The vessel is demise chartered by the MSC and is operated by its own civilian crew.
 - (2) Vessels which are time chartered by the MSC, or are either Navy owned or demise chartered and operated by a contract operator are not considered public vessels. The class of vessel is as appropriate.
 - (3) Under "Route Permitted and Conditions of Operation," insert the following endorsement: "Naval vessel, in Service, civilian manned. This vessel has been inspected and certificated in accordance with the standards applicable to military sealift command vessels."

NOTE: The term "in service" refers to MSC vessels that are manned by civilian crews, as opposed to those manned by naval crews and termed "in commission."

- (4) "Persons in Addition To the Crew" should reflect the number of persons carried onboard a vessel who are connected with the business of the vessel but not classed as crew or passengers. Such persons include military liaison staff on transports or fleet support vessels, technicians and scientists on oceanographic research vessels, military guards on certain cargo vessels, etc. Such personnel should be reflected in the total persons allowed.
- b. Seasonal restrictions. COI statements of seasonal restrictions should be as descriptive as possible, specifying details such as limitations on vessel routes and the scope of passenger-carrying authorizations. Seasonal limitations are intended to ensure the overall seaworthiness of the vessel and the safety of the passenger carried under differing operational conditions without completely halting the operation of the vessel during any specific period of time.

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

- c. Manning requirements for vessels towing inspected passenger barges. These should be indicated on the COI issued to the barge (see the MSM Volume III, Marine Industry Personnel, COMDTINST M16000.8B (series)).
- d. Endorsements for special cargoes. The endorsements required by 46 CFR 36.01-5 and 38.01-5 should be made as indicated.
- e. Endorsements listing cargo names and relief valve calculations. See 46 CFR Part 154.17. Such endorsements should also be made for liquefied gas cargoes regulated solely under 46 CFR Subchapter D.

5. Crew Requirements

- a. Maintenance persons. Maintenance persons may be listed in one of the available slots for required manning. A specific departmental affiliation may be included, e.g., engine maintenance person.
- b. The qualifications of a position, as appropriate, may be further specified under "Route Permitted and Conditions of Operation," e.g., deck maintenance person (any deck rating), engine maintenance person (junior engineer, electrician, deck engine mechanic), or maintenance person (any deck or engine rating). Whenever a maintenance person is listed without departmental affiliation, it is left to the master's discretion to determine where and how to use that person. This action--
 - (1) Allows the master and chief engineer a degree of latitude in determining the ship's internal organization; and
 - (2) Minimizes the possibility of direct Coast Guard involvement in contractual matters of labor management.

NOTE: See MSM Volume III, Marine Industry Personnel, COMDTINST M16000.8B (series), for additional guidance.

- b. Radio officers. When the requirement for a Radio Officer is solely to reinforce the Federal Communications Commission's authority, an asterisk should be entered in the slot for "Radio Officer," with the following endorsement made under "Route Permitted and Conditions of Operation": "If Required By the Federal Communications Commission."
- c. Liquefied gas carriers. The COI for a liquefied gas vessel should clearly state that the cargo officer and cargo systems engineer are non-watchstanders. A notation should be made under "Routes Permitted and Conditions of Operation" specifying that "The chief mate shall be designated the cargo officer and be non-watchstanding" and "The (first or second) assistant engineer shall be

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

designated the cargo systems engineer and be non-watchstanding." The latter designation should be made by the OCMI.

- d. Certificated engineering personnel. These should not be required on the COIs of river and other vessels exempted from this by 46 U.S.C. 8701 and 8702.
 - e. Statement of minimum complement. By law, the COI must state the minimum complement of licensed and certificated personnel necessary for the safe operation of the vessel; this requirement should be strictly followed.
 - f. Radar observer endorsements. These are not necessary, except on certificates for hydrofoils or air cushion vehicles (see MSM Volume III, Marine Industry Personnel, COMDTINST M16000.8B (series)). The regulatory requirements are sufficient without other special notations.
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SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS**I. TEMPORARY CERTIFICATE OF INSPECTION, FORM CG-854**

Temporary Certificate of Inspection Form CG-854, authorized by 46 U.S.C. 3309, provides evidence of the satisfactory completion of an inspection for certification. It has all the force and effect of a full term COI and permits operation of a vessel pending receipt of the COI generated by MISLE. This temporary COI is intended for use when the immediate issuance of a full term COI is not possible at the completion of an inspection. When the full term COI can be issued in time to meet the vessel's needs, a temporary COI should not be issued. A temporary COI should never be issued to a vessel that does not qualify for a COI. The vessel's master should be given one copy of the temporary COI while the OCMI retains the original. It is not the Commandant's intention that a COI be withheld pending correction of minor deficiencies after a temporary COI has been issued.

FORM CANCELLATION: Form CG-2801A, List of Merchant Vessels Under Construction or Conversion. Vessel owner/operators are no longer required to submit Form CG-2801A, List of Merchant Vessels Under Construction or Conversion.

The form was used to record Coast Guard inspection resources used for new construction of inspected vessels, uncertificated Military Sealift Command vessels, or vessel conversions. It included information on involvement by the American Bureau of Shipping under the Memorandum of Understanding dated 27 April 1982. This information historically has been used on an infrequent basis by Headquarters personnel; making monthly submissions unnecessary.

Despite its infrequent use, the inspection manhours reported on the subject form are still very important. This information represents a significant expenditure of MI program resources at many ports, particularly for new construction or conversion cases that may last for several months or years. The manhours are eventually used by Headquarters to substantiate both the billet structure in the MI program and future budget requests for resource allocations.

Each OCMI must account for and maintain these MI resource expenditures at the local level. Upon certification, all manhours expended since the initial inspection began, including plan review manhours expended by the unit, must be entered by inspection type into the activity narrative in MISLE.

All of the manhours should not be attributed to "initial certification." If the vessel is not certificated, for whatever reason, the expended manhours must be entered into the MISLE activity before the activity is closed, thereby enabling this information to be retrieved for reporting purposes. The importance of accurate, complete and timely MISLE data entry cannot be overemphasized, even for those cases in which a vessel is

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

not certificated and the MISLE activity is closed.

J. AMENDING THE COI

Amendments to COIs should be made through the MISLE system. In cases where amendments involving last drydock dates or other changes will require a reissuance and reprinting of a vessel's COI, handwritten annual and periodic inspection entries on the COI will be lost when the COI is reissued. To prevent the loss of these entries on a reissued COI, an amendment should be made to the COI in MISLE whenever an annual or periodic inspection is conducted. This will ensure the inspections are recorded when COIs are reissued for any reason.

K. APPLICATION FOR WAIVER AND WAIVER ORDER, FORM CG-2633

This form must be completed and submitted as required by 46 CFR 2.45 and as indicated on the form itself. Copies of waivers issued must be forwarded to Commandant (G-543), as required by the subject matter. When the waiver is referred to the Commandant for action, the OCMI should submit a forwarding letter explaining the circumstances of the case.

L. PERMIT TO PROCEED TO ANOTHER PORT FOR REPAIRS, FORM CG-948

See MSM Volume II, Materiel Inspection, COMDTINST M16000.7 (series), Chapter C4.

M. PERMIT TO CARRY EXCURSION PARTY, FORM CG-949**1. Purpose**

The OCMI should use Permit to Carry Excursion Party, Form CG-949, to allow a vessel to engage in a temporary excursion operation not permitted by its COI. This occurs when a passenger vessel is permitted to carry extra passengers or to operate on an extended route, or when a cargo or miscellaneous vessel is permitted to carry recreation parties on a 1-day basis. The permit should be issued for a limited period of time only, and should be considered a temporary supplement to the COI. The word "temporary" is stressed; an Excursion Permit should not be used as a device to circumvent normal inspection requirements.

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS**2. Distribution**

The Original copy of Permit to Carry Excursion Party, Form CG-949 should be issued directly to the master, operator, owner, or agent of the vessel; one copy should be electronically scanned and added to “documents” in MISLE. Additional copies may be obtained by the master, operator, owner, or agent of the vessel upon written request to the OCMI.

N. SOLAS CERTIFICATES

1. Passenger Ship Safety Certificate (PSSC), Form CG-968

The number of small passenger vessels certificated with international routes has steadily increased. When certificated for an international route, these vessels require a Passenger Ship Safety Certificate (PSSC) issued in accordance with SOLAS 74/83 in addition to the COI. See MSM Volume II, Materiel Inspection, (COMDTINST M.16000.7 (series), Chapter E2 regarding small passenger vessels subject to SOLAS.

- a. Notification of Approval for SOLAS PSSC, Form CG-969A. Once a vessel desiring an international route has satisfactorily completed the initial inspection for certification, the OCMI should submit SOLAS PSSC, Form CG-969A to Commandant (CG-CVC). This form is normally accompanied by Federal Communications Commission (FCC) Form 806. Except for primary lifesaving equipment, only equipment required by SOLAS should be entered on the form.
- b. SOLAS Exemption Certificate, Form CG-967. Exemptions granted by the OCMI in accordance with Regulations II-1/1(c), II-2/1(e) and III/3(a) of SOLAS 74/83 should be listed on the reverse side of SOLAS PSSC, Form CG-969A. This information should be included at the time of the initial inspection for issuance of a PSSC. The Exemption Certificate is issued in conjunction with the PSSC or a Cargo Ship Safety Equipment Certificate (Form CG-3347).
- c. Issuance of PSSC and Exemption Certificates.
 - (1) Initial issue. Commandant (CG-CVC) issues the initial PSSC and Exemption Certificates based on SOLAS PSSC, Form CG-969A. The originals of the certificates, with copies, are forwarded to the certifying OCMI for distribution. The following statement must be entered on the Exemption Certificate (CG-967).

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

“The below mentioned survey showed that this ship complied with the requirements of the below regulations or equivalent provisions accepted by the Government of the United States of America and substituted, therefore, in accordance with Regulation I/5 and reported in IMO SLS.14/CIRC.87 of 15 November 1989 (copy attached).”

- (a) A copy of IMO SLS.14/CIRC.87 must be attached to the Exemption Certificate. Vessels receiving safety certificates under this arrangement must be issued 1 year COIs to correspond with the PSSC.
 - (b) These vessels must have drydock examinations at least once every 12 months. The authorized international route must be specified on the COI. If applicable, the vessel must have the appropriate Load Line Certificate.
 - (c) Compliance with, or exemption from, SOLAS radiotelegraphy and radiotelephony requirements must be verified by the FCC. Copies of PSSCs issued under this arrangement must be forwarded to Commandant (CG-CVC).
2. Subsequent issue. The OCMI is authorized to reissue subsequent recurring SOLAS PSSCs and Exemption Certificates. If any changes have been made to the exemptions originally granted by the OCMI, they must be submitted to Commandant (CG-CVC) for approval, in which case the certificates will be treated as an initial issue. Copies of reissued certificates should be forwarded to Commandant (CG-CVC).

2. SOLAS Cargo Ship Safety Certificates

- a. Introduction. Cargo vessels and tankships of 500 and more GT that engage in international voyages are subject to SOLAS and are required to have the following SOLAS certificates as applicable:
 - (1) Cargo Ship Safety Construction Certificate, CG-4359 (Rev. 2-80).
 - (2) Supplement to the Cargo Ship Safety Construction Certificate, CG-4359-A (Rev. 2-81).
 - (3) Cargo Ship Safety Equipment Certificate, CG-3347 (Rev. 06-93).
 - (a) Supplement to the Cargo Ship Safety Equipment Certificate, CG-3347A (Rev. 2-81).

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

- (b) Attachment to the Cargo Ship Safety Equipment Certificate, CG-3347B (Rev. 06-93).
- b. Cargo Ship Safety Construction Certificate (SAFCON). This certificate may be issued, at the owner's discretion, by either the Coast Guard or the American Bureau of Shipping (ABS) on behalf of the Coast Guard. This certificate should be issued at the completion of a vessel's drydock exam with a period of validity of 5 years from the date of issue. When the ABS issues a SAFCON, ABS should provide the supplement and endorse the certificate as necessary. When the Coast Guard issues a SAFCON, the distribution should be the same as for the vessel's COI.
- c. Cargo Ship Safety Equipment Certificate (SEC). The SEC should be issued by the Coast Guard at the completion of a vessel's inspection for certification. The SEC should expire when the COI expires.
- (1) Except for primary lifesaving equipment, equipment required by SOLAS and actually on board should be noted by numbers of items present on the SEC form; equipment required by SOLAS but not on board should be noted by a zero.
- (2) SOLAS certificates must not contain asterisks or notes indicating requirements or shortages. The Exemption Certificate noted above is necessary to reflect equipment omissions or authorized shortages.
- d. Attachments. Attachments to the SEC and the SAFCON are forms generated by the International Maritime Organization (IMO) for issuance to cargo ships, including tankships, to indicate the completion of either unscheduled or mandatory annual surveys. Since SOLAS 74 became binding, the IMO has generated two attachments for the SEC and one for the SAFCON.
- (1) An attachment for each certificate was developed for the 1978 SOLAS Protocol. A provision in that Protocol allowed the use of endorsements in lieu of the attachments. The Coast Guard chose to use such endorsements instead of the attachments. For surveys relating to the 1978 SOLAS Protocol, the following endorsement must be typed or stamped on the reverse of a SEC or SAFCON issued by the Coast Guard:

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

"In implementation of Regulation 6(B), Chapter I of the Protocol of 1978 Relating to the International Convention for the Safety of Life at Sea, 1974, the Government of the United States of America has instituted mandatory annual surveys."

Mandatory Annual Survey

Place Date

U.S. Coast Guard

NOTE: The SAFCON should have space for three mandatory annual surveys.

- (2) A second attachment to the SEC (noted in N.2.a above) was developed to show compliance with the 1983 SOLAS Amendments. This attachment is issued by the Coast Guard at the same time as the SEC, is considered to be a part of the SEC, and has the same expiration date as the SEC. Paragraph II of the SEC is to be left blank with an asterisk to refer to this attachment.
- e. Supplements. The supplements to the SEC and SAFCON certificates, listed in paragraph N.2.a.(1) and (2) above, are to be issued to tankships of 10,000 or more GT or 20,000 or more DWT, and to those 10 years and more of age. The supplement is considered to be a part of the relevant certificate to which it refers, and their dates of expiration should coincide.

O. CERTIFICATE OF COMPLIANCE (COC), FORM CG-3585

The Certificate of Compliance (COC) shall be used to document foreign vessel examinations of oil tankers, chemical tankers, gas carriers, passenger vessels, mobile offshore drilling units, and floating installations. The COC form includes detailed instructions for Port State Control Officers and marine inspectors based on the type of vessel, the authority used for the exam (port state control or domestic authority), and whether any deficiencies were identified.

P. IMO CERTIFICATES OF FITNESS (COF)

46 CFR Part 153 contains the regulations for the carriage of hazardous liquid cargoes by self-propelled vessels. 46 CFR Part 154 contains the regulations for the carriage of bulk liquefied gases by self-propelled vessels. These regulations implement the IMO Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH)

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

(Resolution MSC.9(53)) and the IMO Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (Resolution A.328(IX)), respectively. Two additional IMO Codes were developed and made mandatory under SOLAS for ships built after 1 July 1986. These are the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) (Resolution MSC 4(48)) and the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC) (Resolution MSC 5(48)). Each of these codes provides for the issuance of COFs to vessels that comply with the standards of these codes.

1. Considerations for Application

There are some liquefied gas ships that, due to their early date of construction, are not subject to the IMO Gas Code (Resolution A.328(IX)). IMO Resolution A.329(IX), adopted 12 November 1975, provides that gas ships delivered after 31 October 1976, but prior to implementation of the IMO Gas Code, must be reviewed in accordance with the provisions of the code to a reasonable and practical extent. It was recommended that these vessels be issued an IMO Gas Code COF, with endorsements listing the specific provisions of the IMO Gas Code with which they do not comply.

2. Issuance

- a. COF for the Carriage of Liquefied Gases in Bulk, Form CG-5148.
 - (1) Upon request from the master, owner, or agent of a vessel that complies with the IMO Gas Code, the OCMI should issue a COF for a period not to exceed 2 years, dated to expire with the vessel's COI and SOLAS Cargo Ship Safety Equipment Certificate. It should be endorsed to indicate compliance with the International Gas Carrier Code (Resolution MSC 5(48)) if the vessel complies with that Code.
 - (2) For a vessel not subject to the Gas Code, Annex 4A of the certificate should be used to list those areas of the IMO Gas Code with which the vessel does not comply. This should be attached to the COF.
- b. COF for the Carriage of Dangerous Chemicals in Bulk, Form CG-5148A. Upon request from the master, owner, or agent of a tank vessel that complies with the IMO Chemical Code, the OCMI should issue Form CG-5148A. The certificate should be issued for a period of 5 years, dated to expire with the vessel's COI and SOLAS Cargo Ship Safety Equipment Certificate. The COF should be endorsed to indicate compliance with either the BCH or the IBC, whichever applies.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS**3. Certificate Entries**

Many of the entries on COF for the Carriage of Liquefied Gases in Bulk, Forms CG-5148 and COF for the Carriage of Dangerous Chemicals in Bulk, CG-5148A require data developed during the technical review process. The MSC will tabulate the data required for the certificate as it is developed and forward it to the cognizant OCMI. This will avoid lengthy file searches when the vessel is ready to be certificated.

4. Copies Required and Distribution

Forms COF for the Carriage of Liquefied Gases in Bulk, CG-5148 and COF for the Carriage of Dangerous Chemicals in Bulk, CG-5148A should be prepared with sufficient copies for the following distribution:

- a. Original: Issued to the master, owner, or agent of the vessel, to be maintained on board the vessel.
- b. Two copies to Commandant (CG-CVC), via District (p).
- c. One copy is the issuing OCMI's file copy.
- d. One copy to the MSC for vessel file.
- e. One copy to the owner or agent of the vessel (if requested).

Q. VESSEL INSPECTION RECORD CARD, FORM CG-2832

In addition to the MISLE data, Vessel Inspection Record Card, Form CG-2832 provides the inspector with ready information as to the inspection status of a specific vessel when it is boarded for various inspections. Recent inspection information from a previous port, which may not yet be entered into MISLE, should be recorded on this form. The use of this form does not diminish the OCMI's discretion regarding types or frequency of inspections. Rather, it is a tool with which the OCMI can better determine the need for further inspections. This form must be carried on ocean and coastwise cargo vessels (including tank vessels) of 500 or more GT, and ocean and coastwise passenger vessels of any gross tonnage (except those inspected under 46 CFR Subchapters T and K). It must be posted in the pilothouse in a suitably installed frame.

1. Entries

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

At the conclusion of each inspection, the inspector should enter the type of inspection conducted, pertinent remarks, drills conducted, port of inspection, his/her signature, and the date on Vessel Inspection Record Card, Form CG-2832. Each inspector who boards a vessel should examine this record to learn what inspections have been conducted, verify the correctness of the inspection status in MISLE, and determine whether any further inspections are necessary. Entries should be made in ink and in accordance with the instructions printed on the form and the policy below.

- a. Initial entries. Upon completion of the inspection for certification, the inspector should fill out Vessel Inspection Record Card, Form CG-2832 and post it in the installed pilothouse frame.
 - (1) When a vessel is permitted to proceed to another port before inspection is completed, the initial inspector should enter "Began" and the type of inspection and date (e.g., "Began COI").
 - (2) When a subsequent inspector has completed the inspection, that inspector should enter on a new line "Completed" and the type of inspection (e.g., "Completed COI"). When another type of inspection, such as a drydock examination or a lifeboat weight test, is performed during the course of the inspection for certification, the inspector should only enter "Annual, Periodic COI".
- b. Subsequent inspections. At the completion of each annual and periodic inspection, the inspector should make an entry on a new line under "Type of Inspection."
 - (1) When two or more distinct inspections are conducted at the same time, all should be entered on the same line, if possible.
 - (2) In the case of continuing inspections involving more than one port, only those parts of the inspections that are completed at the same port should be entered on the same line. Individual visits made during the course of an inspection should not be entered.
- c. Remarks. This section is for information that will aid subsequent inspectors. For example, when conducting inspections incidental to repairs, an inspector should make a brief entry in "Remarks" indicating the nature of the repairs or alterations.
 - (1) If the inspector does not enter all tanks or cargo holds during a COI, he or she should list those tanks or holds that were entered in the "Remarks" section. For drydock examinations, the inspector should indicate which sea valves were opened and inspected.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS

- (2) When a vessel is permitted to sail with outstanding deficiencies after any type of inspection, an entry should be made in the "Remarks" section to inform subsequent inspectors.
- d. Drills. The inspector should check both columns for every entry, even when the type of inspection is defined as including one or both drills. When a fire or boat drill is held independently of another inspection, the inspector should enter "Drills" in the first column and appropriate notations in the other columns.
- e. Port, signature, and date. These should be entered upon completion of the inspection. Only the inspector making the entry should sign the card, even when two or more inspectors participate in the total inspection.
- f. Transferred information. If lifeboat weight tests are not conducted at the time that a new Form CG-2832 is posted, the date of the last weight test and the port where the test was witnessed should be transferred to the new card. Likewise, when remarks on the old card concerning cargo tanks, cargo holds, or sea valves have not changed, the information should be transferred. This information should be the first entry on the new card and should be signed by the inspector.
- g. Additional cards required. To reflect all inspections of the vessel, it may be necessary to keep extra blank Vessel Inspection Record Cards on board the vessel.

2. Disposition of Outdated Cards

After the inspection for certification, the previous Vessel Inspection Record Card(s) may be destroyed or placed in the OCMI's file.

R. MOBILE OFFSHORE DRILLING UNIT (MODU) SAFETY CERTIFICATE, FORM CG-5334

The OCMI issues Mobile Offshore Drilling Unit (MODU) Safety Certificate, Form CG-5334 to Mobile Offshore Drilling Units (MODUs) that comply with the applicable provisions of IMO Resolution A.414 (XI) (the "MODU Code"). The MODU Code was adopted on 15 November 1979, upon request by unit operators. Distribution of Mobile Offshore Drilling Unit (MODU) Safety Certificate, Form CG-5334 should be the same as for a COI.

Except for primary lifesaving equipment, only equipment required by the IMO MODU Code and actually aboard should be entered in paragraph 3 of Mobile Offshore Drilling

SECTION A: MARINE INSPECTION ADMINISTRATION**CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS**

Unit (MODU) Safety Certificate, Form CG-5334 (e.g., 2 lifeboats for 80 persons, 4 inflatable life rafts for 80 persons, 84 life jackets, and 8 life buoys). Exemptions granted in accordance with section 1.4 of the MODU Code should be listed in paragraph 4 of the form. If additional space is needed to complete these paragraphs, the reverse of the form may be used.

S. TRACKING ITEMS OF SPECIAL NOTE AND SPECIAL DESIGN FEATURES IN MISLE

One of the primary advantages of MISLE is that it provides the OCMI with the ability to call up a particular vessel, whether U.S. or foreign flag, and obtain a readout of the inspection history of that vessel.

CHAPTER 3: DOCUMENTATION OF VESSEL INSPECTIONS**1. Inspection Notes (General)**

When conditions are discovered during an inspection that should be highlighted for scrutiny at later inspections, the inspector should enter an inspection note in MISLE under the “Notes” tab. The note must be assigned a “Retain Until” date. The note will remain current until this date. After this date passes, the note will remain part of the vessel’s MISLE file, but will only be viewable when “view all notes” box is selected in the Notes tab.

2. Inspection Notes (Special Design Features)

Based on the plan review of a vessel, the MSC may advise the OCMI of special design features on a vessel that require entry into MISLE Inspection Note. Conditions of particular note on a vessel must be made a permanent part of the vessel's MISLE inspection at initial or subsequent inspections, as appropriate. Copies of applicable correspondence should be scanned and added to “documents.” For vessels that travel to, and are inspected by, different zones, the Inspection Note will alert the OCMI to the particular conditions that must receive specific attention by the inspector at each inspection.

- a. Special design features. Technological advances in the design, construction, and outfitting of vessels frequently outdate specific requirements in existing regulations.
- b. Structural deficiencies. Reviews of Report of Equipment Failure on Inspected Vessel, Form CG-2752, Report of Structural Failure, Collision Damage or Fire Damage to Inspected Vessel, and other casualty studies have revealed that a particular vessel or vessel class may experience initial or recurring structural failures due to either poor design or repair techniques.
 - (1) When such a situation is discovered, Commandant should be notified. See MSM Volume II, Materiel Inspection, COMDTINST M16000.7 (series), Chapter A5 concerning structural failure reports for more information.
 - (2) Such conditions should also become a permanent part of the vessel's inspection record in MISLE.
 - (3) Structural deficiencies that are identified as a class problem by Commandant will be noted by Commandant (CG-CVC) for all vessels in that class.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 4: APPROVAL OF PLANS AND SPECIFICATIONS**A. INTRODUCTION**

It is the Commandant's responsibility to determine that vessels subject to inspection meet the requirements of the applicable sections of the Code of Federal Regulations (CFR). The primary means of accomplishing this task, in addition to actual inspection of a vessel by field units, is the review and approval of vessel plans and specifications. The general requirements for plans, drawings, or blueprints are found in 46 CFR 2.90-1. For detailed specifications, see NVIC 8-84.

B. SUBMITTAL PROCEDURES

Plans may be submitted to the Officer in Charge, Marine Inspection (OCMI), the Marine Safety Center (MSC), Commandant (CG-CVC), or to the American Bureau of Shipping (ABS) in accordance with NVIC 3-84 or the Memorandum of Understanding between the Coast Guard and ABS, as discussed in NVIC 10-82, CH-2.

1. Submittal to the OCMI

When the OCMI receives a set of plans, he or she should determine the extent of the new construction or conversion project and decide whether the OCMI or the MSC will review the plans. In many cases, the OCMI may determine that he or she does not have either the personnel or the technical resources to conduct plan review. In such instances, the plans should be examined for the presence of any items that warrant special attention, and then forwarded to the MSC for review. Once the OCMI has reviewed the plans, they should be stamped "Approved," "Disapproved," "Return for Revision," or "Examined." The stamp should include the date and the OCMI's signature. At least one set of the plans should then be returned to the originator with a cover letter that includes any outstanding comments. The OCMI should retain at least one set of the plans on file.

2. Submittal to the MSC

Vessel plans may be submitted directly to the MSC. When this is the case, the MSC normally will not begin plan review until the cognizant OCMI has received an application for Inspection for Certification. Three copies of each plan should be submitted to the MSC for review. Upon completion of plan review, one set of the plans will be returned, with the comment letter, directly to the originator; one set will be retained by the MSC; and a third set will be forwarded to the OCMI with jurisdiction over the vessel. Because of personal knowledge the OCMI may have of the vessel and its intended service or operating area, the OCMI may determine that certain items do not comply with applicable regulations or do not provide the required degree of safety. In these cases, the MSC should be notified promptly of any items that the OCMI considers

Section A: Marine Inspection Administration**CHAPTER 4: APPROVAL OF PLANS AND SPECIFICATIONS**

worthy of special consideration or reconsideration. OCMI's should communicate with the MSC or Commandant (CG-CVC), as appropriate, when requests are received for inspection of new construction, major repairs, or conversions for which approved plans and related correspondence are not held.

3. Submittal to ABS

The provisions of NVICs 10-82, Change 2, and 3-84 apply to the submittal of vessel plans to ABS.

C. PLANS AND SPECIFICATION DESIGNATIONS

Whenever plans of inspected vessels are submitted, they must be identified by vessel name and official number whenever known. In the case of a new vessel, designation by shipyard work order number or hull number is sufficient until the vessel name is known; then the vessel's name must be added to the plan. In the conversion of an existing vessel, the new name should be used if it is known, as well as the former name and type designation. Tank vessel plans must be accompanied by information concerning the grades of liquid cargo the vessel will carry and its proposed service. Tank barges shall also be designated as manned or unmanned.

D. SPECIAL SUBMITTAL PROCEDURES**1. Submittal of Electrical Plans**

- a. Submittal to the OCMI. When electrical plans required by 46 CFR 110.25 are submitted to the OCMI, the following plans must be forwarded to the MSC for action:
 - (1) Switchboard wiring diagrams.
 - (2) Switchboard material and nameplate lists.
 - (3) Elementary wiring diagrams of metering and automatic switch gear.
 - (4) Descriptions of operation of propulsion control and bus transfer switch gear.
 - (5) Elementary one-line wiring diagrams of power systems.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 4: APPROVAL OF PLANS AND SPECIFICATIONS

- (6) Electric plant summaries showing connected loads and calculated operating loads for various conditions of operation.
 - (7) Elementary wiring diagrams of steering gear alarm circuits, ventilation shutdown control general alarm systems, and fire protection systems.
 - (8) Elementary wiring diagrams and isometric or deck wiring diagrams of electric watertight door systems and power operated lifeboat winches.
 - (9) Hazardous locations drawings.
- b. Review by either OCMI or MSC. Other plans listed in 46 CFR 110.25 but not listed above may be acted upon directly by the OCMI, or they may be transmitted to the MSC for action.
 - c. Revisions to plans. Subsequent revisions of the plans listed above may be addressed directly by the OCMI, or they may be submitted to the MSC for action. When major changes or revisions are made on these plans, they must be forwarded to the MSC for action.

2. Submittal of Cargo Gear Plans

Plans for cargo gear that have been reviewed and approved by ABS or the International Cargo Gear Bureau, Inc. (ICGB) need not be submitted to the Coast Guard for further review and approval.

3. Submittal of Boiler Plans

Boilers must be designed in accordance with 46 CFR Parts 52 or 53. These parts adopt Section I and Section IV of the American Society of Mechanical Engineers (ASME) Code with modifications to account for the marine environment. It is imperative that the additional requirements in 46 CFR Parts 52 or 53 are identified and met in the design stage to avoid possible rejection of the boiler during installation. For boilers constructed in accordance with 46 CFR Part 52, plans and calculations must be certified by a Registered Professional Engineer (RPE) licensed by one of the fifty states of the United States, the District of Columbia, or U.S. Territories. The RPE's license must be current at the time he or she certifies any plans or calculations. The RPE's certification must appear on each design drawing and on the front page of the design calculations. In addition, the professional engineer should provide a signed statement that the boiler meets the applicable Coast Guard design requirements. The plans must be submitted as early as possible to the MSC for review prior to installation of the boilers. The plans will be reviewed only to the extent necessary to establish that the correct procedures for design

Section A: Marine Inspection Administration

CHAPTER 4: APPROVAL OF PLANS AND SPECIFICATIONS

certification are being followed. Submission of plans and calculations is not required for boilers constructed in accordance with 46 CFR Part 53. Boilers which are automatically controlled must have their control plans approved (see 46 CFR Part 63).

4. Submittal of Pressure Vessel Plans

- a. Requirements. Plans and calculations for Class I-L and II-L pressure vessels and for those pressure vessels that contain hazardous materials must be submitted to the MSC for approval.
 - (1) For other pressure vessels, see 46 CFR 54.01-5 and 54.01-15 for the applicable regulations.
 - (2) Plans required to be available to the inspector under 46 CFR 54-01-5(e) need only be requested for pressure vessels of unusual design, service or pressure.
- b. Certification by a RPE. A RPE may certify a sepia or original drawing if they include the date of certification. Blueprints made from a certified sepia or original drawing are acceptable provided the copy of the RPE's certification is legible. Some RPEs certify a plan by stamping it; others by signing and dating a plan and then embossing the signature with a raised seal. If the document is certified with a raised seal on the original plan (sepia, etc.), then the information contained thereon must be reproducible on all copies.
- c. Method of certifying plans. All plans must be certified by RPE as compliant with Section VIII, Division 1 of the ASME Code, as modified by 46 CFR Part 54.
 - (1) There are no requirements as to the specific wording that the RPE must use for this certification.
 - (2) The certification may appear on the original plan, from which copies may be made, or the RPE may individually sign and certify each copy of the plan.
 - (3) Certification may appear on each page of the calculations, or there may be one certification for the entire set of calculations.
 - (4) The method of certification should be to the satisfaction of the OCMI, but it is recommended that a consistent method is used that either provides for the notation of each plan or the creation of a cover letter with a certification statement. Such a cover letter must include a list of all applicable plans by number, title, and revision or alteration.
- d. Alterations. Alterations and revisions to plans must be dated. Revisions made to a plan after it is certified by a RPE but before the pressure vessel is installed must

Section A: Marine Inspection Administration**CHAPTER 4: APPROVAL OF PLANS AND SPECIFICATIONS**

be checked and certified again by the RPE as being in compliance with the Code and 46 CFR Part 54. Alterations or repairs to pressure vessels that have been put into service need not be certified by a RPE, but must be approved and inspected by the cognizant OCMI.

5. Submittal of structural fire protection plans for certain small passenger vessels

Structural fire protection plans for new construction small passenger vessels that will either carry more than 150 passengers or which have overnight accommodations for more than 49 passengers must be submitted to the MSC for action.

- a. Plans returned for revision. In cases when the MSC finds major or numerous minor structural fire protection deficiencies, the MSC will return the plans to the owner or designer for revision. Appeals or questions concerning the extent of required design changes should be directed to the MSC. The MSC should consult with the OCMI when resolving appeals or considering requests for equivalency.
- b. Plans approved, with comments. When a plan includes numerous minor deficiencies or areas that are unclear to the plan reviewer, but that can be resolved more readily by the OCMI, the plans are marked "Approved with Comments" and forwarded to the cognizant OCMI.
 - (1) At this point, the MSC has completed action on the plan and the responsibility for assuring compliance and resolving comments shifts to the OCMI. The OCMI then has the discretion to either require compliance with the MSC's comments or to accept alternate arrangements that satisfy the intent of the regulations.
 - (2) Questions of compliance with comments forwarded with an approved plan and appeals of inspection issues should be addressed to the OCMI.
- c. Resolving outstanding deficiencies. The status of all structural fire protection plan submissions should be verified by the responsible inspector during the final inspection for certification.
 - (1) If any plans remain that are still marked "Return for Revision," it is incumbent upon the OCMI and the MSC to work together closely to determine the status of any outstanding deficiency, and the necessary corrective action to be taken.
 - (2) Serious deficiencies should result in either a delay in certification until the plans are revised and approved and the deficiency corrected, or the issuance of a Vessel/Facility Inspection Requirements, Form CG-835, to complete the plan

Section A: Marine Inspection Administration

CHAPTER 4: APPROVAL OF PLANS AND SPECIFICATIONS

review process and make any necessary modifications within a specified period of time. Restrictions on the number of passengers authorized may also be appropriate.

6. Submittal of Plans for SOLAS Foreign Passenger Vessels

- a. Vessels over 100 GT. Plan review is considered a matter of routine for foreign flag vessels over 100 GT with berth or stateroom accommodations for at least 50 passengers. 46 U.S.C. 3505 prevents a foreign vessel from departing a U.S. port with passengers embarked if the Secretary determines that the vessel is not in compliance with SOLAS.
 - (1) NVIC 1-85 addresses the procedures for plan submittal for verification of a vessel's compliance with the applicable fire safety standards. This plan review, although not required by law or regulation, is essential to the timely conduct of the initial Control verification Examination (CVE). If the owner/operator/builder fails to take advantage of this opportunity, it is likely that a full and thorough inspection will not be possible without significant delay.
 - (2) When an OCMI has advance knowledge of an initial U.S. voyage of a vessel in this category, he/she should make known to the appropriate vessel representatives the importance of plan submission.
- b. Lead time. Plans should be submitted to the MSC at least 45 days prior to the vessel's arrival at its first U.S. port of call. Earlier submission is encouraged, but plans should not be submitted more than 90 days prior to the vessel's arrival at its first U.S. port of call.
- c. Verification. The goal of MSC's plan review is to verify compliance with the applicable standards and to facilitate the initial CVE, not to bestow approval. Plans submitted to the MSC should indicate Flag Administration approval. Upon completion of both fire safety and stability plan review, the MSC will forward the review results and the plans to the OCMI. The submitter will be informed of the results, particularly if the MSC notes deficiencies or requires more information.
- d. Conceptual review. If, in the design stage or early in the construction stage, an owner or builder wants to discuss design to ensure acceptance, the OCMI should direct them to CG-CVC for conceptual review. When vessels have employed novel design features based on interpretation of SOLAS, even timely plan review under NVIC 1-85 may not ensure the vessel will be acceptable for U.S. operations. The OCMI should encourage these vessel owners or builders to be in

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 4: APPROVAL OF PLANS AND SPECIFICATIONS

contact with Commandant (CG-CVC) early in the design or construction phases, unless deemed clearly unnecessary.

E. SEQUENCE OF PLAN SUBMITTALS

1. General Requirements

For the proper evaluation of vessel construction plans, it is essential that the following basic plans for all vessels, except those inspected under 46 CFR Subchapter T, are forwarded prior to submittal of the other plans listed in 46 CFR.

- a. Specifications (hull, machinery, and electrical).
 - b. General arrangement.
 - c. Midship section
 - d. Lines.
 - e. Curves of form.
 - f. Calculation of intact stability.
 - g. Capacity.
 - h. One-line wiring diagram of the electrical system.
-

2. Passenger Vessels

In the case of passenger vessels inspected under 46 CFR Subchapter H, the following additional plans must also be submitted:

- a. Floodable length curves.
 - b. Calculations of stability in intact and final flooding conditions.
 - c. Fire control plan.
-

F. PLANS FOR IDENTICAL TANK BARGES

Section A: Marine Inspection Administration**CHAPTER 4: APPROVAL OF PLANS AND SPECIFICATIONS**

A new barge is sometimes identical in structure and piping to that of a previously approved barge. To avoid duplication and unnecessary submittal of plans for construction of such a barge, the following procedures should be followed:

1. Proposed Barges

For proposed barges that are going to be identical to previously-approved barges, only general design, hull structure, electrical, and piping plans must be submitted to the MSC for approval.

NOTE: A barge that is based on an already-approved barge must be built in the same yard as the original barge.

2. Extensions of Approvals

When a barge is identical in construction to a previously-approved barge, it is unnecessary to submit new plans.

The cognizant OCMi can give the new barge an extension of the existing barge's approval by letter. The MSC should be informed of the new barge's hull and contract numbers so that its records can be kept current.

3. Non-structural Details

The construction details of any barge that do not involve the vessel structure, such as connections or deck fittings, can be approved by the OCMi in lieu of the MSC.

4. Alterations

When previously-approved construction is changed by a significant alteration, the plans discussed in Subpart F.1 of this chapter must be resubmitted to the MSC for consideration.

The OCMi will determine the significance of the alteration on the merits of the particular case.

G. APPROVAL PROCEDURES

Section A: Marine Inspection Administration**CHAPTER 4: APPROVAL OF PLANS AND SPECIFICATIONS**

The information provided below is in addition to the requirements for these plans contained in the applicable subchapters of 46 CFR and sections of 33 CFR. These standards are suitable for typical vessels. The same degree of safety that these standards establish for typical vessels must be maintained in plans for a vessel of unusual form, arrangement, or construction.

1. Passenger Vessel Plans

- a. General standards. The ABS Rules for Building and Classing Steel Vessels will generally be accepted as a standard for the review of structural plans for the construction, alteration, or repair of typical passenger vessels.
- b. Uses of insulation and covering materials. Approved structural insulation, bulkhead panels, and deck coverings may be used to achieve various structural fire protection classifications for steel bulkheads and decks required by 46 CFR 72.05.
 - (1) The Coast Guard published NVIC 9-97, a "Guide to Structural Fire Protection Aboard Merchant Vessels" to provide information for shipbuilders and others concerned. The sketches accompanying this NVIC show the types, thicknesses, and relative positions of materials necessary to meet Class A-60, A-30, or A-15 requirements. The NVIC does not include Class A-0 construction because no insulation is required on structural steel bulkheads or decks to meet Class A-0 requirements.
 - (2) Since it is impossible to anticipate all combinations of materials that a vessel might use, approval will be given to arrangements differing from these sketches if the alternative arrangements provide equivalent integrity and heat transmission properties.
 - (3) For lists of approved insulation, bulkhead panels, and incombustible materials, see the Equipment Lists, Commandant Instruction (COMDTINST M16714.3, previously CG-190). Current changes are published in the *Federal Register* and the *Federal Register* reprint.

2. Cargo and Misc. Vessel Plans

The ABS Rules for Building and Classing Steel Vessels or Rules for Building and Classing Steel Vessels under 61 Meters (200 Feet) in Length will generally be accepted as a standard for the review of structural plans for the construction, alteration, or repair of cargo and miscellaneous vessels.

Section A: Marine Inspection Administration**CHAPTER 4: APPROVAL OF PLANS AND SPECIFICATIONS****3. MODUs**

The ABS Rules for Building and Classing MODUs and Det Norske Veritas Rules for Classification of Mobile Offshore Units will generally be accepted as standards for the review of structural plans for the construction, alteration, or repair of MODUs.

4. Tank Vessel Plans

- a. Plan approval. The ABS Rules for Building and Classing Steel Vessels will generally be accepted as a standard for the review of structural plans for the construction, alteration, or repair of tank ships. The ABS Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways and the Rules for Building and Classing Steel Barges for Offshore Service are accepted as standards for the determination of scantlings for tank barges.
- b. Construction details affecting cleaning/gas-freeing of cargo tanks. One must take particular care to avoid any arrangement of the structural members that would prevent effective cleaning or gas-freeing of a liquid cargo tank. A plan should show that there are adequate provisions for drainage in all longitudinal and transverse members within a tank. Any arrangement of longitudinals, stiffeners, skegs, bilge keels, fenders, or other members that results in the creation of a possible gas pocket, either in the cargo tanks or in areas contiguous to these tanks, should generally not be approved.

5. Plans for Scuppers, Sanitary Discharges, Tank Overflows, Overboard Discharges, Etc.

Various NVICs include explanatory discussions and sketches of installations that will be approved. Proposed methods other than those specifically illustrated in these NVICs may be approved if they meet the applicable requirements of 46 CFR 56.50-95.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS****A. INTRODUCTION**

The inspection of a vessel during construction or conversion is normally considered an initial inspection. The scope of such inspections and the standards for construction of vessels and equipment are covered in the applicable regulations. See MSM Volume II, Material Inspection, COMDTINST 16000.7A (series), Chapter A4 concerning approval of plans and specifications, and MSM Volume II, Material Inspection, COMDTINST 16000.7A (series), Chapter B1 concerning inspection of vessels for certification.

Inspections must be conducted during construction and upon completion of the work, as necessary, to determine that the vessel may be safely operated in the service in which it is employed. Reports or inspections by the Officer in Charge, Marine Inspection (OCMI) are not required for minor repairs by replacements with spare parts. However, when repairs are accomplished in a foreign port or under emergency conditions at sea, they must be reported to the OCMI at the first port where the vessel calls after such repairs are made. The OCMI must determine, based on the report they receive, if it is necessary for a marine inspector to attend the vessel and if the repair should be considered temporary or permanent. Whenever feasible, extensive examinations or tests (such as for boilers) may be delayed until the next periodic inspection. Final acceptance of repairs must not be made until the OCMI finds all aspects of the repair satisfactory.

B. REFERENCES

1. Regulations

Requirements for notifying the Coast Guard of repairs or alterations affecting the safety of a vessel or its machinery, or movement of a vessel to another port for repairs, are contained in 46 CFR 2.01-15. The following regulations also require that the OCMI be notified of repairs or alterations affecting the safety of the vessel and mandate, if the vessel is subject to inspection, that inspections be held:

SECTION A: MARINE INSPECTION ADMINISTRATION**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

TYPE	CFR CITATION
Tank Vessels	46 CFR 31.10-25
Marine Engineering	46 CFR 50.05-10
Passenger Vessels	46 CFR 71.55
Cargo and Miscellaneous Vessels	46 CFR 91.45
Electrical Engineering	46 CFR 110.25
Public Nautical School Ships	46 CFR 167.30-1
Subdivision and Stability	46 CFR 170.005
Small Passenger Vessels	46 CFR 176.120 (Sub T) 46 CFR 115.120 (Sub K)
Oceanographic Research Vessels	46 CFR 189.45-1

2. American Bureau of Shipping (ABS) Publications

The American Bureau of Shipping (ABS) has produced numerous publications that contain requirements and instructions for the production of sound, effective hull welds. Rules for Building and Classing Steel Vessels and Rules for Building and Classing Steel Barges for Offshore Service are examples of these publications, which are generally accepted by the Coast Guard as standards. See MSM Volume II, Material Inspection, COMDTINST 16000.7A (series), Chapter A2 for a list of ABS publications.

3. American Society of Mechanical Engineers (ASME) Code

46 CFR 57.02-1 states that the Coast Guard has adopted Section IX, "Welding and Brazing Qualifications," of the ASME Code, with certain limitations and modifications. Section IX, as modified by 46 CFR Part 57, is used as a standard for judging the quality of piping and machinery welds.

4. Navigation and Vessel Inspection Circular (NVIC) 7-68

Inspection personnel must become thoroughly familiar with the contents of NVIC 7-68, "Notes on Inspection and Repair of Steel Hulls." This NVIC provides guidance on the inspection and repair of steel-hulled vessels for certification. For more details, see MSM Volume II, Material Inspection, COMDTINST 16000.7A (series), Chapter B1.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS****C. CONSTRUCTION OF VESSELS**

1. General Standards

Vessels to which the inspection statutes and regulations apply must be constructed in accordance with approved plans, specifications, and applicable regulations.

2. Bulkheads and Decks

NVIC 9-97, "Guide to Structural Fire Protection Aboard Merchant Vessels," contains information concerning approved insulation, bulkhead panels, and deck coverings used on most vessels. Cargo or miscellaneous vessels of 4,000 and more GT, built prior to 1 January 1962, may continue to use plywood for nonstructural interior bulkheads in their superstructures, providing that they meet the requirements of 46 CFR 92.05 and 92.07-90. The Coast Guard realizes that there are other materials that minimize fire hazards as required by 46 CFR 92.05 and 92.07; the use of such materials is recommended. Plywood is prohibited for nonstructural interior bulkheads in the superstructures of passenger and tank vessels, and all cargo and miscellaneous vessels of 4,000 and more GT contracted for on or after 1 January 1962.

3. Living Spaces Aboard Tank Vessels

- a. General requirements. The requirements governing construction of the accommodation spaces (staterooms, hospital spaces, passageways) and public spaces, such as messrooms and recreation rooms, on tank vessels are prescribed in 46 CFR Subchapter D.
 - (1) "Fire-resistive material" must be used in the construction and insulation of crew accommodation spaces on tank vessels. The term "fire-resistive material" means noncombustible material approved under 46 CFR 164.009 and listed as "noncombustible materials" in Equipment Lists, Commandant Instruction (COMDTINST) M16714.3.
 - (2) All construction materials, including panels, insulation and any associated support materials, used within living spaces must be approved noncombustible materials.
- b. The only combustible construction materials permitted within living spaces are decorative veneers and trim on the panels of staterooms and public spaces. No combustible materials are permitted in the passageways or in hidden spaces.

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

There are also restrictions on the types of furniture or furnishings authorized on board tank vessels.

4. Lap-Welded Joints In Tank Barges

- a. Some shipyards make tank barges with lap-welded strakes, since lap-welded construction can be cheaper and easier than butt-welded construction. (Small shipyards usually use lap-welded construction.) Some lapped joints may be practically unavoidable in any vessel construction; for example, tank barges usually have lapped joints at the turn of the bilge and at the deck edge. Neither the Coast Guard nor ABS has published rules specifically limiting or prohibiting the use of lap-welded joints. However, their use has the following disadvantages:
 - (1) A lapped joint has a void that can form a gas pocket if the fillet weld on the inside is not tight. Several such gas pockets could make the gas-freeing of a cargo tank difficult. In addition, these voids could provide a route for leakage of gas or liquid cargo from one tank to another.
 - (2) There is no way to test the tightness of the inside fillet weld, since the usual methods of testing a tank will indicate leaks only if the inside and outside welds of a lapped joint are not tight.
 - (3) Lapped joints usually experience an increased rate of corrosion.
 - (4) A tank with lapped joints is more difficult to clean than a smooth tank with butt-welded joints.
 - b. Conditions of acceptance. Lap-welded joints may be accepted in way of cargo tanks on tank barges if--
 - (1) Welded stopwaters are provided in each lapped seam in way of oiltight bulkheads;
 - (2) The overlap of the plates complies with ABS rules, which specify that "Lapped joints are generally to have overlap of not less width than twice the thinner plate thickness plus one inch." The size of the overlap should not be excessive, to avoid the creation of large void spaces; and
 - (3) The joints are continuously welded on both sides.
 - c. The use of lap-welded seams in tank barges should be discouraged, but not prohibited unless the inspector finds a failure to meet these requirements.
-

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS****5. Single-Dogged Hatches and Scuttles**

Hatches on inspected vessels are generally subject to the approval of the OCMI, according to their suitability for the intended locations on board and their use. There is no provision for type approval and they are not normally seen in detail on plans submitted for the OCMI's approval.

6. Fiberglass Gratings

- a. General. Fiberglass gratings are not specifically addressed in the individual vessel regulations. However, fiberglass is combustible; therefore, its use must be limited based on the general requirements to reduce hazards from fire.
 - (1) Basically, fire-retardant fiberglass may be used anywhere except in accommodation areas, and in any other area where its failure could hinder escape or access by firefighters.
 - (2) Although all fiberglass must be fire-retardant, there are no Coast Guard approvals for fire-retardant fiberglass gratings or cable trays. However, the OCMI may authorize its use in particular installations, considering its fire retardance and the criteria in subparagraph C.6.c of this chapter, below. The manufacturer should provide the Coast Guard inspector with appropriate test data; a report showing a flame spread rating less than 25 according to the American Society for Testing Materials (ASTM) Standard E-84 would constitute appropriate evidence. Fiberglass cable trays may be used in exterior locations and in machinery spaces, provided that they are not installed in concealed spaces.
- b. Restrictions on use. Fiberglass gratings must not be used--
 - (1) Within the accommodation area;
 - (2) In areas where their failure could hinder escape or firefighter access. Vessels fitted with deck foam firefighting systems must have steel or equivalent access to the foam monitors (e.g., deck grating to foam monitors must be steel or equivalent); or

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

- (3) For cargo tank hatch covers on all foreign tank ships while trading in U.S. waters. Those vessels found not to be in compliance with this policy should be issued a deficiency notice to correct the situation within a reasonably brief time period.
- c. Authorized uses. Since the approval of fiberglass cable trays and gratings is so dependent on the specific location and application, it is not possible for the Commandant to grant general approvals. In the past, however, the use of fiberglass gratings aboard inspected vessels has been authorized in the following areas:
 - (1) Sea chest screenings.
 - (2) Small sundeck awnings and supports.
 - (3) Lifeboat bilge flooring.
 - (4) Electrical control flooring.
 - (5) Pipe guards on deck, in cargo holds, and in engine rooms.
 - (6) Fore and aft main deck catwalks.
 - (7) Main deck crossover catwalks.
 - (8) Removable guards over hawseholes, anchor hawsepipes, and scuppers.
 - (9) Personnel barriers, such as protection for electrical panels.
 - (10) Ladders, platforms, and catwalks located within double bottoms, bilges, peak tanks, fuel tanks, liquid bulk cargo tanks, and other spaces not normally entered when underway.
 - (11) Ship staging and work platforms (Occupational Safety and Health Administration (OSHA) requirements may also apply).
 - (12) Platforms and ladders located on radar, radio, or other electrical apparatus masts.
 - (13) Platforms or walkways on kingposts.
 - (14) Overlay on existing weather decks to provide slip-resistant, self-draining walking surfaces.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

- (15) Overlay on steel decking around electrical equipment to provide for insulation and safety of personnel.
 - (16) Elevated flooring in boatswain's lockers.
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7. Hull Welding Standards for Aluminum Small Passenger Vessels (T-Boats)

46 CFR 177.300 incorporates, by reference, various non-Coast Guard standards with which a builder must comply to satisfactorily meet minimum structural design requirements. These are broad requirements which are not otherwise defined, particularly with respect to construction details such as welding.

Inspections of aluminum T-boats built in the late 1980's and early 1990's revealed that such T-boats' shell plate fit-up and edge preparation was often such that a proper root gap was not achieved. Because of this, a full penetration weld could not be made consistently in the construction of the vessels.

Essentially, the shell plate was square-buttet together and ground by hand to produce a rough bevel. This procedure effectively left a shoulder in the joint which was not assimilated during the welding process. Further, there was no attempt made to back gouge the weld from the opposite side to remove the discontinuity. Because of this, a lack of fusion remained when a cap pass was applied to the back side, clearly apparent when the weld is x-rayed.

This type of shell welding process is not acceptable for any type of inspected vessel where the long term effects of fatigue could adversely affect the strength of these connections. This could result in failure while in service and/or be less resistant to impact from mechanical damage.

OCMIs must ensure that the joint design and welding of butt joints strictly adheres to the provisions in the ABS Rules for Building and Classing Aluminum Vessels (1975), Chapter 30, Section 30.7, or to the provisions of Lloyd's Rules and Regulations for Classification of Yachts and Small Craft, Part 2, Chapter 3, dependent on the standard used to meet the structural design requirement.

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS****D. VESSEL REPAIRS, ALTERATIONS, AND "HOT WORK"**

The issue of avoiding casualties on all vessels under repair is extremely complicated, due to the possible presence of explosive gases and sources of ignition created by the use of flame or spark producing tools. No repairs; alterations; or other such operations involving riveting, welding, burning, or like fire-producing actions may be made until the requirements of 46 CFR 35.01-1 have been met. These regulations set forth the provisions under which a certified marine chemist will make a decision as to whether the work can be accomplished safely (see Part I of this Chapter). A tank vessel may have only hot work performed in or on the boundaries of a tank previously containing flammable liquids after the tank has been cleaned and gas-freed by conventional methods, and when the surrounding tanks have been cleaned and gas-freed or inerted with carbon dioxide or water. 33 CFR 126.15(c) applies to vessels conducting hot work while moored at designated waterfront facilities.

E. INSPECTION AND REPAIR OF TANK BARGES

1. Introduction

Tank barges employed primarily in river or inland service are generally towed alongside or pushed ahead, as opposed to being towed astern. Barges in these services are subjected to rigors of locking and fleeting operations that seagoing barges or self-propelled vessels do not normally experience. Some distinct structural problems have evolved as a result of this.

2. Hull Damage Considerations

- a. Introduction. While the following guidance was conceived generally to address the problems occurring on vessels in river service, the benefits of preventing pollution incidents through its application may be more universally useful. Therefore, this guidance is applicable to all tank barges with areas of the cargo envelope (excluding the deck) that are not protected by a double hull.
- b. Causes. Normal river and inland operations result in frequent structural deformations of a barge's hull. The rubbing of barges against one another and against lock walls causes the hull plating in some areas of the vessel to wear thin (side plating against framing members, barge corners, ends, and knuckles), while the majority of plating remains in good condition. Such wearing diminishes the plate thickness in these areas and causes plate deformation at the edges of the internals. Continued deformation and metal working results in many weakened

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

areas that are extremely prone to crack initiation and growth. Such degradation of strength in the cargo envelope (the hull) makes river and inland barges particularly prone to pollution incidents resulting from the minor damage of routine operations or low-energy collisions.

3. Inspection Standards

The extent of inspection and the types of repairs necessary to ensure that a tank barge can operate safely will depend upon the barge's age, route, and other considerations.

It is not justifiable to impose less stringent inspection or repair conditions upon tank barges that operate along routes with minimal exposure to severe weather or sea conditions if the less-stringent standards could increase the likelihood of a pollution incident.

The provisions of NVIC 7-68 must always be applied to all tank barges.

The following additional notes apply to the inspection of single-hulled tank barges:

- a. Deficiencies. The possibility of a pollution incident arising from a deficiency must be considered when determining whether a deficiency compromises a vessel's suitability for its intended service. A vessel whose condition is considered likely to cause a pollution incident is not suitable for carriage of oil in bulk.
- b. General evaluation of hull plating. Tank barges are subject to the general causes of deterioration noted in NVIC 7-68. However, because of the frequent rigors of locking and fleeting operations, particular attention must be given to end and sideshell plating that must withstand continuous wear.
 - (1) The greatest loss in plate thickness can be expected where such plating is stiffened by internal structural supports or bulkheads. Often, plating between structural supports will show little loss in plate thickness, while plating supported by internals will be extremely thin.
 - (2) The acceptable degree of hull plating deterioration has traditionally been evaluated by considering the effect of the reduced plate thickness on total hull strength. For specific limits for deterioration of various areas of the vessel, see NVIC 7-68. Localized wastage in excess of these limits has generally been accepted, provided that adjacent material retains adequate strength and the localized deterioration does not result in a radical change in cross-section or a general weakening that could act as a notch.
- c. Evaluating excessive deterioration. A further consideration must be whether reduced thickness of the local area would allow penetration of the product

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

envelope from low-energy impacts or abrasion encountered during fleeting or locking operations. The general guide of 25-percent deterioration indicated in NVIC 7-68 applies here. However, there are instances where renewal of hull plate should be required even though deterioration/wastage may be less than 25 percent. An example is heavily or deeply pitted plating areas on vessels which were constructed with less than 3/8" original hull plating. In this case, 25-percent deterioration would mean plating of less than 1/4" as the only barrier between cargo and water. When plating becomes this thin, an evaluation must be made in each case to determine the strength of the hull and its ability to withstand the rigors of routine, unrestricted operations.

4. Repair Standards

- a. General concerns. The need for renewal of plating is generally evaluated by considering its overall condition.
 - (1) In the case of tank barges that must withstand frequent fleeting and locking operations, the hull plating is the only barrier between cargo and water. For these barges, the condition of the plate in the way of internal structural supports should be the determining factor. This is the case even when the plating between internals shows negligible wastage.
 - (2) NVIC 7-68 provides guidance on gauging for evaluation of plate condition and cautions against gauging without sufficient cause. This does not preclude gauging during an inspection to adequately assess the condition of hull plating in the way of internal structural supports. The repeated rubbing of tank barges against lock walls and other barges can leave little evidence of loss of plate thickness in way of internals, and gauging may be necessary to reveal the true condition of such plating.
- b. Plate cracking. The rigors of unrestricted river operations generate problems other than thinning of plating. The repeated working of shell plating against lock walls and other barges causes crack initiation and growth in many areas. Frequent handling of tank barges by towboats results in areas that are repeatedly set in by low-energy impacts, resulting in the formation of cracks in plating. Generally, the presence of more than two repaired cracks in one local area should be cause for special attention, as the formation of a subsequent crack in such areas is likely.
- c. Repairs of cracked plating. To avoid pollution incidents, cracked plating should be repaired through plate renewal or an insert.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

- (1) The repair procedures outlined in NVIC 7-68 should be followed when cracks are repaired through welding. Proper edge preparation and full penetration welds are very important.
 - (2) When repairs involve the renewal of less than a full plate, an insert of less than 18" by 18" normally should not be accepted (see NVIC 7-68). Inspectors must ensure that the edges of the insert lie in line with existing welds or that the corners of the insert have the proper radius.
- d. Use of rub bars and doublers. As discussed in NVIC 7-68, doubler plates are unacceptable for permanent repairs of tank barge hulls. However, rub pads or rub bar doublers are often installed in areas where excessive wear of the hull plating is detected or anticipated. When such a doubler is to be installed on an existing single-hulled barge, the hull plating to be covered should be carefully examined to ensure that excessive wastage has not already occurred.
- (1) In some cases, older tank barges may have rub pads or rub bars that were installed without adequate evaluation of the hull plating. It may be necessary to remove these to ascertain the suitability of the original hull plating. Where half-round pipe is used as a rub bar, the hull plating beneath is often subject to accelerated corrosion. Gauging from inside the tanks or periodic removal of these bars may be necessary to ensure proper hull plating thickness. Where such rub bars extend across several tanks, the installation of water stops should be considered.
 - (2) Repairs to internals should generally follow the guidance in NVIC 7-68.
- e. Stiffening of internals. On tank barges in river service, the need for repairs to internal structural supports may be questioned because such barges do not normally encounter the stresses of heavy seas and weather conditions and overall hull strength may seem less critical. However, when plating on single-hulled tank barges is not adequately supported, repeated low-energy impacts or excessive stresses from overloading can deform hull plating to the point of failure and result in pollution. Hull plating must always be provided with adequate stiffness to prevent underway panting, and must be able to distribute the force of low-energy impact loading uniformly along the internal structure of the vessel. If the internal structural supports are substantially deformed from original conditions or fail to have the designed amount of contact between support members and hull plating, consideration must be given to requiring renewal.

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

- f. Restrictions on use of clips. The common practice of welding clips to join distorted members to the hull plating cannot be accepted on single-hulled tank barges for extensive repairs to internals. Isolated use of clips may be acceptable if the internals so repaired continue to provide substantially the designed amount of support to the hull plating.

F. STRUCTURAL FAILURES AND CASUALTIES

1. Normal Operating Conditions

It is important to distinguish between structural failures, as defined in the following subparts, and structural damage. Fractures and buckles that result from external forces including collision, allision, grounding, fire, explosion, earthquake, improper cargo handling, or ballasting, (etc) should be reported as marine casualties, not structural failures, if they meet the definitions contained in 46 CFR 4.03. Conversely, fractures or buckles which occur as a result of the natural working of a vessel's hull should not be considered marine casualties.

Because all Class 1 structural failures compromise a vessel's ability to safely operate within its design parameters, they are, by definition, reportable as marine casualties under 46 CFR 4.03. Class 2 and 3 structural failures, as defined, normally fall outside the parameters of the marine casualty definition except in the rare occasion where the cost of a single repair might exceed the monetary value established in 46 CFR 4.03. In any case, the purpose of reporting structural failures is to determine if unwanted trends are developing in particular classes of vessels or vessels which may be operating in a particular environment in order to ensure that appropriate corrective actions are initiated.

2. Classifications and Definitions**a. Definitions.**

- (1) Outer shell: The side-shell and bottom plating of a vessel, including the bow and stern rakes of barges.
- (2) Oil-tight envelope: The portion of the outer shell in way of cargo oil tanks and the vessel's bunker/fuel, lube oil, and slop tanks, exclusive of the clean ballast tanks.
- (3) Main strength members: Structural members which provide primary longitudinal strength to the hull and transverse structural members which

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

directly contribute to support longitudinal strength members. Such members include the strength deck plating; side and bottom plating; tank top plating; the center vertical keel; underdeck, side and bottom longitudinal stiffeners; internal longitudinal bulkheads and stiffeners; deep web frames and girders; transverse bulkheads and girders, and associated bracketing connecting the aforementioned longitudinal and transverse structural members.

- (4) Buckle: Any deformation in the outer shell and/or strength deck plating and the adjacent internal main strength members to the extent that structural strength has been lost.
- (5) Action: The extent of response an operator must take, with concurrence by the OCMI, for a particular structural failure.

b. Class 1 structural failure:

- (1) A Class 1 structure failure is, during normal operating conditions, either--
 - (a) A visible, through thickness fracture of any length in the oil-tight envelope of the outer shell where threat of pollution is a factor, or;
 - (b) A fracture or buckle which has weakened a main strength member to the extent that it compromises the vessel's ability to operate safely within its design parameters.
- (2) In the case of a Class 1 structure failure, the operator must initiate immediate corrective action with approval of the cognizant OCMI. Temporary repairs may be permitted to allow the vessel to safely transit to a repair facility.

c. Class 2 structural failure:

- (1) A Class 2 structure failure is a fracture or buckle within a main strength member which does not compromise the safety of the vessel to operate within its design parameters and does not create a threat of pollution either by location or containment.
- (2) In the case of a Class 2 structure failure, the vessel operator and OCMI must evaluate and agree upon the necessary corrective action(s). Temporary repairs may be authorized until the next scheduled repair period.

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**d. Class 3 structural failure:

- (1) A Class 3 structural failure is any fracture or buckle which does not otherwise meet the definition of a Class 1 or 2 structural failure or a fracture which might normally be considered a Class 2 but is determined not to be detrimental to the strength or serviceability of the effected main hull structural member.
- (2) Class 3 structural failures do not require corrective action or OCMI notification. Class 3 structural failures must be noted for the record, monitored by the operator if deemed desirable, and addressed at the next regularly scheduled repair period.

3. Notification of Class 1 Structural Failures on U.S. Flag Vessels

The following actions must be taken when a Class 1 structural failure occurs on any U.S. documented, non-recreational vessel.

Under no circumstance will a vessel be allowed to operate under the terms and conditions of its Certificate of Inspection until permanent repairs are completed and approved by the OCMI.

Temporary repairs with additional imposed conditions of operations may be authorized by the OCMI to permit the vessel to proceed to a discharge port and/or repair facility.

- a. Operator's responsibility. When a Class 1 structural failure is discovered, the vessel operator must immediately report it to the cognizant OCMI of the zone where detected.
 - (1) The operator must complete and submit Coast Guard Form, Report of Marine Accident, Injury or Death, CG-2692 in accordance with 46 CFR 4.05-10. Class 1 structural failure must always be reported on the Report of Marine Accident, Injury or Death, CG-2692 regardless of when or where the structural failure is found.
 - (2) The operator must also submit details of the temporary and/or permanent repair procedures to the OCMI and the ABS (or appropriate class society). The repair plan must include a past history of any similar failure, the results of any past analysis related to that type of failure, and the results of past repair actions. Operators of vessels with either Coast Guard Critical Areas Inspection Plans (CAIPS) or ABS Enhanced Survey Programs are advised that submittal of these documents for OCMI review would satisfy this requirement.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

- (3) If the operator has no history to provide, then a failure analysis is required. The original must be sent to the OCMI with a copy to Commandant (CG-CVC).
 - (4) Design induced failures on vessels that have had plan approval by the Marine Safety Center (MSC) must be reported to the MSC.
- b. OCMI responsibility. The OCMI must advise Commandant (CG-CVC), in conjunction with district (p), immediately after receiving notice of a Class-1 structural failure by the most expeditious means possible. Commandant (CG-CVC) will advise Commandant (CG-5P-TI) of the event.
- (1) After regular working hours and on weekends, notification should be made through the National Command Center. If cognizant Commandant (CG-CVC) personnel are unavailable, notification should be made to a Commandant (CG-5P-TI) Traveling Inspector. The OCMI must evaluate the operator's repair proposal.
 - (2) OCMI's are strongly urged to contact Commandant (CG-5P-TI) for consultation regarding acceptable repair procedures. Commandant (CG-5P-TI) files contain significant information on previously approved repairs which would be beneficial to ensuring consistency across Marine Inspection zones.

4. Tank Vessel Restrictions

Operational restrictions may be placed upon tankships pending completion of permanent repairs to their oil-tight envelopes. Such restrictions may include prohibition of carrying cargo in the affected tank(s) in order to allow a vessel to remain in service while in that condition. The vessel operator must submit calculations to the OCMI which demonstrate that the other intact tanks can be loaded without placing additional stress on the hull structure and that the vessel can safely operate with the affected tank either ballasted or empty.

5. Vessels with Recurring Structural Failures

A vessel which suffers repeated Class 1 structural failures or a continuous high number of Class 2 structural failures will be placed in a "Special Attention Vessels" category. Vessels not otherwise enrolled in the CAIP program outlined in NVIC 15-91, Change 1 and A5.J of this volume may be required to do so. If the condition of the vessel's hull structure does not significantly improve, additional operating restrictions regarding route and service may be imposed. In severe cases, the vessel's Certificate of Inspection (COI) may be revoked and the vessel removed from service. Commandant (CG-CVC) maintains

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

a list of these vessels and they will be regularly attended by a Traveling Inspector. All structural repairs for these vessels must be approved by Commandant (CG-CVC).

6. Vessels Enrolled in the Alternative Compliance Program (ACP)

As of February 1995, a pilot program was established to delegate the ABS authority to perform surveys of U.S. flag vessels on behalf of the Coast Guard, pursuant to issuance of a COI. Guidance for this program is contained in NVIC 2-95, Change 2. Unless otherwise provided for in part J of this chapter with respect to the CAIP Program, approval of Class 1 structural repairs lies solely with the ABS unless it is determined through oversight monitoring procedures that the repairs are inadequate. Participation of a vessel in the Alternative Compliance Program (ACP) does not relieve an operator of the responsibility of reporting a Class I structural failure to the cognizant OCMI.

7. Documentation of Class 1 Structural Failures

It is rare for two or more types of Class I structural failures to occur during the same event or examination interval. Should this happen, each type must be reported on a separate Report of Marine Accident, Injury or Death, CG-2692. If multiple failures of the same type occur, they may be reported on a single Report of Marine Accident, Injury or Death, CG-2692. At a minimum, the following information should be provided with the Report of Marine Accident, Injury or Death, CG-2692 for each Class I structural failure:

- a. A one or two sentence description on the Report of Marine Accident, Injury or Death, CG-2692 noting the location and size of the fracture, affected structural components, how the failure was found and method of repair. It is acceptable to attach a shipyard repair specification or class surveyor's report if they contain this type of information.
- b. Photos and/or sketches of the structural failure with identifying marks noting the strake; plate number; frame number; side or bottom longitudinal number; location, i.e., port, starboard or centerline; ship's name and any other useful reference points. Photographs should clearly indicate the originating point of the fracture if it can be visually determined.
- c. A description of the structural detail if it is determined that it caused or contributed to the cause of the failure. This should include a description of any similar detail failures which previously occurred in that vessel or sister vessels.
- d. Identification of the vessel's trade and principal operating route; time and weather conditions when the failure occurred; and the stability condition of the vessel,

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

including hull stresses, if available. When the specific time of the failure is not known, a general statement about weather conditions and stability patterns is sufficient.

- e. Steel samples must be obtained for analysis and/or nondestructive testing for Class 1 structural failures (not previously analyzed) if the cause of the failure is not due to some obvious or known discontinuity. The vessel operator must arrange for the failure analysis if it will assist in determining the cause of the failure. A copy of the report must be provided to the cognizant OCMI investigating the failure.
- f. When accurate information is not available, then the best available data must be reported. This should include information regarding the date when the failure was found, approximate time/date when the failure may have occurred, possible contributing environmental conditions, stability condition of the vessel and any other possibly pertinent information. All such information should be noted as approximate.

8. Notification of Class 1 Structural Failures on Foreign Flag Vessels

In addition to the procedures outlined in Paragraph E.3.a, the following items must be adhered to when a Class 1 structural failure occurs to a foreign vessel operating in U.S. waters:

- a. The vessel operator or authorized agent must provide a repair proposal to the vessel's flag administration or Recognized Organization (RO) representative and the cognizant OCMI. Repairs are not authorized until approved by the flag Administration or RO.
 - b. If the class society authorizes temporary repairs, the OCMI will notify the vessel's master and agent that the vessel will not be allowed to return to a U.S. port until permanent repairs are accomplished and approved by the vessel's flag administration or RO and all outstanding conditions related to the incident are resolved.
 - c. Under port state control authority, the OCMI may reject flag administration or RO approval of either permanent or temporary repairs if it is determined that they will not restore the vessel to a condition to allow it to operate within its design parameters.
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SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS****9. Notification of Class 2 and Class 3 Structural Failures**

Class 2 and Class 3 structural failures as defined in Subparagraph E.2.c of this Chapter do not meet the definition of a marine casualty in 46 CFR 4.03. Therefore, neither failure is required to be reported on Report of Marine Accident, Injury or Death, CG-2692. However, when Class 2 and Class 3 structural failures are detected, the following actions will be taken.

- a. Class 2 structural failures. Class 2 structural failures have the potential to become serious through fracture propagation, particularly in a longitudinal strength member that has failed in tension.
 - (1) Refer to NVIC 15-91, Change 1, which contains important information regarding critical crack length and brittle failure.
 - (2) When a Class 2 failure is found, it must be reported to the cognizant OCMI even if not found during a scheduled Coast Guard examination.
 - (3) The operator must submit a repair proposal containing either a temporary or permanent repair. Based on the information presented in the proposal, the OCMI may allow a temporary repair or require immediate permanent repair. In no case will a temporary repair proposal be accepted during a hull examination for credit unless it involves the necessity of the vessel proceeding to another port for permanent repair.
- b. Class 3 structural failures. Class 3 failures are not required to be reported to the OCMI if they are found at times other than a credit hull exam. The operator must address all Class 3 failures at each credit hull examination. Based on location, size and type of structural member involved, the OCMI may elect to defer repairs and permit the failure to be monitored at some mutually agreeable interval with the operator, particularly if the repair will set up a hard spot or stress riser making the detail more susceptible to failure.

10. Documentation of Class 2 and 3 Structural Failures

Operators of all vessels which have either a CAIP manual and/or an ABS Enhanced Survey record must enter the types and dispositions of the failures as appropriate and in accordance with the guidelines of part J of this chapter or the ABS Rules pertaining to enhanced surveys. Vessels not required to maintain these records should have such failures recorded in MISLE. The entry should be detailed to sufficiently describe the number and types of failures and where the hard copy of the repair approval is located.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

OCMIs are encouraged to contact the Traveling Inspectors regarding repair of Class 2 failures as a means to help ensure consistency throughout marine inspection zones.

11. Relationship Between the OCMI and Class Societies Regarding Repair Approval

Historically, many OCMIs required operators to submit and obtain approved repair plans from the cognizant class society prior to presenting it to the OCMI. While this works successfully in most cases, there have been occasions when OCMIs have had concerns about items they felt were inadequately addressed in the class society approval. Typically, the OCMI waits to review proposed repairs until the cognizant class society has approved the repairs. In order to help ensure a harmonious regulatory position, all OCMIs should review any repair proposal concurrently with their local class society counterparts. This partnership facilitates the repair approval process by forging a unified regulatory review that assures that the acceptance by one party will not be disputed by the other, resulting in untimely delays.

12. Forwarding of Class I Structural Failure Reports

Upon completion of the investigation of a Class 1 structural failure, the OCMI must forward the Report of Marine Accident, Injury or Death, CG-2692 and all supporting attachments to Commandant (CG-INV) for inclusion into the casualty database via the district (p) office.

G. REPORTS OF EQUIPMENT FAILURE ONBOARD INSPECTED VESSELS

Whenever approved systems, items of approved equipment (systems or items approved under an approval number), or non-approved systems fail and a dangerous condition results, Report of Equipment Failure on Inspected Vessel, CG-2752A, must be submitted. This report is only to indicate failures, not to report replacements due to normal wear or deterioration. All steering gear failures must be reported in as much detail as possible.

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS****H. NFPA CERTIFIED MARINE CHEMISTS****1. Requirements for Inspections Prior to Hot Work**

The following regulations require an inspection to be made before alterations, repairs, or operations involving hot work are undertaken within cargo tanks used to carry flammable and combustible liquids or chemicals in bulk or on their boundaries, fuel tanks and their boundaries, piping, and equipment connected to cargo or fuel tanks:

TYPE	CFR CITATION
Tank Vessels	46 CFR 35.01
Passenger Vessels	46 CFR 71.60
Cargo and Miscellaneous Vessels	46 CFR 91.50
Public Nautical School Ships	46 CFR 167.30
Oceanographic Research Vessels	46 CFR 189.50
Mobile Offshore Drilling Units (MODUs)	46 CFR 109.573

2. Requirement for a Marine Chemist

In the United States or its territories and possessions, inspections preceding hot work must be made by a marine chemist certified by the National Fire Protection Association (NFPA). For a list of certified chemists, see the annual NFPA Marine Chemists Directory.

When no marine chemist is reasonably available, the regulations provide for the OCMI to select and authorize another person to perform the required inspections (see Subpart I.7 of this Chapter). When the vessel is not in the United States and no marine chemist or other person authorized by the OCMI is reasonably available, the regulations require the inspection to be made by the senior vessel officer present and properly noted in the vessel's logbook.

NOTE: It is unsafe to conduct an Internal Structural Examination (ISE) while a vessel is loading/discharging, even when the space is certified by a Marine Chemist. Due to the potential for changing conditions which would create a hazardous environment, the ISE must not be performed under these conditions.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS****3. Functions of the Marine Chemist**

The Marine Chemist will--

- a. Conduct a physical inspection and test the condition of tanks and spaces;
- b. Determine what previous cargoes were carried;
- c. Check calibration of instruments before and after each day's use; and
- d. Test spaces for oxygen (19.5 percent minimum), combustible gases (must be below 10 percent Lower Explosive Limit (LEL)), and toxic substances (minimum by Threshold Limit Values (TLVs)). TLVs are published in the latest edition of the booklet, "Threshold Limit Values for Chemical Substances and Physical Agents in the Workroom Environment." This is published by the American Conference of Governmental Industrial Hygienists.

NOTE: For additional information concerning toxic vapor hazards in confined spaces, see MSM Volume I, Administration and Management, COMDTINST M16000.6 (series), Chapter 10.

4. Marine Chemist Certification

The marine chemist must complete and sign a marine chemist certificate indicating the compartment is "safe for workers" and "safe for hot work" before hot work begins.

A signature of receipt is required from the owner, employer, or shipyard representative responsible for posting the certificate and maintaining the conditions it requires.

The certificate also states conditions under which the marine chemist should be consulted or recalled.

Unsigned marine chemist certificates are invalid. The marine chemist notes the results of his or her inspection on the certificate, as well as any conditions that must be maintained by the competent person, including--

- a. Frequency and types of additional tests;
- b. Further inspections;
- c. Qualifications, and;

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

- d. Other pertinent instructions.
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5. Standards for Marine Chemist Activities

The publication "Control of Gas Hazards on Vessels," NFPA 306 (latest edition), is the guide for the inspections required and certificates issued before alterations, repairs, or operations as described above are performed. Inspection personnel should become familiar with the provisions of NFPA 306 and the procedures that the marine chemist must follow to issue a marine chemist certificate, as well as additional requirements for bulk chemical cargo tanks and Flammable Cryogenic Liquid (FCL) carriers.

6. Competent Person

- a. Introduction. OCMIs should become familiar with the OSHA requirements in 29 CFR 1915.12 concerning flammable and oxygen-deficient atmospheres and tests conducted by competent persons. This designation is a creation of the OSHA regulations (29 CFR 1915), by which certain functions related to ship repair, shipbuilding, and shipbreaking are performed. A competent person is generally defined in the OSHA regulations as a person capable of recognizing and evaluating employee exposure to hazardous substances and other unsafe conditions. The competent person is also capable of specifying necessary protection and precautions to be taken to ensure the safety of employees required by the particular regulation to which the condition applies.
- b. Functions. The competent person is responsible to his or her employer. One or more such persons are required to be designated by employers when working conditions in a shipyard involve flammable atmospheres. If a certified NFPA marine chemist performs the duties of the competent person in addition to the duties of the marine chemist, that fact must be recorded. The competent person's duties generally involve--
- (1) Determining oxygen content in tanks or spaces prior to workers' entry;
 - (2) Determining concentrations of flammable vapors or gases in cargo tanks and other spaces having contained flammable or combustible liquids or gases prior to entry by workers;
 - (3) Maintaining safe conditions relating to cleaning and cold work in tanks and spaces having contained combustible or flammable liquids or gases;

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

- (4) Determining concentrations of flammable vapors or gases in areas not requiring a marine chemist certificate prior to hot work;
- (5) Maintaining, receipting for, and posting marine chemist certificates and appropriate warning signs;
- (6) Maintaining and testing conditions in tanks and spaces after certification is issued by a marine chemist; and
- (7) Maintaining a log of inspections, tests, operations performed, and any instructions from the marine chemist.

NOTE: Qualifications for a competent person include knowledge and application of protective equipment and devices to minimize hazards from coatings and residues, fire watches, fire extinguishers, charged hoses, fresh air breathing apparatus, air purifying respirators, etc.

NOTE: In spaces where toxic atmospheres or residues may be present, only a marine chemist, industrial hygienist, or other person similarly qualified to recognize and test for toxic substances must be authorized to conduct the required pre-entry tests and inspections.

- c. Interaction with the marine chemist. The competent person accompanies the marine chemist through the vessel while the latter conducts the tests and inspections necessary to certify tanks as safe. The competent person normally conducts a tour of all operations at least once every 24 hours and usually more often, depending on the type of work in progress. The marine chemist is not required to conduct follow-up inspections and tests unless recalled or unless conditions affecting issuance of certificates change (e.g., opening additional tanks, transferring oil, changes in atmospheric conditions of tanks).
- d. Interaction with the Coast Guard. In summary, the competent person is charged with carrying out the responsibilities of the employer in meeting the provisions of the marine chemist certificate and additional requirements of the OSHA regulations. The OCMI's role in this process should be--
 - (1) Awareness of the OSHA and Coast Guard regulations relating to shipyard operations;
 - (2) Awareness of the employer's responsibility to follow OSHA and Coast Guard requirements;

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

- (3) Identification of those instances when existing regulatory requirements are not being followed, either by the competent person or the marine chemist;
 - (4) Reporting violations of regulations and unsafe practices to OSHA Regional Directors (concerning competent persons) or to Commandant (MSC) (concerning marine chemists); and
 - (5) Dialogue with local marine chemists, OSHA officials, and shipyard employers to gain more insight into how competent persons and marine chemists operate, and to resolve problems of mutual concern.
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7. Substitutes for Marine Chemists

- a. Introduction. Under the regulations, the OCMI may be called upon to authorize another person to perform required inspections when it is claimed that the services of marine chemists are not reasonably available. The OCMI should consider each case on its own merits, considering the usual availability of marine chemists within reasonable distances, the impact on the vessel of delays in securing marine chemists, the nature of the cargo that the vessel previously carried, etc.
 - b. Restrictions. If it is necessary to authorize another person to perform a marine chemist's functions, the OCMI should give the greatest consideration to persons with long practical experience in the repair of vessels, rather than those versed in theory alone. An authorized substitute for a marine chemist is limited by the regulations to act only in the case of an individual vessel. Blanket authorizations for a person to act in lieu of a marine chemist are prohibited.
 - c. Authorization procedures. Authorization for persons to act in lieu of a marine chemist must be made in writing. The names of persons making such recommendations, the person(s) recommended and their credentials, the name of the vessel being examined, the shipyard or repair point, and the date of recommendation must be indicated. Copies of such authorizations must be kept in a separate file marked "Marine Chemists - Authorized Substitutes For." From time to time, the OCMI may be asked to report on such authorizations to determine which areas require additional marine chemists.
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USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS****8. Certification Standards**

The NFPA certifies each person found to be a competent marine chemist to carry out the requirements in NFPA-306. An NFPA-appointed qualification board of five members examines each marine chemist application to determine whether the applicant fulfills all requirements set forth in Appendix A of the current Marine Chemists Directory. Each marine chemist must re-qualify every 5 years by completing additional training and educational requirements to ensure that he or she remains abreast of changing technology. The Coast Guard and OSHA provide nonvoting liaison officers to the qualification board who address their agencies' policies and problem areas. The Coast Guard liaison officer relays comments from field units regarding individual marine chemist performances to the board.

9. Types of Certificates

The NFPA only issues one type of certificate. This unlimited certificate certifies that the holder is competent to discharge all duties of a marine chemist in accordance with NFPA 306, on vessels of all types and sizes except FCL carriers. A special FCL carrier endorsement on the marine chemist certificate (license) is necessary before a marine chemist is authorized to issue marine chemist (gas-free) certificates for such vessels.

I. REPAIRS AND ALTERATIONS TO MARINE ENGINEERING EQUIPMENT

1. Introduction

The requirements in 46 CFR Part 59 apply to the repair of all boilers, appurtenances, and pressure vessels subject to inspection by the Coast Guard.

Repairs, replacements, and alterations must not be made without prior approval by the OCMI except in an emergency. The submittal of plans and specifications for approval may be required as specified in 46 CFR 59.01-5.

2. Tailshaft Repairs

The Coast Guard will accept welded repairs to tailshafts used on ABS-classed vessels when they meet ABS requirements or other authorized classification society for vessels enrolled in ACP. When possible, repairs and tests to such shafts should be witnessed by a Coast Guard inspector. The inspector must verify that the work was performed by a welder qualified or certified by the Coast Guard, the U.S. Navy, or ABS, and that the

SECTION A: MARINE INSPECTION ADMINISTRATION**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

welding repair is satisfactory. The ABS Guide for Repair, Welding, Cladding and Straightening of Tail Shafts details the procedures for repairing cracked steel shafts by welding. This guide also contains the requirements that must be passed prior to qualification to repair cracked or corroded shafting by welding. In the case of unclassified vessels, the inspector should use these recommended procedures as a guide in determining whether a satisfactory repair has been made.

J. CONVERSION OF LANDING SHIPS, TANK (LSTs)

NVIC 7-56, "Manned LST's; structural reinforcement and drydocking hull inspection requirements," contains instructions for the structural reinforcement of landing ships, tank (LSTs) being converted for manned commercial operation in ocean, coastwise, or Great Lakes service, and for the inspection of these vessels after conversion. NVIC 11-63, "LST's as Unmanned Barges; structural reinforcement and drydocking hull inspection requirements," contains the requirements for LSTs converted for use as unmanned barges (See MSM Volume II, Material Inspection, COMDTINST M16000.7A (series), Chapter B5).

K. CRITICAL AREAS INSPECTION PLANS (CAIPS)**1. Use of CAIPs**

NVICs 15-91 and 15-91, Change 1 established guidance concerning the implementation and use of Critical Area Inspection Plans (CAIPs). CAIPs may be applied to any vessel or class of vessel based on evidence of repetitive and significant structural failures. The purpose of the CAIP is to identify, track, and document the history of a vessel's structure, including the means and methods employed to mitigate structural failures through modification of substandard design and construction details. The CAIP should be a living document. As a vessel ages, it is reasonable to expect that new and/or more frequent failures of the hull girder will occur due to fatigue caused by a variety of factors. These could include repetitive cyclical loading in a seaway, stresses imposed by environmental factors, operational conditions such as route, speed and cargo operations and type of service. In this manner, causes of structural failures are addressed and permanently corrected. This eliminates the potential for performing in effect a temporary repair of a fracture or defective which immediately addresses the symptom, but does not hold up in service.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS****2. Use of CAIPs by Inspectors**

Periodic updating of the CAIP ensures that the latest and best information about the hull structure is available to inspectors attending the vessel. All inspectors assigned to hull examinations of CAIP vessels must review the CAIP manual prior to commencing the inspection. This is particularly important for new inspectors with limited hull/structural experience, as the information directs attention to areas highly susceptible for failure, provides detailed information on previously approved repair procedures which aid in evaluating a current repair proposal, and ensures a consistent regulatory approach. Inspectors are cautioned that, although the CAIP is an excellent road map for detecting fractures, the remainder of the vessel must be carefully examined as unexpected fractures, potentially indicative of new trends, could have occurred since the last examination interval.

3. Establishing CAIP Requirements

As outlined in NVIC 15-91, the following implementation procedures apply:

- a. Commandant (CG-CVC) is the implementing authority for CAIPs on vessels operating in multiple OCMI zones. This is based on review of Class 1 structural failure casualty data, MISLE sorts on Class 2 structural failure entries and Traveling Inspectors' reports.
 - b. The cognizant OCMI is authorized to establish CAIPs for vessels that operate solely within that OCMI's zone. The OCMI must notify the district and Commandant (CG-CVC) of the CAIP initiation.
 - c. G-MOC maintains a list of all vessels required to have CAIPS. This will be available in an MSIS VFSC product. As of June 1996, all tankers engaged in the Trans Alaskan Pipeline Service (TAPS) trade, including all vessels engaged in the export of oil from Valdez, Alaska to a foreign destination, are required to maintain CAIPS.
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4. Operator Responsibilities

When a vessel or class of vessels is designated by Commandant (CG-CVC) for the CAIP Program, the vessel operators must do the following:

- a. Develop a CAIP in accordance with the performance elements of Enclosure (2) to NVIC 15-91. Format of the CAIP is left to the operator's discretion as long as all of the performance criteria is included in the document.

SECTION A: MARINE INSPECTION ADMINISTRATION**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

- b. Submit the CAIP to the vessel's classification society for review and approval.
 - c. Upon classification-society approval, forward a copy of the approval letter to Commandant (CG-CVC). Submittal of the CAIP itself is not required.
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5. CAIP Surveys

All CAIP surveys are the responsibility of the vessel operator. Coast Guard inspectors are not required to be present during the surveys but OCMI's are strongly urged to assign inspectors because of the tremendous training opportunities afforded by these inspections. Vessel operators often employ highly experienced structural experts to examine and evaluate the vessel's internal structure. These individuals are generally also responsible for drafting repair proposals. Inexperienced inspectors can gain important experience pertaining to structural assessment through association with steel surveyors. The following guidelines must be followed:

- a. Notice of a CAIP survey should be given to the cognizant OCMI at least 15 days in advance.
- b. If Coast Guard inspectors will attend, the operator should present the extent and schedule of the exam to the cognizant OCMI. OCMI's are encouraged to contact the Traveling Inspectors Commandant (CG-5P-TI) to discuss upcoming surveys. The Traveling Inspectors have extensive records of many past CAIPs that would be helpful to the marine inspector.
- c. The CAIP must be conducted by an individual who is qualified to conduct structural examinations. This individual may be a class surveyor, a surveyor who has been certified by a classification society, or an experienced surveyor who can provide documentation of his/her qualifications to the OCMI. Port engineers and/or ship's officers may be employed if the operator attests in writing to their qualifications. CAIPs conducted by unqualified individuals will not be accepted.
- d. Cleanliness of the internal structure is paramount to the quality of the CAIP survey. Cleanliness is a subjective term. However, as a minimum, critical and active repair areas should be--
 - (1) Sufficiently free of standing water, particularly around bottom shell master erection butts and weld wraps of mushroom or rat-hole cutouts of bottom shell longitudinals;
 - (2) Sufficiently free of sludge and mud;

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

- (3) Sufficiently free of wax build up and loose scale, and;
 - (4) Cleaned to prevent soft coatings, if applied, so as to prevent or hinder fracture detection.
 - (5) If the CAIP surveyor has any doubt about the cleanliness of the internal structure, further butterworth, water-washing, and/or stripping must be conducted.
- e. Surveys may be completed by any of the following methods--
- (1) Rafting;
 - (2) Staging, or;
 - (3) Other techniques that apply latest and best technology, such as high resolution cameras suspended in tanks, which result in satisfactory close-up examination of the vessel structure and are acceptable to the OCMI. Ideally, any of the physical methods employed should permit the surveyor or inspector to be no more than 10 feet from any structural component within the critical area defined by the CAIP.
- f. Upon completion of the CAIP survey, the operator must prepare a survey report for entry into the CAIP manual. One copy must be entered into the manual aboard the vessel and another must be forwarded to the cognizant OCMI for review. The operator must provide an executive summary of the report to G-MOC. This summary should be brief. It must only contain types and numbers of the various classes of structural failures noted and if these failures were in existing or new active repair areas. It is expected that these documents be prepared and forwarded within 60 days of the CAIP survey.

6. OCMI Responsibilities and Guidance

The cognizant OCMI must ensure that the following items are adhered to:

- a. OCMI must instruct their inspectors to review the CAIP at each drydock exam and inspection for certification to verify that the plan is updated and the required surveys have been performed.
- b. When resources permit, inspectors should participate in CAIP surveys. It can not be stressed enough what an extremely valuable training opportunity a CAIP is to first tour inspectors. Attending inspectors should monitor the survey and assess its overall quality and completeness.

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

- c. When OCMIIs are advised of fractures, they must require and monitor repairs as required by Subpart E.2 of this Chapter.
- d. OCMIIs should conduct a thorough review of CAIP reports to determine if the periodic information from NVIC 15-91 is provided. The following areas should be of particular interest:
 - (1) Scope of the survey.
 - (2) Qualifications of the surveyor.
 - (3) Fractures reported as required.
 - (4) Repair proposals submitted by the operator are acceptable within the established guidelines. Repair procedures specifically to TAPS tankers can be found in MSM Volume II, Material Inspection, COMDTINST 16000.7A (series), Chapter B4.
- e. CAIPs provide a historical record of the vessel's structural failure and repair history.
 - (1) This history should be employed to evaluate current repair proposals. If certain construction details or prior repairs continue to fail, repairs in kind should not be authorized.
 - (2) OCMIIs must notify operators of their responsibility to improve the deficient detail(s) and work in conjunction with the operator and vessel's class society to mitigate reoccurrence. Conversely, OCMIIs and attending surveyors should recognize the effectiveness of prior repairs and design modifications and accept current repairs done in accordance with these procedures. This supports consistency across OCMI zones.
- f. When Class 1 fractures occur, OCMIIs must require a failure analysis or non-destructive testing of steel samples in accordance with Subparagraph E.7.e of this Chapter. The CAIP process was developed to analyze structural failures and prevent or mitigate their recurrence. Such analysis is vital to this effort.
- g. A history of recurring structural failures combined with an operator's reluctance to develop a permanent solution to their cause is sufficient grounds for the OCMI to recommend to Commandant (CG-CVC), via the cognizant district (p), that a vessel be restricted from a particular trade, or, removed entirely from service. This is a complex process that requires several levels of review. However,

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

**CHAPTER 5: VESSEL CONSTRUCTION, CONVERSIONS,
ALTERATIONS, AND REPAIRS**

nothing is intended to limit the OCMI's authority to remove a vessel's COI if it is determined that the vessel cannot safely operate within its design parameters.

- h. After review of the CAIP survey report, the OCMI must ensure that the proper CAIP survey information is entered into MSIS.
- i. Vessels in the ACP. Several vessels required to maintain CAIPs have been accepted into ACP.
 - (1) These vessels are inspected by the ACP class society on behalf of the Coast Guard and are subject to oversight only.
 - (2) All oceangoing tankships classed by the ABS are required to follow Enhanced Survey guidelines in addition to normal survey requirements. The Enhanced Survey requirements closely parallel CAIP standards and are deemed equivalent as permitted by NVIC 15-91, Change 1, for the normal twice in 5-year drydock interval.
 - (3) The Enhanced Survey guidelines do not specify any annual survey requirements. Thus, strictly adopting the ABS guidelines for Enhanced Survey causes the operator to not comply with the Coast Guard standards if the vessel is subject to an annual CAIP requirement.
 - (4) When overseeing these vessels, the OCMI must determine that the vessel has completed an annual CAIP to NVIC 15-91, or, that the Enhanced Survey guidelines have been formally extended by ABS to the annual interval and that the required surveys have been performed. Failure to conduct either examination within the prescribed interval will cause the vessel to be removed from service until done and possible civil penalty procedures initiated against the operator.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 6: MISCELLANEOUS VESSEL INSPECTION ACTIVITIES**A. INTRODUCTION**

This chapter discusses vessel inspections other than drydocking, annual and periodic inspections that are related to, but do not necessarily occur at the same time as, inspections for certification.

B. PERMISSION TO PROCEED FOR REPAIRS ONLY**1. Authority**

Under 46 U.S.C. 3313, repairs may be deferred (when it can be done safely) until a vessel reaches a port where repairs may more conveniently be done. The regulations applicable to issuance of permits to proceed are:

VESSEL TYPE	CITATION
Procedures Applicable to the Public	46 CFR 2.01-15
Tank Vessels	46 CFR 31.10-35
Passenger Vessels	46 CFR 71.05
Cargo and Miscellaneous Vessels	46 CFR 91.05
Public Nautical School Ships	46 CFR 167.30-5
Small Passenger Vessels	46 CFR 176.202 (Sub T) 46 CFR 115.202 (Sub K)
Oceanographic Research Vessels	46 CFR 189.05

2. Permit to Proceed to Another Port for Repairs, Form CG-948

- a. Upon request of the vessel owner or operator and under certain conditions the Officer in Charge, Marine Inspection (OCMI) may issue a Permit to Proceed to Another Port For Repairs, CG-948, to a vessel.
 - (1) This permit is a substitute for the Certificate of Inspection (COI). The permit must be issued only when the OCMI judges that the vessel may proceed safely.
 - (2) When the a Permit to Proceed to Another Port for Repairs, CG-948, is issued, the OCMI must withdraw the COI and all amendments thereto and forward them to the OCMI of the zone to which the vessel will proceed.
 - (3) A Permit to Proceed to Another Port for Repairs, CG-948, must not be issued to a vessel that is eligible to retain its COI, nor to which an amendment to the COI would suffice.

CHAPTER 6: MISCELLANEOUS VESSEL INSPECTION ACTIVITIES

- b. Restrictions. A Permit to Proceed to Another Port for Repairs, CG-948 allows a vessel to voyage from one port to intermediate ports along a route to its port of destination. However, the vessel may not voyage to several ports and return to the original port or voyage from a port in the continental United States to a port outside the continental United States and then return. If the vessel's COI has expired or is about to expire, the OCMI may issue a Permit to Proceed to the port of final discharge, provided an inspection for certification has been conducted to the point where the OCMI considers it safe for the vessel to proceed and load or discharge cargo. The inspection may be continued at other ports and may be concluded at the port of destination. In such case, appropriate transfer of inspection records among OCMI's will be conducted.
- c. Conditions of operation. Every Permit to Proceed should be worded to expire when the vessel reaches its port of destination. Additional information regarding the purpose for making the voyage, the nature and extent of necessary repairs, special conditions to be observed, modifications in crew or equipment requirements, and whether or not the vessel may carry passengers or cargo, must be set forth clearly on the permit. A Permit to Proceed may be renewed or extended by the OCMI with jurisdiction over the vessel.

3. Pre-Issue Inspection

Issuance of a Permit to Proceed to Another Port for Repairs, CG-948, is contingent upon Coast Guard inspection to determine that the proposed voyage can be conducted safely. The scope and extent of the inspection must vary according to the circumstances, and must be determined ultimately by the OCMI.

4. T-Boats Proceeding for Repairs

When not carrying passengers, vessels inspected under 46 CFR Subchapter T may proceed to another port for repairs without obtaining this form. This is permitted because a small passenger vessel need not operate under the terms of its COI when passengers are not carried.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 6: MISCELLANEOUS VESSEL INSPECTION ACTIVITIES**C. Sanitary Inspections****1. Authority**

The statutory authority for sanitary examinations on vessels is found in 46 U.S.C. 33-08. The regulations establishing requirements for sanitary inspections are:

VESSEL TYPE	CITATION
Tank Vessels	46 CFR 31.10-45 and 35.01-5
Passenger Vessels	46 CFR 71.45
Cargo and Miscellaneous Vessels	46 CFR 91.35
Nautical School Ships	46 CFR 168.15-60
Small Passenger Vessels	46 CFR 176.818 (Sub T) 46 CFR 115.818 (Sub K)
Oceanographic Research Vessels	46 CFR 189.33

2. Inspection Procedures

- a. Scope of inspection. Coast Guard sanitary inspections concern design, construction, and arrangement of tanks, crews' quarters, galleys, and similar spaces.
 - (1) Sanitary inspections begin with plan approval prior to construction, alterations, or conversions.
 - (2) Aspects of sanitary concern include accommodation spaces, ventilation, plumbing, lighting, heating, control and location of overboard discharges, venting of fresh water tanks, installation of hot and cold water in hospital spaces, provisions against fresh water piping running through oil tanks (because of possible contamination), installation of proper drains in waste disposal systems and low points in piping systems, and the installation of insect screens and similar items where required.
- b. Sanitary inspections of crew's accommodations. Accommodations, including washrooms, messrooms, galleys, and storerooms, must be examined for sanitary conditions. The marine inspector must be satisfied that quarters are of the dimensions required, properly ventilated and in a clean and sanitary condition, and equipped with the proper plumbing and mechanical appliances required, and that such appliances are in good working order.
- c. Frequency of inspections. Sanitation on inspected vessels is generally the responsibility of the master and the chief engineer. Coast Guard inspection

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 6: MISCELLANEOUS VESSEL INSPECTION ACTIVITIES

personnel should restrict the number of sanitary inspections to the minimum compatible with statutory and regulatory requirements.

- (1) A sanitary inspection must be held during each inspection for certification, annual inspection, periodic inspection, drydocking, and such other times as provided for by statutes and regulations.
- (2) Sanitary inspections of T-boats must be held as the OCMI deems necessary; normally, they must coincide with COI and annual inspections.
- (3) Inspectors must be alert to unsanitary conditions at all inspections.

3. Unsanitary Conditions

- a. Documentation. If a suspected unsanitary condition is discovered, the inspector should take appropriate action to document the condition. The local Coast Guard unit should request assistance of the Food and Drug Administration (FDA) and/or the Public Health Service (PHS), Centers for Disease Control (CDC). These agencies are able to provide a detailed sanitation analysis, such as detecting the presence of bacteria in food or on food processing equipment. The results of the inspection should include detailed, verified, technical information upon which the Captain of the Port (COTP) can initiate enforcement action. These agencies may be contacted at the following addresses:

U.S. Public Health Service
Office of the Chief
P.O. Box DO, CPS, CDC
1015 North American Way, Rm 107
Miami, Florida 33132-2017
Ph: (305) 536-4307

Quarantine Station
U.S. Public Health Service
P. O. Box 90834
Los Angeles, California 90009
Ph: (213) 215-2365

Centers for Disease Control
Center for Prevention Services
Division of Quarantine
Atlanta, Georgia 30333
Ph: (404) 329-2574

U.S. Food and Drug Administration
50 U.N. Plaza
Federal Office Building
San Francisco, California 94102
Ph: (415) 556-0439

NOTE: The CDC has published an Operations Manual which describes their Vessel Sanitation Program. Coast Guard units may request a copy of the manual by contacting the CDC at the Miami or Atlanta addresses listed above.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION

CHAPTER 6: MISCELLANEOUS VESSEL INSPECTION ACTIVITIES

- b. Enforcement. If the unsatisfactory sanitary condition is of such a nature or magnitude that the district commander or COTP could reasonably determine, based on the detailed results of the inspections conducted by either the FDA or the PHS, that a clear threat to the vessel, crew, passengers or safety exists, enforcement action may be taken under Title 33 CFR 160.111(c). Enforcement action on foreign flag vessels initiated under U.S. law or under the provision of the International Labor Organization Convention Concerning Minimum Standards in Merchant Ships (ILO 147) must be reported in accordance with Enforcement of the ILO 147, COMDTINST M16711.12, (series).

D. TRAVELING INSPECTION STAFF (CG-5P-TI)

1. Introduction

The traveling inspection staff conducts and monitors various inspections and examinations of vessels of particular interest and provides oversight of field missions with feedback directly to Commandant (CG-5P). The staff also conducts special missions and studies in support of inter-division issues to improve commercial vessel safety and increase awareness of marine safety. The vessels targeted for attention by this staff vary based on the priorities the Director of Prevention Policy (CG-5P). Examples of targeted vessels are U.S. deep draft vessels over 20 years of age, Trans-Alaska Pipeline Service (TAPS) tankers, large passenger vessels (over 100 GT), U.S. vessels of novel build or design, and U.S. vessels undergoing major conversions, modifications, or life extensions and ACP enrolled vessels.

2. Purpose

Traveling Inspectors perform oversight of targeted vessels and conduct special studies to provide sound technical advice and recommendations to Commandant (CG-5P) which help form program direction and measure the effectiveness of existing programs and policies. Unit Commanding Officers may request advice or assistance from this specialized and highly experienced staff on issues of particular concern.

CHAPTER 6: MISCELLANEOUS VESSEL INSPECTION ACTIVITIES**3. Interaction with Field Units**

In most cases, a representative of the cognizant field command should accompany the Traveling Inspector at each vessel inspection. Traveling Inspectors do not issue marine inspection deficiency requirements Vessel/Facility Inspection Requirements, CG-835s; however, they may make recommendations for Vessel/Facility Inspection Requirements, CG-835s to the cognizant OCMI/COTP. Special inspection reports will be submitted by the Traveling Inspector to Commandant (CG-5P). Recommendations that the Traveling Inspector may offer include an action addressee, generally a program manager or Headquarters Division Chief, who will coordinate any necessary district or field unit action. Copies of special inspection reports must be forwarded by the traveling inspection staff to appropriate districts and field units after approval by Commandant (CG-5P).

E. EXEMPTIONS FOR LAID UP, DISMANTLED, OR OUT-OF-COMMISSION VESSELS

Under 46 U.S.C. 3302(e), vessels subject to the vessel inspection laws are exempted from inspection when they are laid up, dismantled, or otherwise out of commission. Under 46 CFR 31.01-1, 70.05-1(a)(2), and 90.05-1(a)(3), tank, passenger, cargo and miscellaneous vessels need not possess a COI when in such condition.

F. CLASSIFYING VESSELS AS SELF-PROPELLED

There is an increasing number of non-self-propelled vessels being equipped with positioning machinery, steering aids, and propulsion assist units. Propulsion is one of the determining factors in the application of the various vessel inspection laws as well as certain international agreements. Propulsion also relates to the particulars of the minimum required vessel manning scales.

It is up to the Marine Inspector to classify vessels that have various modes of mechanical maneuvering as self propelled or non-self propelled. Any vessel equipped with mechanical means which gives it the capability of propelling itself could be arbitrarily classified as self propelled. Some vessels such as barges with "kickers" or tunnel type thrusters used solely to aid in assisting mooring or transiting confined areas, that were not intended to be subject to U.S. inspection and manning requirements, were classified as self propelled, and thus subjected to additional manning and U.S. inspection regulations. Those vessels where the equipped machinery is used solely in limited operations whereby the propulsion is incidental to its intended purpose of assisting steerage are not considered self propelled.

To further clarify, unidirectional tunnel type "thrusters" and "kickers" used solely for transiting locks and/or canals would NOT be considered a basis for classifying a vessel as

USCG Marine Safety Manual, Vol. II: Materiel Inspection

SECTION A: MARINE INSPECTION ADMINISTRATION**CHAPTER 6: MISCELLANEOUS VESSEL INSPECTION ACTIVITIES**

self-propelled. Vessels equipped with directional maneuvering equipment and/or substantial propulsion assist units will normally be considered self propelled (this would include dynamic positioning (DP)); notwithstanding the fact that a towing vessel may be employed in the operation.

For any vessel where the mode of operation does not fall within the above criteria, but they believe they should be classified as self-propelled, should submitted requests with complete details to Commandant (CG-CVC) for evaluation.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

A. PHILOSOPHY AND RELATED POLICY	A7-3
1. General Philosophy	A7-3
2. Optimal Marine Inspector	A7-3
3. Related Policy	A7-4
4. Terms of Reference	A7-6
B. COMMERCIAL VESSEL COMPLIANCE PERSONNEL	A7-8
1. Workforce Classification.....	A7-8
2. Civilian Apprentice Marine Inspector (CAMI) Program.....	A7-11
C. FEEDER PORT PROGRAM.....	A7-18
1. Designation.....	A7-18
2. Staffing.....	A7-188
D. TRAINING AND CERTIFICATION PROCESS	A7-20
1. Performance Qualification Standards (PQS Books) and Inspection Guides.....	A7-200
2. Competency Applicability Tables.....	A7-21
3. Maintaining and updating PQS books and Inspector Guides.....	A7-23
4. Verifying Officer Performance	A7-24
5. Commercial Vessel Compliance Personnel Verification Inspections/Exams.....	A7-26
6. Merchant Marine Indoctrination Ship Rider Program and Industry Specific Orientation	A7-26
7. C-School Training.....	A7-28
8. Competency Management.....	A7-30
E. MAINTAINING CERTIFICATIONS AND CONTINUED PROFESSIONAL DEVELOPMENT	A7-31
1. Currency	A7-31
2. Newly Reported Personnel with Existing Certifications.....	A7-34
3. Periodic Proficiency Testing	A7-34
4. Informal Professional Development.....	A7-34
5. Professional Certifications	A7-35
F. TRAINING AND PERFORMANCE MEASUREMENT AND CONSISTENCY	A7-37
1. Mission Management System (MMS)	A7-37
2. Marine Inspector Training Officer (MITO) Peer Audits	A7-37

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

3. Inspector Performance Assessment Tool (IPAT).....	A7-38
G. AWARD FOR EXCELLENCE IN MARINE INSPECTIONS	A7-388
1. Background and Purpose.....	A7-39
2. Award Administration.....	A7-39
3. Award Evaluation Criteria	A7-40

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**A. PHILOSOPHY AND RELATED POLICY**

1. General Philosophy

All personnel involved in commercial vessel safety, whether in the field or at a staff, have the personal responsibility to continue developing and increasing their proficiency and the proficiency of those around them. There is no finite amount of knowledge regarding ships, structures, systems, equipment, navigation and operations. No one person can acquire all the required knowledge. As such, Commercial Vessel Compliance personnel must always strive to improve personal and unit proficiency to apply the best solutions to challenging problems and enhance the safety of an ever-evolving maritime industry.

Feeder Ports are the backbone of training for Commercial Vessel Compliance personnel, producing highly competent marine safety professionals who will train the next generation of marine inspectors and supply the Prevention program with personnel who understand the marine industry that we protect. Specific guidance for Feeder Ports is found in Section C.1.

Non-Feeder Ports must also continue to train and develop their personnel. It is probable that a Journeyman Marine Inspector reporting to a non-feeder port will not always have the correct mix of certifications and will have to be trained for new competencies.

Training programs at both Feeder Ports and Non-Feeder Ports must also consider the training needs of the enlisted workforce, generally known as Vessel Examiners.

Training should be integrated in operations, both through formal unit programs and informally. Opportunities for unique training opportunities (e.g., different vessel types, steam, unique repairs) should be seized and capitalized on. Additionally, working with local industry and manufacturers provide an opportunity to gain a much deeper understanding of systems that we regulate.

Commercial vessel certification is achieved through selected formal training and significant On-the-Job-Training (OJT). Verifying Officers (VO) are integral to the OJT process and are discussed in detail in Section D.4. In addition to VOs, many successful training plans incorporate coaches or mentors to assist new inspectors through their transition to marine inspections and the OJT process.

2. Optimal Marine Inspector

- a. Background. It is imperative that all Commercial Vessel Compliance personnel develop suitable proficiency beyond initial competency attainment. The Optimal Marine

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

Inspector definition is an ideal that begins to formulate what is suitable proficiency. The term was used in the 2012 Marine Inspector Strategic Needs Assessment and is integral to the Human Performance Technology cycle.

- b. Definition of Marine Inspector. Marine Safety Manual, Volume I, Administration and Management, COMDINST M16000.6 (series), Chapter 3 defines a Marine Inspector as:

The marine inspector is an officer or civilian assigned to the inspection department of a field unit to perform the field duties of the Commercial Vessel Safety (CVS) Program. The inspector must understand and apply federal statutes and regulations, Coast Guard policy, and accepted industrial standards in the inspection of construction, alterations and repairs, equipment, and operating procedures for various types of vessels. To this end, the inspector shall be thoroughly familiar with applicable references (including this manual), and shall take advantage of available technical training.

- c. Traits of Optimal Marine Inspector. The Optimal Marine Inspector is a confident and competent member of the maritime community who:
- has an in-depth technical knowledge of the maritime transportation system including vessel components, policy and regulations,
 - demonstrates thorough understanding and correct application of regulations, policies, and technical information,
 - is capable of balanced decisions with consideration of how they affect commerce, public safety and environmental risk,
 - is committed to the Coast Guard marine safety mission,
 - promotes self and others in continued professional and inspector development, and
 - is recognized as a leader in the marine safety community.
- d. Relationship to Vessel Examiners. The traits of the Optimal Marine Inspector were developed as part of a Strategic Needs Assessment focused on Marine Inspectors. Vessel Examiners should also work towards acquiring and displaying these traits within their scope of responsibilities.

3. Related Policy

- a. Marine Safety Manual Volume I. Marine Safety Manual, Volume I, Administration and Management, COMDINST M16000.6 (series), provides policy and guidance on a

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

number of important topics including Marine Safety program philosophy, authorities for Marine Safety activities, Marine Safety organization, personnel management, and occupational health. This chapter is aligned with Marine Safety Manual Volume I and provides specific direction related to Commercial Vessel Compliance Personnel.

- b. Coast Guard Sector Organization Manual. The U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series), provides general guidance with respect to unit training organization, certification boards, and competency management. This chapter is also aligned with that policy and provides specific direction related to Commercial Vessel Compliance Personnel.
- c. Coast Guard Officer Specialty Management System Manual.
 - (1) The Officer Specialty Management System is outlined in the Coast Guard Officer Specialty Management System Manual, COMDTINST M5300.3 (series). This system is used to quantify demand and measure supply of the officer workforce based on specific specialties and sub-specialties.
 - (2) The OSMS applies to commissioned officers O-1 through O-6, and their corresponding officer positions, both active and reserve. Chief Warrant Officers (CWOs) are managed separately. CWOs who become Lieutenants under the CWO to Lieutenant Program have the opportunity to earn specialties and subspecialties codes.
 - (3) The Officer Ashore Prevention (OAP) specialty designation is used for Prevention Officers. Two sub-specialties apply to officers working in Commercial Vessel Compliance: OAP-11 - Marine Inspection and OAP-16 - Marine Safety Engineering Technical. Each sub-specialty contains certain knowledge, education, training, or competency requirements to earn an Officer Specialty Code.
 - (4) Sub-specialty descriptions and the associated requirements to earn Officer Specialty Codes can be found on the Officer Specialty/Sub-Specialty Requirements (OSR), Form CGHQ-5318. Officers working in Commercial Vessel Compliance should review OAP-11 and OAP-16 to understand the requirements to earn the associated Officer Specialty Codes.
- d. Enlisted Rating Advancement Training System (ERATS).
 - (1) The ERATS establishes training standards for each rating within the Coast Guard, which must be completed to become eligible for advancement in a chosen rating. The system is designed to align rating training with organizational goals, technological change and to leverage the full range of learning resources available to best support workforce performance.

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- (2) The system is comprised of six major training components: the Rating Performance Qualification Standard (RPQS), Rating Advancement Test (RAT), Enlisted Professional Military Education (EPME), Advancement Qualification Examination (AQE), Core Competency Requirements and participation in the Servicewide Examination.
- (3) Additional information on ERATS can be found on CG Portal.

4. Terms of Reference

The following definitions are provided for convenience, bringing together relevant definitions from a number COMDTINSTs. Any update in a controlling COMDTINST takes precedence over the definition found in this table.

Term	Definition
Attainable Competency	A competency that can be obtained at a specific unit due to the frequency of that particular activity. Attainable competencies are determined by the Marine Safety Mission Performance Support Committee based on input from the Sector Staffing Model or Marine Inspector Training Officer/Training Officer. Attainable competencies are also sustainable.
Competency *	Formerly known as a “qualification”, a competency is a collection of tasks with the associated skills, knowledge, and abilities (e.g., tools, methods, information, doctrine, procedures, materials, etc.) needed to perform the tasks to a predetermined, measurable, performance standard.
Competency Code*	An alphanumeric code, up to eight characters long, that uniquely identifies a competency in Direct Access. This code is established when the competency is created in Direct Access. Users will only see this code when creating ad hoc competency queries.
Certification*	Formerly known as “qualified”, a certification is an endorsement by the Sector Commander or designee, indicating that specified standards of knowledge and performance were met, or they are being maintained for a particular competency. Certification alone does not guarantee assignment to duties since currency requirements or requirements for newly reported personnel must also be met.
Certification Boards*	Certification Boards are used to assess a trainee’s understanding of the duties and potential for performance. “Certification” does not mean that they have attained mastery of craft or proficiency because members are expected to continue to grow well after they first obtain their competency and certification. There are five types of certification boards: Oral Pre-board, Final Assessment, Final Board,

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

	Currency Board and Revocation Board.
Currency*	Maintenance of proficiency and knowledge associated with a particular certification usually by performing an inspection / examination within a specific timeframe.
Feeder Port	A Feeder Port is a Sector or Marine Safety Unit (MSU) with a diverse workload and sufficient volume to allow for training in at least four of the marine inspection (MI) and port state control (PSC) competencies. Feeder ports provide qualified MIs and PSCOs to fill those positions throughout the Coast Guard. Feeder Ports are designated by Commandant (CG-CVC).
Letter of Certification*	A letter issued to a member who has successfully completed all the training and certification requirements for a particular competency. (Also referred to as a qualification or designation letter).
Newly Reported Personnel*	Newly Reporting Personnel are those members new to a division or unit from either an internal or an external transfer.
Marine Inspector	A marine inspector is an officer or civilian assigned to the inspection division of a field unit to perform the field duties of the Commercial Vessel Safety (CVS) Program. The inspector must understand and apply federal statutes and regulations, Coast Guard policy, and accepted industry standards in the inspection of construction, alterations and repairs, equipment, and operating procedures for various types of vessels. To this end, the inspector shall be thoroughly familiar with applicable references (including this manual), and shall take advantage of available technical training. (Definition from Marine Safety Manual, Volume I, Administration and Management, COMDTINST M16000.6 (series), Chapter 3.)
Marine Inspections Training Officer (MITO)	Exclusive to Feeder Ports, MITOs are designated by the Commanding Officer as being responsible for administering a unit's Inspections Training Program. These positions are filled by highly skilled civilian marine inspectors. (Appendix A of U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series), has additional information).
On-the-Job Training (OJT)*	OJT is the planned process of developing knowledge and skills at the "point of work performance", which will be conducted in the field, or an office or watchstander setting. OJT emphasizes one-on-one coaching and training by an experienced subject matter expert (SME) or accomplished performer who holds the corresponding competency.
Proficiency*	A measurable, established level of skill or ability required for the competency attached to a specific position. This characteristic is assigned to a competency when it is attached to a position.
Sector	The term "Sector" in this policy includes any command, detachment

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

	or detached duty station that performs commercial vessel compliance activities.
Sustainable Competency	A competency that can be maintained (for currency) at a specific unit due to the frequency of that particular activity. Sustainable competencies are determined by the Marine Safety Mission Performance Support Committee based on input from the Sector Staffing Model or Marine Inspector Training Officer/Training Officer.
Training Officer (TO)	TOs are designated by the Commanding Officer to be responsible for administering a unit's Training Program including, but not limited to inspections. The TO oversees the Sector's Training Board. See Chapter 7 of U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series).
Training Board*	A Sector or Unit Training Board is required by Chapter 2 of the Performance, Training and Education Manual, COMDTINST M1500.10 (series), and is discussed further in Chapter 6 of the Sector Organizational Manual.
Training Manager*	A person designated by the MITO/TO to assist a command staff element or department in executing Sector Competency Management policy.
Verifying Officer (VO)	<p>An experienced person designated in writing by the Sector Commander or designee, who has demonstrated the ability to instruct, coach and train and to verify a trainee's ability to correctly perform the task(s) established in the applicable PQS Workbook.*</p> <p>VOs are the only personnel authorized to sign off PQS tasks and must be certified in the competency for the PQS workbook they are endorsing. This includes meeting currency requirements.</p> <p>Certain members at National Centers of Expertise or Commandant (CG-5P-TI) may be designated in writing to serve as National Verifying Officers. These members are not required to have unit-specific VO designation letters. The term VO throughout this document includes National Verifying Officers.</p>

* Taken from the U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series)

B. COMMERCIAL VESSEL COMPLIANCE PERSONNEL**1. Workforce Classification**

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

The Personnel Allowance List (PAL) contains several standard titles for Commercial Vessel Compliance Personnel. All positions, regardless of title, from Apprentice to Chief, Prevention Department, MUST strive to professionally develop proficiency beyond competency attainment. Refer to U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series), Chapter 3, Section B.4.a for a full description of duties and responsibilities.

Descriptions. A description of the position, paygrades and duties of Commercial Vessel Compliance personnel is as follows:

- a. Marine Inspectors: A marine inspector is an officer or civilian assigned to the inspection division of a field unit to perform the field duties of the Commercial Vessel Safety (CVS) Program. The inspector must understand and apply federal statutes and regulations, Coast Guard policy, and accepted industry standards in the inspection of construction, alterations and repairs, equipment, and operating procedures for various types of vessels. Marine Inspectors are further defined by three levels based on experience and competency:
 - (1) Apprentice Marine Inspector (MI/PSCO APPRENTICE): Junior Officers (O1-O3), Chief Warrant Officers (CWO2), and civilians (GS-7-12). They acquire detailed knowledge of US and International maritime laws, regulations, policies and the maritime industry with the goal of attaining a minimum of four competencies, at least one of which is domestic and one is foreign, to become a Journeyman Marine Inspector.
 - (2) Journeyman Marine Inspector (MI/PSCO JOURNEYMAN): Junior Officers (O2-O4), Chief Warrant Officers (CWO2 and CWO4), and civilians (GS-12 to GS-13) who have completed at least one inspection tour and attained four inspection competencies, at least one of which is domestic and one is foreign. Only certifications for inspected domestic vessels or Port State Control examinations, except PSCE, count toward the required four competencies. Journeymen are expected to continue professional development, pursue Verification Officer status and train new inspectors and vessel examiners.
 - (3) Advanced Journeyman Marine Inspector (MI/PSCO ADV JRNYMN): Junior Officers (O3-O4), Chief Warrant Officers (CWO3-4), and civilians (GS-12 to GS-13) who have more than four competencies and more than six years field experience as marine inspectors. Additionally, Advanced Journeymen have either the K-Boat Inspector (KI), Drydock Inspector (DI), Foreign Tank Vessel Examiner (FTVE), Foreign Chemical Tank Vessel Examiner (FCTVE), Foreign Gas Carrier Examiner (FGCE), Foreign Passenger Vessel Examiner (FPVE), Hull Inspector (HI), Hull Tankship (HT), Machinery Inspector (MI), or Machinery Steam (MS) Inspector competencies. Their job is similar to Journeymen.

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

Additionally, they are expected to provide experience and expertise to Inspections Division personnel.

- b. Vessel Examiners: Vessel Examiners are enlisted and civilian personnel who conduct examinations of foreign commercial vessels and U. S. flagged uninspected vessels such as towing vessels and commercial fishing vessels. Depending on the scope of exam and their certification, they may examine vessel lifesaving, firefighting, pollution prevention and navigational equipment, propulsion and steering systems. They inspect and evaluate vessel construction and hull integrity and crew performance of emergency drills.
 - (1) Port State Control Officer/Vessel Examiner (PSCO/VSL EXAMINER): Enlisted Personnel (E-6 to E-9). Pursuant to their competencies these personnel may only lead foreign flag vessels as allowed by Section D1.E of this Manual. They may lead uninspected towing vessel and uninspected commercial fishing vessel exams. They may not issue International Oil Pollution Prevention (IOPP) certificates. A PSCO/VSL EXAMINER is by their nature a specialist and may serve as a Verifying Officer provided the requirements contained in Section D.4 of this chapter are met. Additionally, Chief Petty Officers are responsible for the professional development, technical acumen and leadership qualities of their subordinates.
 - (2) Vessel Examiner (VSL EXAMINER): Enlisted Personnel (E-4 and E-5) and Civilian Personnel (GS-9 to GS-12). Pursuant to their competencies these personnel may assist Marine Inspectors, PSCOs and uninspected vessel examinations. An E-4 or E-5 VSL EXAMINER may serve as a Verifying Officer for the Port State Control Examiner (PSCE) competency provided the requirements contained in Section D.4 of this chapter are met. A Civilian Commercial Fishing Vessel Examiner is a type of Vessel Examiner who has additional duties of managing and marketing their voluntary examination program.
- c. Mid-Management Positions: Mid-management positions are discussed here as they are critical to workforce proficiency.
 - (1) Chief, Inspection Division (INSP DIV CHIEF): Refer to the Sector Organization Manual, Chapter 3, Section B.4.a for a full description of duties and responsibilities. The CID is a Marine Inspector and should maintain currency, when practical, periodically perform inspections and examinations and participate on certification boards. Each CID should utilize the Inspector Proficiency Assessment Tool (IPAT) to assess competency on a different certified MI at least once per quarter (see Section F.3 for more detailed information on the IPAT).

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

- (2) Marine Inspector Training Officer (MITO): A MITO is a GS-13 Marine Inspector/Training Officer assigned at a Feeder Port who is responsible for managing a unit marine inspector training program and ensuring that apprentices, verifying officers and mentors are meeting HQ and unit professional development and training requirements.
- (3) Inspection Division Branch Chiefs: The Sector organizational construct and PAL do not include Branch Chief positions with the exception of (LT/O-3) FACILITY INSPECTIONS SUPERVISOR at larger ports. In order to maintain span of control it is sometimes necessary to designate personnel as branch chiefs. Assignment as Journeyman and Advanced Journeyman (Apprentices should not be Branch Chiefs) takes precedence over Branch Chief titles. Personnel in these positions are still responsible to earn certifications (as available), maintain currency, perform inspections and examinations and train marine inspectors and vessel examiners.
- (4) Civilian Marine Inspector (GS-12/13): Journeyman and Advanced Journeyman level MIs that provide continuity and depth to the inspection bullpen within a specific port over a prolonged period of time. Because tour lengths are not a consideration for civilian MIs, they are expected to gain all the inspection competencies that are attainable at their specific unit over time.

2. **Civilian Apprentice Marine Inspector (CAMI) Program**

- a. Purpose: The Marine Safety Enhancement Plan outlined a strategic plan to improve the Coast Guard's ability to perform its marine safety mission. A key element of this plan is to deploy a percentage of the marine inspector workforce as Civilian Marine Inspectors with a solid core capacity of qualifications, and to promote mission consistency across the service. The CAMI program was created to have a ready pool of qualified candidates to rotate into vacating civilian Journeyman positions once they have completed their training.
- b. Design: The CAMI program is designed to be a three-year program and provide a structured training platform for CAMIs to gain a solid foundation in marine inspection and port state control knowledge and skills while assigned to a feeder port. Completion of this program is dependent on satisfying the program requirements outline below. Upon successful completion, the CAMI will be designated as a Journeyman Marine Inspector and considered available for transfer to a permanent duty location.
- c. Program Roles and Responsibilities:

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- (1) Under standard Office of Personnel Management merit principles, District Command Staff Advisors (CSA) will initiate a recruitment action, via Commandant (CG-1211), to publically advertise all CAMI vacant billets and conduct the selection process.
 - (2) Commandant (CG-CVC) will work with the inbound Feeder Port to select the best candidates to conduct interviews with, and together select a primary and alternate for the position.
 - (3) The District Command staff Advisor will work with the feeder port MITO to provide a new CAMI with unit sponsor contact information. The sponsor will assist the CAMI during transition and to help coordinate a start date. (This date should not be later than 45 business days after accepting the position unless an extension is authorized by Commandant (CG-CVC)).
- d. **CAMI Recruitment and Retention:** All CAMIs are initially offered a GS-7 Step 1 pay grade. COMDT CG-1211 will coordinate available recruitment incentives for newly appointed CAMIs, as follows:
- (1) As outlined in Civilian Recruitment, Relocation, and Retention Incentives, COMDTINST 12500.2 (series), paragraph 10.b., a maximum recruitment bonus of 25 percent of the general schedule pay may be offered.
 - (2) A superior qualification appointment in accordance with Civilian Recruitment, Relocation, and Retention Incentives, COMDTINST 12500.2 (series), paragraph 9, may be authorized up to a GS-7 step 10. This appointment is designed to off-set the forfeiture of income that would have been earned from a non-governmental employment opportunity.
 - (3) Retention beyond the one year probationary period is incumbent on the CAMI meeting the competency and promotion requirements discussed in paragraphs h and j below. Newly reporting CAMIs should be notified about these expectations which should become part of their work plan. If during their 1st year of probation they are not meeting these expectations, they should be immediately counseled and performance shortfalls documented.
- e. **CAMI Transfers:** At the completion of this program, the CAMI is expected to transition into a permanent non-training position as a Journeyman Marine Inspector.
- (1) Sectors shall report all vacant Journeyman Marine Inspector (GS-1801) positions directly to Commandant (CG-CVC) for management directed reassignment of eligible CAMIs prior to contacting the cognizant CSA and announcing the job to the public.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

- (2) Commandant (CG-CVC), working together with the MITOs will provide receiving units with a candidate pool of CAMIs eligible to transfer.
 - (3) The receiving unit shall conduct interviews in coordination with the CAMIs feeder port and MITO.
 - (4) Once selection has been made, the departing feeder port shall report to their cognizant CSA the name of the selected CAMI, the port they have been selected for, and the agreed upon departure/report date so orders can be cut.
 - (5) If there are no eligible CAMIs, or the eligible CAMIs do not meet the receiving units needs, the unit may submit a request to Commandant (CG-CVC) to pursue an availability announcement to the public. A phone call, email, or memo is acceptable.
- f. Occupational Medical Surveillance and Evaluation Program (OMSEP): All CAMIs are required to enroll in the Occupational Medical Surveillance and Evaluation Program (OMSEP) for Hazardous Waste and Hearing Conservation at a minimum, prior to attending any examinations or inspections. OMSEP is a physical examination established to monitor the health of Coast Guard personnel working in jobs designated as having high health risk potential to chemical or physical agents. Requirements as follows:
- (1) Chapter 12.A.2.c.2 of the Coast Guard Medical Manual, COMDTINST M6000.1 (series); enrollment for a CAMI is based on the specific job assignment as a marine inspector who is actively engaged for 30 or more days per calendar year. More information can be found at the OMSEP home page, <https://hswl.uscg.mil/kseOmsep/>. The Evaluation and Enrollment Tool can be found under OMSEP Tools.
 - (2) Chapter 12.A.5.g of the Coast Guard Medical Manual, COMDTINST M6000.1 (series); civilian employees are entitled to OMSEP services provided by Coast Guard medical facilities. CAMIs should contact their local Safety and Environmental Health Officer (SEHO) and receive instruction on how to schedule a baseline examination (at no out-of-pocket cost). A current list of SEHOs can be found at <https://cg.portal.uscg.mil/units/hswlsc/SafeEvHealth/SitePages/Home.aspx> using the link, Contacts.
- g. CAMI Formal Training:
- (1) Through the Coast Guard Learning Management System (LMS) found in the CG Portal, CAMIs must complete the following on-line mandated training courses within 60 days of obtaining a CG standard workstation account:

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- (a) Civilian Orientation (502281): The purpose of this course is to provide basic information to all new civilian employees about the Coast Guard as an organization, civilian job resources, and professional development; and,
 - (b) Information Systems Security (810010): The purpose of this course is to provide minimum awareness to CGSW users on the current requirements, mandates, or policies set forth by OMB, DHS, DoD, and the CG.
- (2) As soon as a new CAMI receives an employee identification number, supervisors shall ensure an electronic training request (ETR) is submitted for either the Marine Inspector Course (501869) or the Port State Control Course (501864). In order to meet program requirements, CAMIs will attend both courses within their first two years of employment and Commandant (CG-CVC) shall grant top priority to CAMIs for selection to both courses. When requesting a C-school, supervisors shall also ensure the Introduction to Confined Space Entry and Shipyard Competent Person for Marine Inspection/Port State Control (100028) course is completed prior to attending these courses.
- (3) MITOs should continually seek professional development opportunities for their assigned CAMIs within the maritime industry. Working with classification societies, shipyards, or other local marine transportation companies are normally very successful. These training opportunities are welcomed by the industry as they are extremely helpful in developing relationships as well as improving partnership knowledge of the maritime sectors that the Coast Guard regulates. At the conclusion of the training.
- h. Proficiencies: To successfully complete this program, CAMIs will need every opportunity to concentrate on their training plan. During this program, CAMIs should not be tasked with duties outside their position description such as carrying collateral responsibilities. The CAMI position description is available at Commandant (CG-CVC).
- (1) Once the minimum required proficiencies have been achieved as outlined below, additional responsibilities may be added. Supervisors should only consider CAMI attendance at after-hours inspections if the training opportunity is not otherwise available during normal work hours and provided that the training is in line with the CAMI's work plan.
- (2) CAMIs are directed to Section A, paragraph C, for guidance on completing Performance Qualification Standards (PQS) workbooks and requesting certification. PQS workbooks are available at <https://elearning.uscg.mil/catalog/>, located under the Marine Safety section.
- (3) To ensure CAMIs are well-rounded, it is important that CAMIs become proficient in both domestic inspections and port state control. Supervisors will identify the

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

required proficiencies in the CAMI's work plan based on the competencies attainable at their particular feeder port. The Port State Control Examiner (PSCE) competency is attainable at all feeder ports and must be obtained as a pre-requisite by all CAMIs.

i. Paygrade specific CAMI proficiency requirements:

(1) GS-1801-7: Proficiency needed at this level are:

- (a) Attend the Marine Inspection Course (501869) or Port State Control Course (501864).
- (b) Fundamental knowledge of prevention operations, policies, methods, and procedures with regards to marine safety programs.
- (c) Ability to conduct appropriate pre-inspection review for a particular class of vessel and any available previous inspection histories in preparation of assigned vessels or systems.
- (d) A working knowledge of computer systems related to job responsibilities, such as MISLE, Lloyd's Register, IMO, SafeNet, etc.
- (e) Ability to perform routine inspections/examinations under supervision on domestic/foreign vessels and other marine structures for compliance with the applicable statutory/international requirements.
- (f) Ability to evaluate basic systems and vessels for compliance with straightforward specifications and requirements.
- (g) Knowledge of basic inspection procedures & techniques in accordance with the laws, regulations, and precedents governing inspections to perform developmental assignments or segments of larger inspection actions.
- (h) Prepare technically accurate and timely reports of inspections and examinations performed.
- (i) Develop the ability to communicate, orally and in writing, pertinent information relative to assigned area of study.
- (j) Obtain at least two (2) vessel specific competencies as outlined in the appropriate feeder port's attainable list.

(2) GS-1801-9: In addition to the proficiencies described for the GS-7 level, proficiencies needed at this level are:

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- (3) Ability to inspect required navigation, intra-vessel communication, alarm, lifesaving, fire fighting, and pollution prevention systems on a vessel to ensure that proper operations and compliance with applicable national and international standards.
 - (4) Capability of identifying hazardous conditions, note violations of accepted vessel specifications and operations technology, and prescribe acceptable methods of correcting these conditions.
 - (5) Accurate inspection documentation preparation; including appropriate orders drafted specifying any required changes, repairs or operational limitations for the vessel and its equipment. When deficiencies are noted, CAMI evaluates the impact of the deficiency, directs appropriate corrective measures and prepares appropriate documents to notify the vessel owner/operator of the corrective measures required.
 - (6) Ability to read engineering plans and have a basic understanding of shipbuilding practices and vessel operations.
 - (7) The professionalism, judgment and responsibility necessary to understand the impacts of decisions made regarding safety standards (including acceptable concession on the operations, repairs, replacements, etc) on vessel operations and on local industry and commerce.
 - (8) Understanding and comprehension of the USCG's strategic, technical and regulatory position in the marine industry (e.g., CG literature - The Proceedings, Mission Performance Plans, CG Authorization Bills, etc. Industry literature - stay current on industry release publications)
 - (9) Ability to prepare professional briefing papers, technical analyses, and optional evaluations for the Officer-in-Charge, Marine Inspection, where inspection decisions may have broad impact on an industry, are controversial in nature, or are expected to be appealed to higher authority.
 - (10) Obtain two (2) more competencies for a total of four (4) competencies as outlined in the appropriate feeder port's attainable list with at least one (1) being a Port State Control vessel competency.
- j. Promotion: If all of the required levels of proficiency have been met; a CAMI's promotion schedule is to start as a GS-7 and promote to GS-9 on the first anniversary. Upon the second anniversary, the CAMI is expected to promote to a GS-11. Finally, the CAMI is expected to promote to a GS-12 on the third anniversary. In order to promote on schedule, the following minimum criteria must be met:

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

- (1) For promotion from a GS-7 to GS-9:
 - (a) Receive a 'meets' or 'exceeds' on all performance evaluations; and,
 - (b) Earn at least two (2) competencies as outlined in the appropriate feeder port's list of attainable and sustainable competencies.
- (2) For promotion from a GS-9 to GS-11:
 - (a) Receive a 'meets' or 'exceeds' on all performance evaluations; and,
 - (b) Earn at least two (2) additional competencies as outlined in the appropriate feeder port's list of attainable and sustainable competencies. At the completion of the second year and before promotion to GS-11, the total number of competencies earned must be at least 4, not including the PSCE competency.
- (3) For promotion from a GS-11 to GS-12:
 - (a) Receive a 'meets' or 'exceeds' on all performance evaluations; and,
 - (b) Throughout the one year time-in-grade, actively seek assignment to a permanent journeyman marine inspector billet.
- (4) To avoid promotion delays, supervisors shall submit Request for Personnel Action, SF-52 to their District Command Staff Advisor (CSA) one month in advance of a CAMI's anniversary date; provided that the CAMI meets the above criteria. Career ladder promotions can be enacted without further authorization as these positions are approved for a full performance level of GS-12. Performance evaluations are not required to accompany promotion requests.
- k. Relocation: Relocation to perform marine inspection duties at a journeyman level is expected after completion of training. A CAMI that is promoted to a GS-12 and continues to occupy the training billet will be subject to the Mobility Certificate Agreement.
- l. Waiver. A Feeder Port Commanding Officer that anticipates a CAMI not complete the requirements for promotion as prescribed in this policy and determines the reason was outside the CAMI's control, he or she shall, prior to deviating from the above promotion track, submit a memo to Commandant (CG-CVC):
 - (1) Identifying the reason for deviation (examples may include: need to shift resources due to significant unplanned events such as spills of national significance, employee is recalled to an active duty obligation, or limited availability to perform vessel

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

inspection activity because of reduced vessel traffic); and,

- (2) Propose an alternative training timeline for the CAMI to fulfill the required competencies.

C. FEEDER PORT PROGRAM

1. Designation

- a. General. Feeder ports are designated by Commandant (CG-CVC) based on a unit's attainable and sustainable competencies. Units that feel they possess the necessary inspection and examination workload, training program, and resource capacity to be designated as a feeder port must submit a request to Commandant (CG-CVC) in standard memo format. Commandant (CG-CVC) will coordinate the review of the request to include historical and current MISLE activities, competency cubes in CGBI, Personnel Allowance List staffing levels, Mission Management System and MITO peer audit results, and any other factors for consideration.
- b. Attainable and Sustainable Competencies. Annual review of attainable and sustainable competencies at Feeder Ports will be conducted by Commandant (CG-741), validated by feeder ports and approved by the Prevention Performance Advisory Committee (PPAC). Since the Sector Staffing Model relies on historic MISLE data over a period of time, new activities or the removal of historic activities at a feeder port should be documented and forwarded to Commandant (CG-CVC) and Commandant (CG-741) for the annual review. (i.e., shipbuilding contracts, a new LNG terminal, removal of a MARAD fleet, etc; could impact activities and needed or "Sustainable" competencies.)
 - (1) Attainable competencies are those competencies that can be obtained at a specific unit due to the frequency of that particular activity. The minimum activity level in the Sector Staffing Model (SSM) for a competency to be considered attainable is 451 hours of training opportunities for each vessel type. SSM calculations are vetted by feeder port MITOs to account for recent changes or anomalies in the data and to validate workload in respective ports.
 - (2) Sustainable competencies are those competencies that can be maintained (for currency) at a specific unit due to the frequency of that particular activity. The minimum activity level in the SSM for a competency to be considered sustainable is between 29 hours and 450 hours of training opportunities for each vessel type.

2. Staffing

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- a. General. A sufficient ratio of Journeyman Marine Inspectors to Apprentice Marine Inspectors must be maintained. Due to larger needs of the service and availability of Journeyman Marine Inspectors, it is possible that OPM may have to assign Apprentice Marine Inspectors to Journeyman billets and in limited cases to Non-Feeder Ports. In these cases, these personnel must make every attempt available to attain requisite competencies.
- b. Marine Inspector Training Officer (MITO)
 - (1) Description. MITOs are responsible for the technical development of marine inspectors as evidenced by competency attainment and the further development of proficiency. Examples of further development include Verifying Officer status and professional certifications.
 - (2) Duties. In their Position Description, a MITO is titled a Senior Marine Inspector/Training Officer. This means their responsibilities include a mix of performing inspections, training others and managing the unit's marine inspector training program. The degree to which each MITO is a hands on trainer versus a manager of training has to be determined locally based on the unit's specific workload, size and quality of the bullpen and availability of VO's. MITOs should maintain currency of their certifications and should be a technical expert for the attainable qualifications at their unit.
 - (3) Authority. MITOs typically work directly for the Chief, Inspections Division because of the responsibilities of training marine inspectors. MITOs evaluate work performance of AMIs and VOs and provide feedback to both the individual and supervisor in a timely manner. MITOs are to take appropriate performance based action if necessary; giving advice, counsel, or instruction to employees on both work and administrative matters. Per their position description, MITOs have direct input into personnel evaluation marks to document performance and proficiency in keeping with unit training strategy and Individual Development Plans.
 - (4) Supervisory Responsibility: Depending on the terms of hiring documented in their individual position description, not all MITOs are considered "supervisors" in the sense of being able to formally evaluate active duty members or other civilian employees. Regardless, MITOs are responsible for supervising the training-related efforts of marine inspectors. Careful attention must be paid to the fact that the development of an officer as a marine inspector and CG officer overlap significantly but are not synonymous. MITOs train officers to become marine inspectors which is one aspect of their career development.
- c. Expectations.

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- (1) Feeder Ports are expected to develop apprentices to attain a minimum of four attainable competencies, specific to that feeder port, with an emphasis on domestic vessel inspections and foreign vessel examinations.
 - (2) PSC Examiner (PSCE), Liferaft Inspector (LR), Commercial Fishing Vessel Examiner (CFV), and Uninspected Passenger Vessel Examiner (UPV) do not count as one of the four competencies an apprentice marine inspector must attain for a successful first tour.
 - (3) This does not prohibit marine inspectors from attaining any specific competencies, including those listed in paragraph D.1.d(2) above. Marine Inspectors are encouraged to make the most of every training opportunity and seek out additional opportunities.
 - (4) Progress is tracked through the Feeder Port Progress Report, administered by Commandant (CG-5P-TI). The report utilizes TMT and DA certification/qualification data and is published every three months, February, May, August and November. The data provides critical trend data to determine the effectiveness of training policy and decisions.
- d. Use of Apprentices: Apprentice MIs will spend their full tour as Apprentice MIs. As such they will pursue all qualifications available at the unit and once qualified will conduct inspections independently to gain expertise in that competency. The ability of Apprentice MIs to work independently once qualified will offset the training loads experienced by the core Journeyman MIs at the unit. In some cases, Apprentice AMIs may have the opportunity to gain qualifications in competencies normally only sustainable at the unit. Non-MI related collaterals and duties should be minimized. For professional development reasons, junior officers training to be MI's may need to assume certain collateral duties, those should only be assigned when necessary and taking into account the impact on the officer's professional development as both an MI and Coast Guard Officer.
 - e. Apprentices as PQS Verifying Officers: Apprentice MIs should not be PQS Verifying Officers for other Apprentice MIs unless they meet the requirements contained in Section D.4 of this chapter.

D. TRAINING AND CERTIFICATION PROCESS

1. Performance Qualification Standards (PQS Books) and Inspection Guides

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

The most recent PQS Workbook must be utilized by Marine Inspectors and Vessel Examiners during training. The most recent editions of these PQS workbooks are available through the Coast Guard Learning Management System, under Maritime Safety in the Course Catalog.

All pre-requisites must be met unless the PQS specifically allows deferment or delay. See U.S. Coast Guard Sector Organization Manual, COMDINST M5401.6 (series), Chapter 8.E for specific requirements when deferring a PQS item.

Some PQS Workbooks have vessel specific addendums. For those types of vessels, the addendum is required to be completed prior to examination or inspection of that particular vessel type. For example, to qualify for an endorsement to examine Foreign Ro-Ro Passenger Vessels you will be required to complete the specific tasks and steps associated with Ro-Ro vessels which are incorporated in the addendum workbook.

Units may also develop unit-specific requirements in addition to the PQS that address local policies, procedures and operations.

All Verifying Officers (VO) must be familiar with the PQS content, particularly the task, condition, steps, and VO Guidance. Not all steps supporting a task need to be completed at the same time, however, all steps must be completed prior to signing off the task. Additionally, the VO must take into account the VO guidance when determining successful completion of a step and task.

2. Competency Applicability Tables

Competency Applicability (US Flag Vessels)			
Vessel Subchapter (46 CFR)	Vessel Type	Competency to be used	Competency Dictionary Code
C Uninspected Vessels	Fishing Vessel	Commercial Fishing Vessel Examiner	CVSFSE
C Uninspected Vessels	Uninspected Towing Vessel	Uninspected Towing Vessel Examiner	CVSUT
D Tank Vessels	Tankship	Hull Inspector (Tankship) Machinery Inspector (Diesel) as appl. Machinery Inspector (Steam) as appl.	CVSHT CVSMI CVSMS
D Tank Vessels	Tank Barge	Barge Inspector	CVSBI
H	Cruise	Hull Inspector	CVSHI

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

Passenger Vessels	Ship Ferry	Machinery Inspector (Diesel) as appl.	CVSMI
I Cargo & Misc. Vessels	Freight Ship	Hull Inspector Machinery Inspector (Diesel) as appl. Machinery Inspector (Steam) as appl. (OSVs inspected under Subchapter I only requires the CVSOI competency)	CVSHI CVSMI CVSMS
I-A	MODUs	Mobile Offshore Drilling Unit Inspector	CVSMU
K Small Passenger Vsl >150	K-Boat	K-Boat Inspector	CVSKI
L Offshore Supply Vessels	OSV	OSV Inspector (Some OSVs are inspected under 46 CFR Subchapter T; in these cases the CVSTI competency is also required.)	CVSOI CVSTI
R Nautical Schools	Schoolship	Hull Inspector Machinery Inspector (Diesel) as appl. Machinery Inspector (Steam) as appl. (Some schoolships are certificated under subchapters T or K. In these cases a CVSTI or CVSKI competency would be required)	CVSHI CVSMI CVSMS CVSTI CVSKI
T Small Passenger Vessels	T-boats	Small Passenger Vessel (T-boat) Inspector	CVSTI
U Oceanographic Research Vessel	ORV	Hull Inspector Machinery Inspector (Diesel) as appl. Machinery Inspector (Steam) as appl. (Some ORVs are certificated under subchapters T or K. In these cases a CVSTI or CVSKI competency would be required)	CVSHI CVSMI CVSMS CVSTI CVSKI

Note: The Competency Dictionary with all Competency Codes can be found at <http://www.uscg.mil/ppc/da/>

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

Competency Applicability (Foreign Flag Vessels)		
Vessel Service	Competency to be used	Competency Dictionary Code
Freight Ships	Foreign Freight Vessel Examiner	CVSFV
Tank Ships (Oil)	Foreign Tank Ship Examiner	CVSTV
Chemical Carriers	Foreign Chemical Tank Vessel Examiner	CVSML
Gas Carrier	Foreign Gas Carrier Examiner	MARFGCE
Cruise Ship	Foreign Passenger Vessel Examiner	MARFPVE
MODU/Offshore COC	Foreign MODU/offshore installations requiring a COC	CVSMU
All	Port State Control Examiner – Cannot lead exam	MARPSC

3. Maintaining and updating PQS books and Inspector Guides

- a. Ownership. Marine Inspector and vessel examiner PQS books and Inspection Books are owned by Commandant (CG-CVC). Commandant (CG-CVC) has final approval of PQS book changes in consultation with the Prevention Performance Advisory Committee (PPAC).
- b. Administration and Maintenance. The administration and maintenance of PQS books and Inspection Guides lies with the Training Center Yorktown Marine Safety School (FC-TCY-TM) as follows:
 - (1) FC-TCY-TM maintains process guides to detail organizational relationships, procedures, and timelines for maintaining, reviewing and updating PQS books and Inspection Guides. Major and Minor changes are defined and their adjudication is also described.
 - (2) Specifically, FC-TCY-TM will:
 - (a) gather, draft, and issue changes to all Marine Inspection PQS and job aids,
 - (b) conduct routine annual review to assess the need for minor changes based on user feedback,
 - (c) Solicit input from Course Administrators and National Center of Expertise subject matter experts as well as field users to assess the need for a significant change

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

involving the addition or removal of a task recommended by user feedback.
Additional or removal of a task requires Commandant (CG-CVC) concurrence.

4. Verifying Officer Performance

- a. Verifying Officers (VO) are the backbone of marine inspector training. Selection as a VO demonstrates that a Marine Inspector or Vessel Examiner has demonstrated exceptional professionalism and technical expertise. As such, it should be a highly sought after designation and assigned judiciously. It is not an automatic designation.
- b. Each VO must meet the following minimum requirements :
 - (1) The VO shall have already obtained formal designation in writing by the OCMI and be current for the certification for which he / she is being considered as a PQS Verifying Officer,
 - (2) The VO shall have the confidence of the Chief, Inspections Division, and Marine Inspection Training Officer or Training Manager and meet at least one of the following requirements:
 - (a) Be a Journeyman Marine Inspector, or
 - (b) Be an Apprentice Marine Inspector (AMI), a Civilian Apprentice Marine Inspector (CAMI) or a Vessel Examiner who has held the certification for which VO designation is being sought for a period of not less than six months.
- c. Formal Evaluation as a PQS Verifying Officer. Once the minimum requirements of paragraph 4.b. are met, units shall conduct a formal evaluation of the Marine Inspector's or Vessel Examiner's potential as a VO. Marine Inspectors or Vessel Examiners who already hold the VO designation for the certification being sought shall conduct the formal evaluation. The formal evaluation consists of two parts: an IPAT evaluation on a vessel specific to the competency and an evaluation of the VO candidate's ability to train and evaluate a trainee's performance using the criteria below:
 - (1) Technical expertise (can effectively evaluate a trainee's understanding of technical concepts),
 - (2) Training knowledge (possesses an in depth understanding of the unit's training program),

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

- (3) Job-task knowledge (possesses comprehensive understanding of each of the PQS tasks for the competency in question),
 - (4) Interpersonal skills (can effectively interact with different trainees and evaluate their technical ability and comprehension),
 - (5) Attitude (possesses an attitude that promotes learning and professional development),
 - (6) Listening ability (can listen and understand different trainees during the verification process),
 - (7) Degree of patience (can adjust to different types of learners),
 - (8) Accessibility to trainees (is available to trainees),
 - (9) Communications skills (can effectively communicate when explaining inspection concepts to trainees),
 - (10) Willingness to follow certification requirements (committed to training and verifications in accordance with established policy), and
 - (11) Judgment (make recommendations to the OCMI regarding a trainee's ability to effectively represent the Coast Guard as a certified inspector).
- d. Expectations for PQS Verifying Officers. PQS tasks shall only be signed off by command designated VOs. Command designated VOs must have demonstrated an ability to effectively instruct and evaluate marine inspectors in the performance criteria established for their VO competency. In conducting the functions of a VO, the below sequence shall generally be followed. Under certain circumstances, steps below may be omitted given the experience level of the trainee, however this should only be done after the VO has carefully considered the trainee's experience and knowledge concerning the task being conducted. At a minimum, steps (4) and (5) must be completed.
- (1) Step One: VO Explains and Demonstrates. The VO shall demonstrate the performance of the task while explaining the process using proper nomenclature and procedures,
 - (2) Step Two: VO Demonstrates and Trainee Explains. While the VO demonstrates the task, the trainee is given the opportunity to verbalize his / her understanding of the concepts. This is not the evaluation of the task. The VO may coach the trainee through this process if necessary and reinforce trouble areas for comprehension.

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- (3) Step Three: Trainee Demonstrates and VO Explains. Hands-on is a must for performance training. The trainee will perform the task with as much coaching as needed from the VO. Communicate constantly during the process to ensure the trainee understands his / her actions. The VO must closely monitor the trainee's performance for safety precautions and concerns.
- (4) Step Four: Trainee Explains and Demonstrates. This is not the evaluation of the task. The trainee must be provided opportunities to practice the task. The number and frequency of this step will be determined by the VO depending on the proficiency of the trainee.
- (5) Step Five: Task Endorsement. Once the VO is satisfied the trainee has demonstrated a satisfactory understanding of the task being performed using the guidelines above, the task item may be signed off. VOs must ensure that they are evaluating the trainee's ability to meet the current requirements identified for the specific task and guard against requiring them to go beyond those requirements.

5. Commercial Vessel Compliance Personnel Verification Inspections/Exams

- a. Method. Field practical verification inspection/examination (check ride) shall be conducted with the trainee as the team leader under the direct supervision of a VO. The VO shall assess whether the trainee has the necessary judgment, knowledge and communications skills to successfully conduct the inspection / examination. The VO should only intervene if absolutely necessary. Multiple trainees shall not be evaluated during the same vessel activity with the exception of U. S. flag deep draft vessels that require both a Hull and Machinery Inspector. The VO shall utilize the IPAT plus Appendix 1 to this Chapter to standardize assessment. Data from Appendix 1 is not uploaded into the IPAT data site. Feedback shall be provided to the trainee and IPAT data shall be entered in accordance with current IPAT processes.
- b. Rigor. Additionally, efforts shall be made on the part of the MITO/TO to ensure that the trainee has not only accomplished individual tasks for a competency but has a broader understanding of the competency requirements and can readily access and interpret regulations and policy. Methods such as a written test or pre-board will prove useful in this determination.

6. Merchant Marine Indoctrination Ship Rider Program and Industry Specific Orientation

To provide an understanding of the maritime industry as well as specific segments of the industry and ships we regulate, the Coast Guard has developed two types of industry orientation

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

training for marine inspectors; the Merchant Marine Indoctrination (MMI) Ship Rider program and Industry Specific Orientation training. Completion of these training programs will provide valuable professional exchange opportunities for the mutual benefit of both the Coast Guard and the merchant marine industry.

- a. MMI Ship Rider Program. The MMI Ship Rider Program is a cooperative educational program between the Coast Guard and participating host ship companies. By providing opportunities for Coast Guard Marine Inspectors to join a vessel's crew while underway and act as a riding observer, the program gives the ship rider practical knowledge of the performance and operating characteristics of various vessels, equipment, waterways, and crews operating within the maritime industry. The program is designed for first tour Coast Guard marine inspectors as part of their introductory phase into vessel inspections. It's especially useful for those new marine inspectors who have little or no shipboard experience, as it will provide the relevant background knowledge to assist in marine inspector training. It is expected that all first tour apprentice marine inspectors with little or no commercial shipboard experience will complete a MMI ship ride prior to completing their initial apprentice marine inspection tour. Details on the MMI Ship Rider Program can be found in Coast Guard Merchant Marine Indoctrination (MMI) Ship Rider Program, COMDTINST 16705.1(series).
- (1) Coast Guard Merchant Marine Indoctrination (MMI) Ship Rider Program, COMDTINST 16705.1(series) states that "The program also serves to increase and expand marine inspector knowledge of the maritime industry in their unit's area of responsibility. As such, the program may be utilized by Marine Inspectors to understand different operating requirements, characteristics or vessel types upon transfer to units with unique or different inspected vessels." The Liquefied Gas (LG) Ship Rider Program is an example of such a program.
- (2) The Liquefied Gas Carrier National Center of Expertise (LGC NCOE) manages the LG Ship Rider Program. The program's intent is to give experienced Foreign Gas Carrier Examiners (FGCEs) a comprehensive understanding of LG ship operations. While the program is targeted at qualified FGCEs, units may arrange for a FGCE Verifying Officer to accompany an apprentice FGCE to assist in PQS completion. Requests for the LG Ship Rider Program should be coordinated through the LGC NCOE.
- (3) During the LG ship ride, participants must complete the Liquefied Gas Ship Rider Performance Guide and the associated post-ship ride survey. The performance guide can be found on the LGC NCOE CGPortal site. LG ship rider participants must submit a copy of the completed Performance Guide to the LGC NCOE, through their chain of command, for feedback and action.

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- b. Industry Specific Orientation. Industry Specific Orientation training is designed to develop a foundational understanding of a specific vessel industry and includes a series of tasks that must be completed as part of the marine inspection qualification process. These tasks include ship rides or shoreside tasks appropriate for that particular industry and vessel type. All marine inspection performance and qualification standards (PQS) now include enclosures that require Industry Specific Orientation training. This orientation training is more easily adaptable to non-seagoing vessels or vessels with short voyage durations such as T-boats and certain towing vessels. All current PQS are available on the Learning Management System within the Coast Guard Portal.
- c. Industry Specific Orientation training is not a substitute for conducting a ship ride as part of the MMI Ship Rider Program. However, a marine inspector may complete specific Industry Specific Orientation training PQS tasks while participating on a MMI ship ride. It is up to the marine inspection training officer (MITO) or unit training officer to properly manage a marine inspector's training and qualification process to ensure the intent and goals of each program are met.

7. C-School Training

MITOs or Unit Training Officers should coordinate C-School training requests for their unit. Below are a list of mandatory and additional courses applicable to Marine Inspectors and Vessel Examiners as well as information regarding course waivers. Course prerequisites (and the process for requesting waivers from the prerequisites), descriptions, and requirements are available on the TQC website at <http://www.uscg.mil/hq/tqc/>.

- a. Mandatory.

- (1) Marine Inspector Course (Domestic) – Course Code 501869

- (2) Port State Control (PSC) – Course Code 501864.

(Note: Marine Science Technicians (MSTs) who have graduated from MST A-School after 27 January 2010 are not required to attend the PSC Course.)

- b. Mandatory for earning a competency.

- (1) Advanced Foreign Passenger Vessel Examiner – Course Code 500317 (Required for Foreign Passenger Vessel Examiner certification)

- (2) Gas Carrier Inspector (Gas) (MS-513) – Course Code 351263
(Required for Foreign Gas Carrier Examiner certification)

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCYc. Additional.

- (1) Chemical Tanker Safety (MS-525) – Course Code 250540
- (2) Commercial Fishing Vessel Exam (MS-527) – Course Code 500304
- (3) Crude Oil Wash/Inert Gas (COW/IG) (MS-404) – Course Code 250257
- (4) Diesel/Steam Automation (MS-507) – Course Code 250015
- (5) Fiberglass Reinforced Plastic and Wooden Boats (MS-454) – Course Code 340210
- (6) Outer Continental Shelf Inspection (MS-514) – Course Code 250269
- (7) T-Boat Structural Plan Review (MS-520) – Course Code 400479
- (8) Uninspected Towing Vessel Exam – Course Code 502234

d. Waivers from mandatory courses. Due to high quota demand, Commandant (CG-CVC-2) instituted a waiver process for the Port State Control course.

(1) This process shall only be used when the following conditions are met:

- (a) The candidate has completed the PSCE PQS,
- (b) The candidate has successfully conducted the required verification exam,
- (c) The candidate has passed the oral PSCE certification board, and
- (d) The unit has submitted at least 2 previous electronic training requests (ETRs) for the course and has not received a quota.

OR

- (e) The candidate has completed (a) – (c) above and the command must have the candidate qualified before the next PSC course convening in order to effectively perform PSC activities.
- (2) Personnel with the legacy EI, SFV or SFVA qualifications are eligible for a PSC course waiver, without completing (a) – (c) above, provided the unit has submitted at least 2 previous ETRs for the course and has not received a quota.

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- (3) Requests for a waiver shall be submitted in standard memo format, signed by the Chief, Prevention Department or higher, to Commandant (CG-CVC-2) with the following information:
 - (a) A statement that the candidate has completed the PSCE PQS, successfully conducted the verification exam, and passed the oral PSCE certification board.
 - (b) The amount of time the candidate has been conducting PSC exams and number and type of vessels examined during the certification process.
 - (c) How long the candidate has been waiting to attend the PSC course.
 - (d) A description of any other vessel or PSC related training or professional education.
 - (e) Any other input the unit wishes to submit to justify the waiver.
 - (4) Commandant (CG-CVC-2) will review the waiver package and determine if a waiver is appropriate. If so, Commandant (CG-CVC-2) will send a PSC Course Waiver Exam to verify the candidate has an equivalent level of knowledge as those who have completed the PSC course. The exam package will include specific instructions for the unit and the candidate on proctoring and returning the exam.
 - (5) Commandant (CG-CVC-2) will respond via memo with the exam results.
 - (a) Candidates that pass the exam will receive a memo that states that the PSC course requirement is waived.
 - (b) Candidates that fail the exam will receive a memo that the PSC course requirement is not waived and that they may request a retest after 6 additional weeks of on-the-job training. If the candidate fails the exam a second time, they must attend the PSC course prior to receiving any additional PSC certifications.
 - e. Waivers from mandatory courses for earning a competency. Units should refer to the preamble of the applicable PQS for information on course waivers and prerequisite deferment.
-

8. Competency Management

- a. Training Management Tool (TMT).

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

- (1) Use of the Training Management Tool is required by Mandatory Use of the Training Management Tool, COMDTINST 5270.2(series).
- (2) Units must assign competencies to individuals when they are first directed to pursue those competencies. Once certified, units must reflect that change in TMT. The practice of assigning and certifying personnel simultaneously once they receive their certification is unacceptable.
- b. Direct Access. Certain data systems draw information from Direct Access rather than TMT. For instance, Direct Access data is the basis for the Employee Summary Sheet which is routinely used by selection boards and other panels. Marine Inspectors and Vessel Examiners should ensure their competencies are correct in Direct Access in addition to TMT.

E. MAINTAINING CERTIFICATIONS AND CONTINUED PROFESSIONAL DEVELOPMENT

1. Currency

- a. Twelve Month Currency Requirement: To remain certified, MIs, PSCOs and Vessel Examiners shall conduct at least one inspection / examination every twelve months for each competency required by the OCMI. This can be accomplished as the team leader, lead inspector or as a team member. The following are competencies listed with the activities that are acceptable towards meeting the twelve month currency requirement:
 - (1) Domestic Competencies:
 - (a) Life raft Inspector: Completion of a life raft servicing inspection.
 - (b) T-Boat Inspector (TI): Completion of a COI or annual inspection of a U.S small passenger vessel regulated under subchapter T or subchapter K.
 - (c) K-Boat Inspector (KI): Completion of a COI or annual inspection of a U.S. small passenger vessel regulated under subchapter K.
 - (d) Barge Inspector (BI): Completion of a COI, annual, or periodic inspection of a U.S. barge regulated under subchapter D, I, or O.
 - (e) Offshore Supply Vessel Inspector (OI): Completion of a COI, annual, or periodic inspection of a U.S. offshore supply vessel regulated under subchapter L.

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- (f) Hull Inspector (HI): Completion of the Hull Inspection tasks for a COI, annual, or periodic inspection of a U.S. deep draft vessel regulated under subchapter H, I, R, or U.
- (g) Hull Inspector, Tankship (HT): Completion of the Hull Inspection tasks for a COI, annual, or periodic inspection of a U.S. deep draft vessel regulated under subchapter D or O.
- (h) Machinery Inspector (MI): Completion of the Machinery Inspection tasks for a COI, annual, or periodic inspection of a U. S. deep draft vessel regulated under subchapter D, H, I, O, R, or U.
- (i) Machinery Inspector, Steam (MS): Completion of the Machinery Inspection tasks for a COI, annual, or periodic inspection of a U.S. steam propelled deep draft vessel regulated under subchapter D, H, I, O, R, or U.
- (j) Mobile Offshore Drilling Unit Inspector (MU): Completion of a COI, annual, or periodic inspection of a U.S. mobile offshore drilling unit regulated under subchapter I-A.
- (k) Drydock Inspector (DI): Completion of a dry-dock inspection, internal structural exam, or cargo tank internal exam of a U.S. vessel of 100 gross tons or more.

Note: Completion of Streamlined Inspection Program, Alternate Compliance Program, or Maritime Security Program audits and oversight inspections conducted in lieu of traditional regulatory inspections satisfy certification requirements for applicable Marine Inspector competencies.

(2) Port State Competencies:

- (a) Port State Control Examiner (PSCE): Completion of a PI, PII, Random Safety, COC-Annual, COC-Renewal, or COC-Quarterly examination on any foreign commercial vessel type. This competency is also considered certified if any other Foreign Vessel Examiner competency is maintained certified.
- (b) Foreign Freight Vessel Examiner (FFVE): Completion of a PI, PII, or Random Safety examination on a foreign freight vessel.
- (c) Foreign Tank Vessel Examiner (FTVE): Completion of a PI, PII, COC-TVE Annual, or COC-TVE Renewal examination on a foreign petroleum tank vessel.
- (d) Foreign Chemical Tanker Examiner (FCTE): Completion of a PI, PII, COC-Chem Annual, or COC-Chem Renewal examination on a foreign chemical carrier.

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

- (e) Foreign Gas Carrier Examiner (FGCE): Completion of a PI, PII, COC-Gas Annual, or COC-Gas Renewal examination on a foreign gas carrier.
- (f) Foreign Passenger Vessel Examiner (FPVE): Completion of a PI, PII, COC-CVE Initial, COC-CVE Annual, or COC-CVE Quarterly examination on a foreign passenger vessel.
- b. Lapse of Twelve Month Currency Requirement: Those MIs, PSCOs and Vessel Examiners who have not performed a particular inspection / examination type during any twelve month period will have lapsed in currency for that specific competency. They are therefore no longer certified and are not authorized to lead foreign vessel exams or domestic vessel inspections. Members with lapsed currency can only be recertified by completing a field practical (check ride).
- c. Documentation: All Letters of Certification shall be documented in writing by the OCMI with appropriate entries made in TMT. The OCMI may issue a Certification endorsement to the member's original letter of certification. Previously deferred items that have been satisfactorily demonstrated shall be clearly documented on the form and endorsement as they are no longer considered deferred. A copy of the form or endorsement shall be kept in the individual's training record.
- d. Alternatives if Units Cannot Comply with Currency Requirements: In instances where a unit could not fully comply with the currency requirements and an activity needs to be conducted by a certified MI/PSCO one of the following alternatives should be used:
 - (1) Deferral: If possible, in accordance with existing policy/regulation, defer the activity to the next U.S. port.
 - (2) Request for Forces: The OCMI should send a Request for Forces to their cognizant District to request assistance for a certified MI or PSCO.
 - (3) Competency Specific Refresher Training: The OCMI shall ensure robust refresher training is conducted covering the applicable competency and the specific inspection / examination activity scheduled. The training should be conducted by the most competent and experienced member at the unit that holds the applicable competency provided the member has been certified for the competency within the last five years. MITOs shall document the refresher training as a task capture in TMT.
- e. Collaboration. Units are encouraged to network with other units, Feeder Ports and NCOEs to maximize training opportunities, obtain training materials, maintain currency and ensure consistency with national standards.

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

NCOEs serve as subject matter experts and a repository of best practices, assist and collaborate with the Marine Safety School, and enter into working relationships with the maritime community. From a training perspective, NCOEs are available to assist with the inspection/examination of specific vessel types, endorse PQS workbooks (if designated as a National Verifying Officer) and participate in verification inspections/examinations (for qualification and currency) and qualification boards.

2. Newly Reported Personnel with Existing Certifications

- a. Requirements. Newly reported MIs, PSCOs and Vessel Examiners with existing certifications are required to be certified at their new unit before being authorized to lead vessel inspection / examination activities. A “field practical inspection/examination” under the supervision of a designated VO is required for at least one of the newly reported MI’s certifications. The Inspector Proficiency Assessment Tool (IPAT) will be used to assess the newly reported MI/PSCO. IPAT data shall be entered in accordance with current IPAT processes.
- b. Documentation. Each new member shall have their training records (PQS workbooks, Letters of Certification, certification documents) reviewed and have an interview conducted by the Division Chief. If deferred PQS items are applicable at the new unit, those tasks must be completed and documented in the member’s PQS workbook before certification is granted. Any local Sector-specific PQS tasks should also be completed.

3. Periodic Proficiency Testing

- a. Background. The 2010 Coast Guard Authorization Act 2010 requires an MI to have the training, experience, & qualifications equivalent to a classification society surveyor. A 2011 Industry Training report identified that classification societies periodically determine a surveyor’s proficiency using online testing or biennial meetings. Following certification, proficiency is managed by recency requirements to perform one inspection per year using a specific competency and when inspectors transfer to a new field unit.
- b. Measuring Proficiency: In addition to the Inspector Proficiency Assessment Tool (IPAT), proficiency following certification can be measured in a variety of ways such as requirements for recency, remote computer-based testing, refresher courses, and individual field assessments.

4. Informal Professional Development

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

Units should consider execution of a Professional Development Plan documenting activities that support their pursuit of proficiency. Certain members are required to comply with the Coast Guard Individual Development Plan (IDP), COMDTINST 5357.1 (series). Local formats may be utilized for all others. After completion, certain activities may also be documented on the Record of Professional Development, Form CG-4082.

Activities a Marine Inspector or Vessel Examiner should consider for inclusion in their professional development plan include:

- a. Completion of a CG-Approved maritime training course.
- b. Completion of a pre-planned industry familiarization opportunity
- c. Completion of a marine-related, accredited college course.
- d. Completion of advanced “C” schools (COW/IGS, Wood/RFP, Chemical Tanker Safety, etc.)
- e. Attending a maritime industry event.
- f. Providing instruction OJT during a unit training event.
- g. Providing instruction or a presentation during a CG-led industry day event.
- h. Providing instruction or presentation during an industry-led event.
- i. Conducting an IPAT as an Assessor.
- j. Becoming a VO.

5. Professional Certifications

Professional certifications, such as the ones listed below, are recognized (and sometimes required) within the maritime industry. Earning or working towards professional certifications will enhance a Marine Inspector’s or Vessel Examiner’s knowledge of the maritime industry and directly translated to conducting inspections and examinations.

- a. Merchant Mariner Credential. The Merchant Mariner Credential (MMC) is proof of qualification for mariners serving in specific capacities on varying types of vessels. There are many levels and types of certification as depicted in 46 CFR Part 10 and 46 CFR Part 12. Additional information can be found at: www.uscg.mil/nmc/.

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- b. Merchant Mariner Credential Endorsement. Endorsements identify a mariner's qualifications such as an officer capacity (Chief Mate), staff officer (Radio Officer), ratings (Able seaman) or STCW (GMDSS operator). Title 46 CFR Part 10.109 provides a complete list of endorsements. Additional information can be found at: www.uscg.mil/nmc/
- c. National Association of Marine Surveyors. The National Association of Marine Surveyors (NAMS) certifies marine surveyors to a professional standard. There are three levels of membership: Apprentice, Associate and Full Membership/Certification. Additional information can be found at: <http://www.namsglobal.org/>.
- d. Society of Accredited Marine Surveyors. The Society of Accredited Marine Surveyors (SAMS) certifies marine surveyors to a professional standard and also has three classes of membership: Accredited Marine Surveyor (AMS), Surveyor Associate (SA) and Affiliate Member (AFF). Additional information can be found at: <http://www.marinesurvey.org/>
- e. American Welding Society Weld Inspector. The American Welding Society (AWS) focuses on enhancing the science, technology and application of welding and other joining/cutting processes. There are three levels of a welding inspector: Certified Associate Welding Inspector (CAWI), Certified Welding Inspector (CWI) and Senior Certified Welding Inspector (SCWI). Additional information can be found at: <http://www.aws.org/>
- f. ISO Lead Auditor. The International Organization for Standardization (ISO) maintains a number of lead auditor certifications including ISO 9001 (Quality Management Systems), ISO 14001 (Environmental Management Systems), and ISO 27001 (Information Security Management Systems). Additional information on Lead Auditor certification can be found at <http://www.iso.org/>.
- g. International Safety Management (ISM) Lead Auditor. The ISM Code requires companies/vessels subject to IMO standards to establish a safety management system. ISM Lead Auditors receive certification to conduct ISM audits. Additional information regarding the specific ISM Code can be found at <http://www.imo.org/>.
- h. Certified Industrial Hygienist. The American Board of Industrial Hygiene (ABIH) provides a professional certification program which sets standards in industrial hygiene. An Industrial Hygienist focuses on evaluating and improving the work environment in regards to health and safety. Additional information can be found at <http://www.abih.org/>.
- i. Professional Engineer. To become a PE, one must earn a four-year degree in engineering from an accredited engineering program, pass the Fundamentals of Engineering exam, complete four years of engineering experience under a PE and pass the Principles and

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

Practice of Engineering exam. There are several organizations dedicated to the certification of PEs. Additional information can be found at <http://www.sname.org/Home/> or <http://www.nspe.org/index.html> or <http://ncees.org/> or <http://abet.org/>.

F. TRAINING AND PERFORMANCE MEASUREMENT AND CONSISTENCY

1. Mission Management System (MMS)

The MMS is an ISO 9001 based quality management system (QMS) to ensure fulfillment of domestic and international obligations for marine safety and security. A quality management system is the organizational structure, procedures, and resources needed to direct and control an organization in order to continually improve the effectiveness and efficiency of its performance. Information on the MMS may be found in U.S. Coast Guard Mission Management System, COMDTINST 5200.4 (series).

2. Marine Inspector Training Officer (MITO) Peer Audits

- a. Description. The MITO to MITO audit program is a peer-based, second party audit using the principles of ISO 9001:2008 and sponsored by the FORCECOM Mission Management System (MMS) Staff (FC-AEMMS). The audit program improves practices by promoting quality management principles thereby producing internal corrective actions and improving field personnel efficiency. It can be viewed as a subset to the larger MMS audit program.
- b. Process. The audit is a process-based and product-based audit centered on performance support; this means the auditors examine internal processes through document review and interviews with the Unit. An inspector is accompanied by an auditor during an inspection (the inspector being the product) and assessed using the IPAT.
- c. Method. Using sampling, auditors assess the effectiveness of the unit training program as it affects marine inspectors, and examine various aspects of the support climate to identify areas for improvement, capture best practices and assess alignment with policy and guidance. "Sampling" means auditors may vary their concentration and depart from the checklist when necessary to assess conformity to requirements. This is derived from ISO standard 19011:2002, Guidelines for Quality and Environmental Management Systems Auditing, clause 7.4.1. The audit team is made up of a MITO and a Traveling Marine Inspector, both of which are ISO Lead Auditor trained.

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

- d. Scope. The scope of the audit is the unit's training and performance support program. Auditors' focus on training but may also touch on other factors that affect training such as safety and resource management. Additionally, inter-departmental and cross-division functionality is examined where units employ marine inspectors for waterways management or investigations duties/tasks.
- e. Results. Audit results, non-conformities and best practices will be shared with other MITOs. Mechanisms for information sharing will include roundtable discussions. A roundtable discussion is a post-audit meeting or conference call to discuss audit findings amongst all MITOs and one guest from the audited command.
- f. Reporting. Audit reports are confidential and only shared amongst the audit team and the command being audited. Copies of audit reports are available from the unit Commander (Sector) or Commanding Officer (Marine Safety Unit) who may include an explanatory cover letter. As needed, HQ, FORCECOM, Areas and Districts may be apprised of audit highlights in a Traveling Marine Inspector Trip Report which acts as a partner document. Traveling Marine Inspector Trip Reports will be stored on the CG-5P-TI CG Portal page.
- g. Frequency. MITO Peer Audits will be conducted at each feeder port approximately once every two years or as directed by Commandant (CG-5P-TI).

3. Inspector Performance Assessment Tool (IPAT)

The IPAT measures proficiency of Marine Inspectors and Examiners. It provides a mechanism to validate, or identify areas for improvement in, our training, management and administrative processes by assessing the proficiency and effectiveness of inspectors while conducting vessel inspections. The data collected provides hard data to provide a foundation for overall assessment of the proficiency of Marine Inspectors and Examiners. The IPAT is designed to be used by seasoned Marine Inspectors who meet or exceed Verifying Officer requirements as specified in the Sector Organization Manual and this Chapter. Strict adherence to the rating scales and definitions as well as the qualification requirements for Assessors is crucial to ensure the integrity of the data collected and to provide a foundation for overall assessment of the marine inspections program. The IPAT is required to be used when a newly reported is being assessed at a new unit as part of the re-certification process after transfer. The IPAT may be used at any other time at the command's discretion.

The IPAT can be found at <https://cgportal2.uscg.mil/communities/ipat/SitePages/Home.aspx>.

G. AWARD FOR EXCELLENCE IN MARINE INSPECTIONS

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY****1. Background and Purpose**

In 2013, Commandant (CG-CVC) established the Award for Excellence in Marine Inspections. The award is designed to:

- a. Publicize the importance of marine inspections for the health of the maritime community and the safety of the public;
- b. Raise the level of awareness of the Marine Inspection program;
- c. Highlight superior quality inspections conducted by Prevention personnel; and
- d. Identify processes that enhance safety and improve marine inspections and Port State Control examinations

2. Award Administration

- a. Commandant (CG-CVC) will coordinate an administration notification in December of each year soliciting for award nominees. The closing period for submissions should be 31 January of the following year.
- b. Each unit with field level inspectors (Sectors, MSUs, or Activities) may submit one nominee. Nominees should be an individual (not a team), and may be any active duty, civilian or reserve member filling a duty Marine Inspector billet (at the O-4 and below rank or GS-13 and below pay grade) who actively carries out the inspection mission (domestic inspections or Port State Control).
- c. The nominee should exemplify the Core Values and display the traits of an optimal Marine Inspector as described in the Marine Inspector Strategic Needs Assessment of September 2012. Further, the nominee should lead inspection activities that demonstrate superior inspection skills with wide ranging safety improvements, substantial enhancements to the Marine Inspection program, or contributions to a fleet-wide or industry-wide change which improves Marine Safety. Their accomplishments should improve training, safety, expertise and demonstrate professionalism. The award will consider a nominee's body of work over a full calendar year. Activities that result in safety notices, technical publications, or correction of a series of hard to find deficiencies that prevented eventual loss of life are examples of such accomplishments.
- d. Nominations should be made by submitting a one to two page narrative in memo format signed by the unit Commander or Commanding Officer and sent to Commandant (CG-CVC) at cgcvc@uscg.mil. The subject line of the email should state, "Nomination for Excellence in Marine Inspections". The nominee's full name and title shall be listed.

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

The memo should briefly describe the individual's role at the unit, specifically describe the actions for which they are being nominated, and explain how the actions impacted the Coast Guard, industry or safety onboard commercial vessels. If associated with activities in MISLE, the activity numbers should be referenced in the narrative. Additionally, any safety alerts or professional publications associated with the nomination may be attached as supplemental information.

- e. Commandant (CG-CVC) will then convene a board of three to five Marine Inspectors to review submissions and select a winner. The results should be announced via administrative notification no later than 15 March of each year.
- f. In accordance with reference (a), the winner of the award will receive an appropriate trophy, plaque or similar item embossed with the USCG inspections propeller. A flag letter will be sent to the winner as well. Honorable mention nominees will be sent a congratulatory letter from Commandant (CG-CVC).

3. Award Evaluation Criteria

There is no expectation for an award nomination to systematically address each of these criteria. Rather, nominations should highlight specific actions that provide evidence of these items:

- a. Training/Mentoring. Did the nominee actively and skillfully pass along their expertise by training others and helping them to grow in their technical abilities and confidence?
 - (1) What is the success of apprentice / junior inspectors with whom the nominee works?
 - (2) Did the nominee inspire those around them to increase their proficiency?
 - (3) Did the nominee supply the resources, time, tools and training to ensure the success of their fellow inspectors?
 - (4) Did the nominee enhance the inspections knowledge of all personnel including leadership?
 - (5) How effectively did the nominee share inspections knowledge with others (i.e., not keeping it all to themselves)?
 - (6) Did the nominee reach out to industry/ other groups to present inspection issues and further enhance their knowledge?
- b. Impact on increasing safety. Did the action of the nominee lead to fixing chronic problems with a demonstrable impact on safety of shipping, result in safety alerts, or

Section A: Marine Inspection Administration**CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY**

greatly enhance the Marine Safety Program? Did their actions lead to needed safety changes or build a strong case for change?

(1) Did an action of the nominee result in preventing a mishap or casualty?

(2) How well did the nominee foster a culture of safety and ISM compliance?

(3) Did the nominee ensure that Coast Guard personnel were properly equipped to safely perform their inspections?

(4) Did they identify an issue which led to a change of operations in industry or to a particular fleet of vessels?

(5) Did the nominee conduct safety outreach to industry/vessel owners?

c. Display of expertise. Was the level of knowledge displayed by the nominee beyond the normal level for someone in a similar position?

(1) Did the nominee clearly distinguish themselves as a subject matter expert that understands and properly applies regulations, policies and technical information (the nomination should provide specific examples)?

(2) Has the nominee been asked to speak at a conference, workshop, training evolution, and/ or at other units?

(3) If the nominee had not taken their actions, would a hazard go unnoticed or would a process be not as effective?

(4) Did the inspector bring to light a regulatory or policy conflict, material condition or safety concern that had previously gone unnoticed?

d. Professionalism. How well did the nominee work with industry and their peers to improve Coast Guard/ Industry partnerships?

(1) Did they conduct themselves in proper manner, exemplifying the Core Values of honor, respect, and devotion to duty (uniform appearance, speaking/ listening and treatment of others)?

(2) Is the nominee recognized as a leader in the marine inspection community and committed to the Coast Guard's Marine Safety mission?

(3) Did the nominee lead and encourage the use of teams to solve complex issues?

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

- (4) Did the nominee make balanced decisions with consideration of how they affect commerce, public safety and environmental risk?
- (5) Was the nominee tactful and poised even when dealing with a contentious situation?

USCG Marine Safety Manual, Vol. II: Materiel Inspection

Section A: Marine Inspection Administration

CHAPTER 7: COMMERCIAL VESSEL COMPLIANCE PERSONNEL PROFICIENCY

Verification Examination Form

Name: _____ Vessel: _____ Inspection Type: _____

Qualification: _____ Date: _____ Exam Number: _____ of _____

Communication Skills	Yes	No
Did the apprentice clearly articulate the inspection protocols and procedures?		
Did the apprentice provide an accurate and timely drill evaluation critique?		
Were the deficiencies and their corresponding regulations thoroughly explained?		
Did the vessel owner understand apprentices' expectations and vessel limitations?		
Did the apprentice provide the necessary documentation and information in MISLE?		

Knowledge	Yes	No
Did the apprentice gather the necessary information prior to the inspection?		
Did the apprentice demonstrate an adequate working knowledge of vessel systems?		
Were all deficiencies issued by the apprentice supported by regulation?		
Did the apprentice issue the proper documentation and certificates?		
Did the apprentice use applicable references?		

Ability	Yes	No
Did the apprentice systemically conduct an inspection?		
Was the inspection thorough in accordance with the applicable job aid?		
Was the inspection conducted in a reasonable amount of time?		
Did the apprentice utilize inspection personnel appropriately to complete the inspection?		

Judgment	Yes	No
Did the apprentice make sound decisions and apply the proper enforcement action for the deficiencies?		
Did apprentice ensure all team members were adequately equipped with PPE?		
Was the apprentice able to evaluate and apply equivalencies, actual or hypothetical?		

Maturity	Yes	No
Did the apprentice act in a professional manner even during conflict?		
Did the apprentice bring all necessary references, equipment, and materials?		
Did the apprentice act ethically and without discrimination?		
Did the apprentice bring credit to the CG through actions, demeanor, and appearance?		

Verification Officer (Print)_____
Verification Officer (Signature)**APPENDIX 1**