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Commandant of the Coast Guard

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The Cover: Heavy seas in North Atlantic

COUNCIL ACTIVITIES

THE Merchant Marine Council submitted to the Commandant, U. S. Coast Guard, findings and recommendations concerning improved type life rafts based upon the report of the Chief, Research and Development Division, rendered after exhaustive tests of various types of improved type rafts. During the month of April the Council received from the Commandant his conclusions and direction in this matter. These findings are set forth elsewhere in this issue of the *Proceedings*. A revision of life raft specifications embodying these conclusions has been ordered with the direction that prior to adoption they be circularized to all interested parties for comment. The conclusions of the Commandant do not indicate that any major revision or changes in the specification are necessary.

A public hearing upon the method proposed by the Merchant Marine Personnel Division of the Coast Guard for simplifying seamen's documents was held by the Council on April 19, 1945, at the District Coast Guard Office in New York City. The necessary amendments to the regulations and the single seamen's document proposed to replace the many now carried were discussed with various industry representatives.

As recommended by the Council, the Commandant has approved a "Vessel Inspection Record" to be maintained on all domestic vessels of the following classes which are certificated for ocean or coastwise service: (a) freight vessels including tankers of 500 gross tons and over; and (b) passenger vessels of any tonnage.

The check-up of additional equipment prescribed, as a wartime measure, for ships sailing in danger zones, occasionally has resulted in the same vessel undergoing more than one inspection, particularly if she called at several United States ports before final departure, and gave rise to justified criticism and complaints of over-inspection burdensome to the ship. Much of the cause of duplication of inspections lay in the difficulty in determining what check-ups the vessel had already undergone, since no records in that direction were on board. It is the purpose of this record to achieve more uniform inspection of vessels and to prevent over-inspection by providing local inspectors a record of the inspections a vessel has undergone since her last annual inspection. The inspection record will not show any uncorrected deficiencies on the vessel. The record will manifest only the type of inspection, the place and date, the name of the inspector, and will be kept on board ships in a container furnished by the Coast Guard. This record is for the use of Coast Guard personnel only, although it will be available to the master of the vessel. The Navigation and Vessel Inspection Circular describing this new record is entered as a directive in the Appendix of this issue of the *Proceedings*.

An amendment to the Engineering regulations has been promulgated abolishing the limitations restricting the use of seamless copper piping and tubing to saturated steam services only and to pressures not exceeding 180 p. s. i. gage pressure. The Engineering regulations as amended now permit this tubing and piping to be used where the temperature does not exceed 406° F. This amendment brings these regulations up to date with the requirements of the A. S. M. E. and the Code for Pressure Piping. It was the opinion of the Council that so long as an upper limit of 406° F. is observed in limiting the use of seamless copper and brass pipe and

tubing, it should not matter whether this temperature was the result of saturated steam at 250 pounds pressure or steam at a lower pressure which had been superheated to 406° F.

A study of the causes and reasons for the numerous collisions occurring at this time has been undertaken by the Council. It is hoped that a thorough analysis of the collision records will reveal concrete measures which may be taken to reduce the number of collisions now occurring.

Captain R. F. Farwell, U. S. N. R., advisor to the Council upon nautical rules of the road, appeared before the Council with respect to publication of a new edition of the Coast Guard booklet "Nautical Rules of the Road." Captain Farwell pointed out the corrections which should be made in a new edition. He stated that a government publication so widely in demand and used as frequently as this booklet should do more than merely present a comparison of the Inland and Pilot and International rules. He felt that where ambiguities in the rules have been clarified by court decisions that these judicial interpretations should be inserted as footnotes to the rules. The Council approved Captain Farwell's recommendations and requested that a revised edition of "Nautical Rules of the Road" be prepared accordingly.

A hydrophobically treated fibrous glass material has been approved as a substitute for Kapok as a buoyant filler for life preservers. The fiber is made from a weather-resistant glass formulation. It is described as "fine A" which denotes a fiber with an average diameter of slightly less than 5 microns. This new material has several advantages over Kapok. It is fireproof, more resistant to compression, and neither absorbs water as rapidly nor so much as Kapok.

This material was recommended as the best substitute for Kapok by the Mellon Institute of Industrial Research after tests of various types of materials in a long search for a satisfactory Kapok substitute. The development of this buoyant material is timely. Our present closely controlled annual rate of consumption of Kapok, milkweed and Ecuador Kapok is about 10,700,000 pounds. Our stock pile of Kapok and substitutes is 10,000,000 pounds which it is believed will be exhausted by the end of 1945.

Operators of vessels upon the Gulf Intracoastal Waterway are endeavoring to obtain legislation amending the present Inland Rules and Western River Rules so that the conflicting rules now governing navigation upon this waterway will be abolished. Generally speaking, it is the desire of these operators that Inland rules be made effective upon this waterway and upon the Western Rivers, except the Mississippi and Warrior-Tombigbee river systems. To this end a meeting of operators and representatives of the Council will be held in New Orleans on May 11, 1945. Commodore Norman B. Hall, Vice Chairman of the Council; Commander J. A. Kerrins, Executive Secretary; and Captains R. F. Farwell and L. J. Bernard will be present. Mr. Chester Thompson, president of American Waterways Operators, Inc., Mr. Munger Ball and Mr. Henry F. DeBardeleben will be among the representatives of the operators.

Routine action was taken upon the approval of items of safety equipment.

Life Raft Tests

THE Merchant Marine Council has submitted to the Commandant its comments upon the tests conducted by the Research and Development Division of the Engineer-in-Chief's office upon a number of improved-type life rafts of different designs. These tests were intended to demonstrate the performance of the various rafts as to strength, maneuverability, resistance to fire, and machine-gunning. The results of the tests and the general conclusions drawn therefrom are summarized in the comments of the Acting Commandant upon the report, excerpts of which follow:

History of Improved Type Life Rafts

In peacetime life rafts, due to the slight amount of protection they afford for occupants, have never been considered as desirable lifesaving equipment for cargo vessels. On passenger ships light buoyant equipment was authorized in addition to complete boatage, but such buoyant equipment was intended solely to keep personnel afloat until they could be picked up by boats from the same vessel. The provision of double boatage, that is, boat capacity on either side sufficient to accommodate the entire ship's company, was considered adequate for cargo ships.

Early in this war, however, it was found that enemy action, chiefly torpedo explosions, tended to reduce sharply the possibility of using boats. Boats upon the attack side were frequently destroyed, while those on the other side, due to the list of the vessel, sometimes could not be launched. Resulting fires, particularly on tankers and on vessels loaded with inflammable cargo, also tended to reduce the possibility of using the regulation lifeboat. It was obviously necessary to provide additional flotation means, and as a result all ships were ordered to carry life rafts in addition to lifeboats. The early life rafts were either improvisations or, in some cases, were of the catamaran type used on inland craft, consisting of two buoyant chambers covered by a slatted platform. These rafts gave no protection to their occupants, could carry no appreciable equipment for improving likelihood of survival and, due to their construction, were highly susceptible to fire. Their construction was not adequate to withstand the stresses imposed upon them and altogether they were entirely unsuitable as a piece of equipment which might be required to sustain its occupants for days or even weeks. Only the urgent need for something supplementing boats warranted the provision of this type raft for which it could only be said that it was at least better than nothing.

When our merchant vessels were first attacked by submarines, the Coast Guard instituted a system of analyzing the reports of survivors for the purpose of determining what improvements should be made in lifesaving and other equipment of vessels which might experience such attacks. A large amount of such evidence rapidly became available which indicated that life rafts assumed an importance almost equal to that of lifeboats and that consequently a superior type of raft should be promptly developed and made required equipment. The desiderata of such a raft were that it should approach a lifeboat in offering protection to its occupants, that it should be capable of being skid launched under practically any circumstances, and that it should be capable of stowage in such manner as to interfere least with the workings of the vessel. Several private companies were working on designs in this direction and the data in possession of the Coast Guard was made available to them and their efforts were encouraged and guided by the Coast Guard. On 15 April 1943, the Coast Guard issued tentative specifications for an improved type life raft in Navigation and Vessel Inspection Circular No. 33 and definite specifications under date of 30 September 1943, in Circular No. 42. It was the intent of this circular that new vessels should be equipped with improved type rafts as soon as satisfactory models were in production. Similarly all replacements of old type rafts were to be of the improved type. If a cargo vessel was unable to carry the requisite double boatage, due to the reduced number of personnel allowed per boat, the deficiency could only be made up by the provision of the improved type raft.

Life raft being given fire test on dummy skids.

Reason for Conducting Tests

The defects of the old type life raft were clearly brought out by the experience and testimony of survivors of merchant vessels sunk by enemy action. In the early days of the war the Coast Guard had a lamentable amount of such evidence in its files and from it was largely guided in preparing the minimum specifications for the improved type life raft. These specifications were, however, purposely made broad in order to permit the development of various types of rafts. At about the time when the new rafts began to be placed upon our vessels, the United Nations had succeeded to a large extent in mastering the Axis submarines and aircraft, insofar as their attacks upon merchant shipping went. This splendid result sharply reduced the necessity of resorting to the new rafts and consequently the Coast Guard obtained little first-hand information as to their performance.

Under the broad specifications promulgated on 30 September 1943, in Navigation and Vessel Inspection Circular No. 42, 18 designs for improved type life rafts had been approved. Lacking actual experience, the Commandant considered it desirable to conduct field tests of all these models in order that he might be satisfied that every life raft approved by the Coast Guard was suitable for the purpose intended. The tests were intended to be far more drastic in character than would be the conditions which a raft would be likely to encounter in actual service.

Nature of Tests

The rafts were turned over to the Chief, Research and Development Division, Captain G. A. Tyler, for testing as to accessibility, maneuverability, beaching, and for withstanding strafing and oil fires. A description of these tests is contained in the reports made by Captain Tyler to the Engineer-in-Chief. Full opportunity was afforded all interested persons in other Government agencies and representatives of the various makers to witness the tests.

Results of Tests

From the standpoint of maneuverability, all types of life rafts, as was expected, proved highly inefficient. They could be propelled by oars sufficiently to get them away from the side of a sinking or burning vessel, but only at low speed and with considerable effort. Under sail they were unable to do anything but drift before the wind. In seaworthiness, they are, of course, inferior to the lifeboat, primarily because of low freeboard and lack of sheer. On the other hand, the self-bailing features of the life raft cockpit is something not possessed by the lifeboat.

With regard to strength, all rafts of themselves are adequately constructed to withstand repeated drop tests without displaying other than minor damage. In service, of course, the raft would normally be dropped but once. These rafts also have been previously subjected to beaching tests.

The strafing test was conducted with different types of ammunition and the 25 rounds fired at each raft greatly exceeded the probable amount of strafing that might be experienced by a raft in any one run. If subjected to repeated attacks to the extent tested, it is probable that the raft's entire personnel would be killed. The incendiary bullets used in part of the strafing do not cause fires except when the pyrotechnic equipment of the life raft chances to be hit.

In the fire tests all rafts were exposed to direct oil flames for a period for longer than any personnel could have survived. Damage was experienced in various degrees and lessons were learned from the tests that will be incorporated in new specifications. Nevertheless all rafts at the conclusion of this test still would have offered a buoyant place of refuge for survivors.

Conclusions

The reports of the tests with supporting data, were carefully studied and the following conclusions were reached:

(*a*) No type of raft presently upon the Coast Guard approved list is unsuitable for its intended use as a piece of lifesaving equipment of the second order, that is, ranking next after the standard lifeboat in efficiency.

(*b*) All types of rafts are far superior to rafts of the catamaran or "chicken coop" type previously used.

(*c*) Eventually all rafts should be of one gauge in order that they may be launched from a standard skid. This will permit the use of any type of raft on any vessel without change in launching skids. This will be worked out in cooperation with the Maritime Commission.

(*d*) Navigating and propulsive equipment should be minimized on life rafts and emphasis should be given to means of locating the raft and the rescuing of its occupants by other craft.

(*e*) The Research and Development Division should continue its search for a satisfactory internal buoyancy medium.

(*f*) Minor changes in the specifications are desirable and can, it is believed, be adopted without interference with production.

A revision of present specifications embodying the thoughts expressed herein will be made but before adoption they will be circularized to all interested parties for comment.

Hearing Units and Details

ONE of the early actions taken by the Coast Guard, after the transfer to it of the duties of the Bureau of Marine Inspection and Navigation, was the establishment of special details in all principal United States seaports to perform the investigative functions authorized by R. S. 4450. These functions included the determination of all cases of alleged misconduct, incompetency, or negligence on the part of maritime personnel acting under licenses or certificates issued by the Coast Guard.

A Hearing Unit consists essentially of the Hearing Officer, who sits as judge in the case, the Examining Officer, who has investigated the facts and who presents the evidence, and a reporter, who takes down the testimony. The following outline illustrates how a Hearing Unit operates:

(*a*) Ships are boarded at or near Quarantine by an Examining Officer who, among other things, makes inquiry as to whether any situations requiring disciplinary action have arisen during the voyage. He does this by checking the log, talking to the master and officers, and by interviewing the crew's delegates. If it appears from this cursory check that there are grounds for further investigation, he proceeds immediately, and while all witnesses are available.

(*b*) The Examining Officer considers all information available and if he is of the opinion that offenses warranting action have been committed he gives the persons involved an opportunity of explaining their side of the matter before charges are filed. This is a safeguard against arbitrary action.

(*c*) If the Examining Officer finds that the offense is of minor importance or that there were extenuating circumstances, he may admonish the person involved instead of preferring charges against him. This practice eliminates many first offenses and substantially reduces the number of charges filed. The admonishment is made a matter of record and will be considered in case of subsequent proceedings against the same individual.

(*d*) In more serious cases the Examining Officer, as soon as he reaches the conclusion that the case warrants prosecution, prepares the charges and specifications, sets a time for hearing and issues a summons to the person charged requiring him to be present at the hearing. All witnesses required by the Examining Officer as well as any witnesses desired by the person charged are likewise subpoenaed at this time. The trial or hearing on the charges is ordinarily set for the day following the serving of the charges, although if fairness indicates the person charged should be given a longer period in which to prepare his defense, the time is fixed accordingly. The hearing is usually held in the offices of the Hearing Unit but it may be held aboard the vessel or at any other place that is suitable and convenient.

(*e*) Every effort is made to conduct the trial in the fairest possible fashion. The Examining Officer is the first witness. He outlines the whole case and then assumes the role of prosecutor. The Hearing Officer has had no previous knowledge of the case and reaches a decision solely on the basis of the evidence presented. The person charged is accorded every opportunity to defend himself and may be assisted by a lawyer, a patrolman, a ship delegate, a port agent, or any person he desires. If the person charged wishes, a Coast Guard officer will be assigned to assist him in his defense.

(*f*) The Hearing Officer may find the person charged guilty or not guilty. If the decision is not guilty the case is closed. If the accused is found guilty the Hearing Officer may order his license or certificate suspended for a period of time or revoked entirely. The offenses are graded and an effort is made to insure that uniform sentences are given for similar cases. In the discretion of the Hearing Officer the sentence may be suspended and the person charged placed upon probation. If the person charged is guilty of further misconduct during the period of probation the original sentence becomes effective. All revocations and suspensions are brought to the attention of other interested government agencies and in some instances the local draft boards of the persons involved are notified, with the result that a number of deferments have been cancelled.

(*g*) The testimony at the trial is always taken down by a reporter but it is not usually transcribed unless the person charged is convicted and indicates that he wants to appeal. Upon appeal a copy of the transcript is made available to the person charged. Appeals must be filed within 30 days of the date of the decision, or within 30 days after return to the United States, with the local District Coast Guard Officer. Further appeal to the Commandant is allowed if an actual suspension or revocation has been ordered.

The results obtained in United States ports by these units were so productive of good that, at the request of the Navy Department and the War Shipping Administration, units were established at key ports overseas, the ports of each area being under an officer in charge for that area. At present there are 30 of these units, called Merchants Marine Details, at different ports overseas, divided into six areas, as follows:

United Kingdom.—Twelve units, whose location varies according to the flow of United States merchant vessels.

Merchant Marine Hearing Unit in session.

Mediterranean.—Naples, Bari, Oran, Marseille, Leghorn, Port Said, Suez.

India-Ceylon.—Calcutta, Colombo, Bombay.

South Pacific.—Noumea.

Southwest Pacific.—Hollandia, Finshaven, Tacloban, Sydney, Brisbane.

Canal Zone.—Balboa, Cristobal.

These overseas Details spend a large part of their time—in fact the majority of it—in duties other than investigations and hearings, since they also perform inspectional duties, issue licenses and certificates, act as technical advisers to United States Consuls in cases affecting maritime personnel, and perform any other type duties arising in connection with the merchant marine where they can be of service.

Up to June 30, 1944, Hearing Units had given decisions in cases involving 1,294 licenses and 7,593 certificates, these figures representing only about 35 percent of the total number of cases investigated. In about 65 percent of the cases investigated the examining officers decided that insufficient grounds existed for a formal hearing.

During the month of March 1945, Coast Guard Merchant Marine Units and Details handled cases involving 335 officers and 3,173 unlicensed men. In the case of officers, 3 were revoked, 22 were suspended, 64 were suspended on probation, 25 were voluntarily surrendered, 145 were admonitions, and 76 were dismissed. Of the unlicensed men, 22 were revoked, 355 were suspended, 565 were suspended on probation, 470 were voluntarily surrendered, 1,448 were admonitions, and 313 were dismissed.

LESSONS FROM CASUALTIES

Traps for the Unwary

This article on personal injuries could be given other titles such as "Fools Rush In," or "He Put His Foot in It." It has to do with the injuries caused by failure to look where one is going, with some reference to special dangers and pitfalls.

There is limited room on a ship at best. All traffic passageways should be kept clear of unnecessary obstructions, such as hatch covers, cargo gear, ship's stores, and refuse. When such obstructions as cleats, pad-eyes, and the like are unavoidable, they should be painted a distinct color, such as bright orange, to attract attention.

Adequate light should be provided at all ladders, gangways, deck house entrances, alleyways, and for passageways over deck cargo. (This, of course, is in wartime subject to such modification as blackout instructions may require.) Entering any dark compartment or hold without safe and proper flashlight is highly dangerous and the use of matches or open lights should be forbidden. A safety chain should be kept across the door to the shaft alley escape trunk.

All openings without coamings or with low coamings should be safeguarded. Hawsepipes on the forecastle deck should be covered or railed off. Open manholes and engine room floor plates removed for access can cause broken legs. Where the ship's accommodation ladder is in an almost horizontal position, or when any other runged ladder is at a similar angle, duck wards with cleats should be secured in place on them as walkways.

Vertical ladders, such as hold ladders and Jacob's ladders, should be inspected frequently for damage, particularly cargo hold ladders which are subject to damage by drafts. Jacob's ladders should be kept free of grease or other slippery substances and should never *never* be secured to a pipe or chain hand rail. Personnel climbing a ladder or mounting steep steps should keep their hands free and use the man ropes or grab rails.

Where the deck, outside of the machinery spaces, is oily, sprinkle sawdust on it. In the machinery spaces wipe it as clean as possible. Don't wear old, run-down, or greasy shoes or any other footgear that detracts from sure-footedness. When the ship is rolling heavily or shipping green water, rig a wire lifeline with sufficient lizards. Finally, don't step into a coil or bight of a slack mooring line or other working gear, nor, in the interest of posterity, straddle one.

Explosions in Gas Contaminated Tanks

Two recent barge explosions, one of which claimed the lives of two men, the other resulting in the death of one and injuries to two others in addition to causing approximately $8,000 damage to the barge, have been attributed, in the first case, to negligence of workers in using tools which gave off sparks in a gas contaminated tank, and, in the second case, to a worker dropping a portable extension light, which broke and touched off an explosion in another contaminated tank.

Both cases point to the importance of taking thorough measures to free tanks and compartments of gas before entering them with tools and appliances, as well as to the importance of using appliances of approved type.

On 8 January 1945, the Merchant Marine Council approved a new regulation relating to inspections prior to making certain repairs on tank ships and tank barges.

This regulation reads as follows:

"35.6–1 *TB/ALL.* Riveting, welding, burning or like fire-producing operations shall not be undertaken within or on the boundaries of bulk cargo spaces or in spaces adjacent thereto, until an inspection has been made to determine that such operations can be undertaken with safety. Such inspections shall be made and evidenced as follows:

(*a*) When in a port in the continental United States, this inspection shall be made by a gas chemist certificated by the American Bureau of Shipping; however, if the services of such certified gas chemist are not reasonably available, the marine inspector of the Coast Guard, upon recommendation of the vessel owner and his contractor, or their representatives, shall select a person who, in the case of an individual vessel, shall be authorized to make the inspection. If the inspection indicates that such operations can be undertaken with safety, a certificate setting forth that fact in writing and qualified as may be required shall be issued by the certified gas chemist or the authorized person before the work is started.

(*b*) When not in such a port, this inspection shall be made by the senior officer present, who shall make a log entry."

APPENDIX

Amendments to Regulations

TITLE 46—SHIPPING

Chapter I—Coast Guard: Inspection and Navigation

Subchapter C—Motorboats, and Certain Vessels Propelled by Machinery Other Than by Steam More Than 65 Feet in Length

PART 29—ENFORCEMENT

NUMBERING OF MOTORBOATS

By virtue of the authority vested in me by 40 Stat. 602, as amended (46 U.S.C. 288), Executive Orders 9074, dated February 26, 1942 (3 CFR, Cum. Supp.) and 9083, dated February 28, 1942 (3 CFR, Cum. Supp.), the following amendment to the regulations is prescribed:

Section 29.8 is amended by changing subparagraphs (3) and (4) of paragraph (f) to read as follows:

§ 29.8 *Procedure relating to numbering of motorboats.* * * *

(f) * * *

(3) The number shall be painted parallel with the water line and the distance between the water line and the bottom of the number shall not be less than the minimum height of the number. The height of the number on all undocumented vessels, except those found on inland lakes other than the Great Lakes and on connecting waters, shall be in accordance with the following scale:

Length of vessel:	*Height in inches*
Under 20'0"----------	6–8
20'0" and under 40'0"----------	10
40'0" and under 60'0"----------	18
60'0" and over----------	24

The height of the number on all motorboats found on inland lakes other than the Great Lakes and on connecting waters, shall be in accordance with the requirements of the act of June 7, 1918, as amended (46 U.S.C. 288). The width of the characters of the number on all numbered vessels and the thickness of the individual numbers shall be in accordance with accepted engineering practices.

(4) On all undocumented vessels, except those found on inland lakes other than the Great Lakes and on connecting waters, if the construction of the boat permits, the number shall also be painted on a conspicuous part of the top side for the purpose of aerial identification. The number shall be placed athwart ships or fore and aft, depending upon which of these two areas is the larger, and shall be painted in a color which contrasts to the color of the top side, and the size of the individual numbers shall be in proportionate ratio to the scale set forth in the preceding paragraph. (10 F.R. 4266, 21 April 1945.)

Subchapter D—Tank Vessels

AMENDMENTS TO REGULATIONS

By virtue of the authority vested in me by R.S. 4405 and 4417a (46 U.S.C. 375, 391a) and Executive Order 9083, dated 28 February, 1942 (3 CFR, Cum. Supp.), the following amendments to the regulations are prescribed:

PART 30—GENERAL PROVISIONS

Section 30.1 *Basis and application of rules* is amended by changing the name "Bureau of Marine Inspection and Navigation" to "Coast Guard."

Section 30.3 is amended to read as follows:

§ 30.3 *Definition of terms.* Certain terms used in the regulations in this subchapter are defined as follows:

(a) *Approved.* The term "approved" means approved by the Commandant unless otherwise stated.

(b) *Cargo.* The term "cargo" means combustible liquid, inflammable liquid, or liquefied inflammable gas unless otherwise stated.

(c) *Certificated.* The term "certificated" when applied to tank vessels refers to a vessel covered by a certificate of inspection issued by the Coast Guard; when applied to men employed on tank vessels, the term refers to a certificate of ability issued by the Coast Guard.

(d) *Classification requirements.* The term "classification requirements" means applicable rules and supplementary requirements of the American Bureau of Shipping, or other recognized classification society.

(e) *Coastwise.* Under this designation shall be included all tank vessels normally navigating the waters of any ocean or the Gulf of Mexico 20 nautical miles or less offshore.

(f) *Cofferdam.* A "cofferdam" is a space having a width sufficient for ready access, with tight bulkheads on both sides. In the rules in this subchapter, any one of several spaces shall be considered to be equivalent to a cofferdam, as follows:

(1) A cargo pump room.

(2) A tank, either empty or used to carry a liquid having a flash point of 150° F. or above.

(3) A horizontal air space either inclosed and vented or open to the atmosphere.

(g) *Combustible liquid.* A "combustible liquid" is any liquid having a flash point above 80° F. (as determined from an open-cup tester, as used for test of burning oils). In the rules in this subchapter, combustible liquids are referred to by grades, as follows:

(1) *Grade D.* Any combustible liquid having a flash point below 150° F. and above 80° F.

(2) *Grade E.* Any combustible liquid having a flash point of 150° F. or above.

(h) *Commandant.* The term "Commandant" means the Commandant of the Coast Guard.

(i) *District Coast Guard Officer.* The term "District Coast Guard Officer" means an officer of the Coast Guard designated as such by the Commandant to command all Coast Guard activities within his district which include the enforcement and administration of Title 52, R. S., acts amendatory thereof or supplemental thereto, rules and regulations thereunder and the inspections required thereby.

(j) *Existing tank vessel.* An "existing tank vessel" is any tank vessel the construction of which was started prior to November 10, 1936, and shall include any vessel the conversion of which into a tank vessel was started prior to November 10, 1936.

(k) *Flame arrester.* The term "flame arrester" means any device or assembly of a cellular, tubular, pressure, or other type and of a size approved for preventing the passage of flames into inclosed spaces.

(l) *Flame screen.* The term "flame screen" means a single screen of corrosion-resistant wire of at least 30 by 30 mesh, or two screens, both of corrosion-resistant wire, of at least 20 by 20 mesh, spaced not less than ½ inch nor more than 1½ inches apart.

(m) *Flash point.* The term "flash point" indicates the temperature in degrees Fahrenheit at which a liquid gives off an inflammable vapor when heated in an open-cup tester. For the purpose of the regulations in this subchapter, flash points determined by other testing methods will be equivalent to those determined with an open-cup tester, as follows:

EQUIVALENT FLASH POINTS

Open-cup tester	Tag closed-cup tester (A. S. T. M.)	Pensky-Martens closed tester (A. S. T. M.)
° F.	° F.	° F.
80	75	----------
150	----------	140

(n) *Gas free.* The term "gas free" means free from dangerous concentrations of inflammable or toxic gases.

(o) *General rules and regulations.* The term "general rules and regulations" means the general rules and regulations in this chapter (46 CFR Chapter I) prescribed by the Commandant.

(p) *Great Lakes.* Under this designation shall be included all tank vessels navigating the Great Lakes.

(q) *Headquarters.* The term "Headquarters" means the Office of the Commandant, U. S. Coast Guard, Washington, D. C.

(r) *Inflammable liquid and gas—*(1) *Inflammable liquid.* An "inflammable liquid" is any liquid which gives off inflammable vapors (as determined by flash point from an open-cup tester, as used for test of burning oils) at or below a temperature of 80° F. In the regulations in this subchapter inflammable liquids are referred to by grades, as follows:

Grade A. Any inflammable liquid having a Reid[1] vapor pressure of 14 pounds or more.

Grade B. Any inflammable liquid having a Reid vapor pressure under 14 pounds and over 8½ pounds.

Grade C. Any inflammable liquid having a Reid vapor pressure of 8½ pounds or less and a flash point of 80° F. or below.

(2) *Liquefied inflammable gas.* A "liquefied inflammable gas" is any inflammable gas having a Reid vapor pressure exceeding 40 pounds or a vapor pressure exceeding 25 pounds per square inch gage at 70° F. as determined by N. G. A. A.[2] or other recognized test method which has been compressed and liquefied for purposes of transportation. In the regulations in this subchapter, liquefied inflammable gases are referred to by classes as follows:

Class 1. Any liquified petroleum gas, including gases or mixtures of gases produced with or derived from petroleum or natural gas, and composed predominantly of hydrocarbons or mixtures of hydrocarbons such as propane, propylene, butane, butylene, or butadiene.

Class 2. Any liquefied inflammable gas other than liquefied petroleum gas.

(s) *Lakes, bays, and sounds.* Under this designation shall be included all tank vessels navigating the waters of any of the lakes, bays, or sounds other than the waters of the Great Lakes.

(t) *Marine inspector or inspector.* The terms "marine inspector" or "inspector" mean any person from the civilian or military branch of the Coast Guard assigned under the superintendence and direction of an Officer in Charge, Marine Inspection, or any other person as may be designated for the performance of duties with respect to the enforcement and administration of Title 52, R. S., acts amendatory thereof or supplemental thereto, rules and regulations thereunder, and the inspections required thereby.

(u) *New tank vessels.* The term "new tank vessels" means any tank vessel the construction of which is started on or after November 10, 1936, and shall include any vessel the conversion of which into a tank vessel is started on or after November 10, 1936.

(v) *Ocean.* Under this designation shall be included all tank vessels normally navigating the waters of any ocean or the Gulf of Mexico more than 20 nautical miles offshore.

(w) *Officer in Charge, Marine Inspection.* The term "Officer in Charge, Marine Inspection," means any person from the civilian or military branch of the Coast Guard designated as such by the Commandant and who under the superintendence and direction of the District Coast Guard Officer is in charge of an inspection district for the performance of duties with respect to the enforcement and administration of Title 52, R. S., acts amendatory thereof or supplemental thereto, rules and regulations thereunder and the inspections required thereby.

(x) *Permit.* The term "permit" refers to indorsement on the certificate of inspection, authorizing the presence on board of liquid inflammable or combustible cargoes in bulk, issued by an Officer in Charge, Marine Inspection, for a tank vessel which is found to be in substantial compliance with the regulations in this subchapter.

(y) *Pilot rules.* The term "pilot rules" means the pilot rules contained in Title 33, Code of Federal Regulations, Chapter III. These pilot rules are also published by the Coast Guard in three parts: namely, (1) Rules to Prevent Collisions of Vessels and Pilot Rules for Certain Inland Waters of the Atlantic and Pacific Coasts and of the Coast of the Gulf of Mexico; (2) Pilot Rules for the Great Lakes and Other Connecting and Tributary Waters and the St. Marys River; and (3) Pilot Rules for the Rivers Whose Waters Flow Into the Gulf of Mexico and Their Tributaries and the Red River of the North.

(z) *Pressure vacuum relief valve.* The term "pressure vacuum relief valve" means any device or assembly of a mechanical, liquid, weight, or other type and of a size approved for the automatic regulation of pressure in inclosed spaces.

(aa) *Recognized classification society.* The term "recognized classification society" means the American Bureau of Shipping or other classification society recognized by the Commandant.

(bb) *Reid vapor pressure.* The term "Reid vapor pressure" means the vapor pressure of a liquid at a temperature of 100° F. expressed in pounds per square inch, absolute, as determined by the "Reid Method" as described in the latest revision of designation D 323 of the American Society for Testing Materials.

(cc) *Rivers.* Under this designation shall be included all tank vessels whose navigation is restricted to rivers and/or to canals, exclusively.

(dd) *Spark arrester.* The term "spark arrester" means any device, assembly, or method of a mechanical, centrifugal, cooling, or other type and of a size suitable for the retention or quenching of sparks in exhaust pipes from internal combustion engines.

(ee) *Tank barge.* A "tank barge" is any tank vessel not equipped with means of self-propulsion.

(ff) *Tank ship.* A "tank ship" is any tank vessel propelled by power or sail.

(gg) *Tank vessel.* A "tank vessel" is any vessel especially constructed or converted to carry liquid bulk cargo in tanks.

Part 31—Inspection and Certification

Part 31 is amended by changing certain names and phrases as follows:

1. In § 31.7–1 "Secretary of Commerce" to "Commandant."
2. In § 31.6–1 "Director" to "Commandant."
3. In § 31.6–1 "Bureau" to "Commandant."
4. In § 31.3–2 (a) "Bureau of Marine Inspection and Navigation" to "Commandant."
5. In §§ 31.1–3, 31.2–1 and 31.6–2 "Bureau" to "Coast Guard."
6. In §§ 31.3–2 (b) and 31.3–3 (c) "Bureau or its inspectors" to "Coast Guard."
7. In § 31.3–2 (a) "inspectors of this Bureau" to "Coast Guard."
8. In §§ 31.3–8 (c), 31.4–3 (a), (b), 31.6–1, and 31.6–3, "supervising inspector(s)" to "District Coast Guard Officer(s)."
9. In § 31.6–2 "supervising inspectors and the bureau" to "District Coast Guard Officers."
10. In § 31.6–1 "supervising and local inspectors" to "inspectors."
11. In § 31.3–6 (c) "board of local inspectors or supervising inspectors" to "inspector."
12. In §§ 31.3–3 (b), 31.3–6 (a), (c), 31.3–7 (d), 31.3–8 (b), (c), (e), 31.4–1 (a), (c), 31.4–2, 31.4–3 (b), 31.4–4, 31.6–1, 31.6–3 "local inspectors" to "Officer(s) in Charge, Marine Inspection."
13. In § 31.1–1 (a) "local inspectors of the bureau" to "Officer in Charge, Marine Inspection."
14. In § 31.6–2 "local boards" to "Officers in Charge, Marine Inspection."

[1] American Society for Testing Materials Standard Method of Test for Vapor Pressure of Petroleum Products (Reid Method)—(D 323), most recent revision.

[2] Natural Gasoline Association of America Tentative Standard Method for Determination of Vapor Pressure of Liquefied Petroleum Gas Products, most recent revision.

15. In § 31.3–8 (b) "have" to "has," "their" to "his," and "they" to "he."
16. In § 31.3–8 (c) "their" to "his."

GENERAL

Section 31.1–1 (b) is amended by the addition of the following sentence:

§ 31.1–1 *Issuance of certificate of inspection—TB/ALL.* * * *
(b) * * * The indorsement for the carriage of liquefied inflammable gases is set forth in § 38.11–1 of this subchapter.

Section 31.1–2 is amended to read as follows:

§ 31.1–2 *Authority to regulate vessels carrying hazardous cargo—TB/ALL.* Under the authority of R. S. 4405 and 4417a, as amended (46 U.S.C. 375, 391a), and Executive Order No. 9083 (7 F.R. 1609; 3 CFR Cum. Supp.), the Commandant prescribes the rules and regulations for all vessels having on board any inflammable or combustible liquid cargo in bulk.

Section 31.1–5 *Time allowance for changes in existing tank vessels—TB/ALL* is deleted.

Section 31.1–6 is amended to read as follows:

§ 31.1–6 *Owner's right of appeal—TB/ALL.* Whenever any person directly interested in or affected by any decision or action of any Officer in Charge, Marine Inspection, shall feel aggrieved by such decision or action, he may appeal therefrom to the District Coast Guard Officer having jurisdiction, and a like appeal shall be allowed from any decision or action of the District Coast Guard Officer to the Commandant, whose decision shall be final: *Provided, however,* That application for such re-examination of the case by a District Coast Guard Officer or by the Commandant shall be made within 30 days after the decision or action appealed from shall have been rendered or taken.

CERTIFICATES OF INSPECTION

Section 31.2–2 *Application for certificate of inspection of all existing tank vessels—TB/ALL* is deleted.

INSPECTION OF TANK VESSELS

Section 31.3–3 (a) is amended to read as follows:

§ 31.3–3 *Inspection of new tank vessels—TB/ALL*—(a) *Plans.* Triplicate copies of contract plans and specifications shall be forwarded to the Officer in Charge, Marine Inspection, in whose district the construction will take place, for submission to Headquarters for approval, but if the tank vessel is to be classed, such plans and specifications shall first be approved by a recognized classification society. If the plans and specifications are found to be in substantial agreement with the regulations in this chapter, they shall be approved, properly stamped and dated and distributed as follows: one set to owner or builder; one set to Officer in Charge, Marine Inspection, of the district in which the vessel is to be built; and one set shall be retained at Headquarters. If such plans and specifications are not approved, Headquarters shall notify the owner or builder promptly wherein they fail to comply with the regulations in this chapter.

Section 31.3–4 *First inspection of existing tank vessels—TB/ALL* is deleted.

Section 31.3–8 (a) is amended to read as follows:

§ 31.3–8 *Special inspections* — (a) *Repairs and alterations involving safety—TB/ALL.* No extensive alterations involving the safety of a tank vessel either in regard to hull or machinery shall be made without the approval of the Commandant. Before such alterations are carried out, copies of plans and specifications in triplicate for the work involved shall be forwarded to the Officer in Charge, Marine Inspection, in whose district the repairs will be made, for submission to Headquarters for approval. If approved, one set of the plans and specifications, properly stamped and dated, shall be returned to the owner or to the repair yard designated by the owner; one set to the Officer in Charge, Marine Inspection, who forwarded the plans and specifications to Headquarters; and one set shall be retained at Headquarters. If such plans and specifications are not approved, Headquarters shall promptly notify the owner or designated shipyard wherein they fail to comply with the regulations in this chapter. No extensive repairs to the hull or machinery which affect the safety of a vessel shall be made without the knowledge of the Officer in Charge, Marine Inspection.

GENERAL INSPECTION REPORTS AND PROCEDURE

Section 31.6–1 *Annual reports of inspectors—TB/ALL* is amended by deleting the last paragraph thereof.

Part 31 is amended by the addition of a new § 31.6–1a to follow § 31.6–1, reading as follows:

§ 31.6–1a *Publication of inspectors' reports — TB/ALL.* Annual reports shall not be made public until after they have been printed and made public by the Coast Guard. No inspector or clerk shall make public any report without the consent of the District Coast Guard Officer or the Commandant.

PART 32—REQUIREMENTS FOR HULLS, MACHINERY AND EQUIPMENT

Part 32 is amended by changing certain names, words, and phrases as follows:

1. In §§ 32.1–6 (d) (4), 32.5–1, 32.5–5, 32.5–6 (b), 32.6–1 (a), and 32.9–4 (g) "bureau" to "Commandant."
2. In § 32.5–12 "supervising inspector of the district" to "District Coast Guard Officer."
3. In §§ 32.1–6 (a), 32.3–1, 32.3–5, 32.4–1, 32.4–2 (b) (2), 32.5–5, 32.6–5, 32.7–2, and 32.7–9 "local inspectors" to "Officer(s) in Charge, Marine Inspection."
4. In § 32.1–1 "board of local inspectors" to "Officer in Charge, Marine Inspection."
5. In § 32.1–1 "inspector of hulls" to "inspector."
6. In §§ 32.3–1 and 32.4–1 "themselves" to "himself."

PART 33—LIFESAVING APPLIANCES

Part 33 is amended by changing certain names and phrases as follows:

1. In § 33.1–2 "Board of Supervising Inspectors" to "Commandant."
2. In §§ 33.2–3, 33.2–4, 33.2–5 (a) "bureau" to "Commandant."
3. In § 33.5–5 (e) "supervising inspector of the district" to "District Coast Guard Officer."
4. In § 33.6–3 "supervising merchant marine inspector" to "District Coast Guard Officer."
5. In §§ 33.1–1, 33.1–2, 33.1–4, and 33.2–7 "local inspectors" to "Officer in Charge, Marine Inspection."
6. In § 33.3–2 (f) "local or assistant inspectors" to "inspectors."

PART 34—FIRE-FIGHTING EQUIPMENT

Part 34 is amended by changing certain names and phrases as follows:

1. In §§ 34.1–6 and 34.1–7 "Board of Supervising Inspectors" to "Commandant."
2. In § 34.5–1 "Board of Supervising Inspectors, which" to "Commandant, who."
3. In §§ 34.1–7, 34.3–2, and 34.3–8 "Bureau" to "Commandant."
4. In § 34.5–2 "Bureau of Marine Inspection and Navigation" to "Coast Guard."
5. In §§ 34.1–1, 34.1–3, 34.1–7, 34.1–8, and 34.5–3 "local inspectors" to "Officer in Charge, Marine Inspection."
6. In § 34.1–4 "both the hull and boiler inspectors" to "the inspectors."

INSPECTION OF FIRE-FIGHTING EQUIPMENT

Section 34.1–2 *Inspection by both inspectors—TB/ALL* is deleted.

PART 35—OPERATION

Part 35 is amended by changing certain names and phrases as follows:

1. In § 35.3–3 (a) "this Bureau" to "the Coast Guard."
2. In § 35.2–9 (a) "board of local inspectors" to "Officer in Charge, Marine Inspection."

3. In §§ 35.3–1 and 35.3–2 (a), (b) "local inspectors" to "Officer in Charge, Marine Inspection."

NAVIGATION

Section 35.2–9 is amended by changing the head note, by deleting footnote 63, and by deleting paragraphs (b), (c), (d), and (e), and by substituting the following therefor:

§ 35.2–9 *Reports of accidents to tank vessels—TB/ALL.* * * *

(b) Whenever a tank ship collides with a lightship, buoy, or other aid to navigation under the jurisdiction of the Coast Guard, or is connected with any such collision, it shall be the duty of the licensed officer in command of such vessel to report the accident to the nearest Officer in Charge, Marine Inspection. Whenever a collision of this character is reported, the Officer in Charge, Marine Inspection, shall immediately transmit such information through official channels to the District Coast Guard Officer of the district in which the collision occurred.

(c) Whenever a tank barge in tow collides with a lightship, buoy, or other aid to navigation under the jurisdiction of the Coast Guard, or is connected with any such collision, it shall be the duty of the person in command of the towing vessel to report the accident to the nearest Officer in Charge, Marine Inspection. When any collision of this character is reported, the Officer in Charge, Marine Inspection, shall immediately transmit such information through official channels to the District Coast Guard Officer of the district in which the collision occurred.

(d) Whenever in an investigation of an accident to a vessel, made by the Coast Guard, it is stated by the officers of the vessel concerned, or it is developed by the investigation, or it is stated in a report of an accident, that the accident was due to a collision with a light vessel, buoy, or other aid to navigation under the jurisdiction of the Coast Guard, or to any fault of any such aid, or to the lack of such aid, the Officer in Charge, Marine Inspection, investigating the case, or to whom the report was made, shall promptly report through official channels to the Commandant, the location of the accident, the aid to navigation near or at which the accident occurred; the nature of the accident; the alleged cause of the accident; whether or not the accident was due to some alleged fault of the aid, either in its operation or location; the proposed improvement in the aid, if such has been suggested; and all other information or suggestions which would be of value. If an investigation was held, the findings shall also be reported. The Officer in Charge, Marine Inspection, shall also report in the same manner any other information or suggestions coming to him concerning the need of additional aids to navigation or the modification of any existing aids.

PART 37—SPECIFICATIONS FOR LIFESAVING APPLIANCES

Part 37 is amended by changing certain names and phrases as follows:

1. In §§ 37.1–1 (a), (c), (d), 37.1–3, 37.2–5 (d), 37.5–1 (a), 37.8–2, 37.8–10, and 37.9–5 "Board of Supervising Inspectors" to "Commandant."

2. In §§ 37.1–4 (a), 37.1–7, and 37.3–9 (d) "Board" to "Commandant."

3. In § 37.1–4 (b) "Bureau" to "Commandant."

4. In § 37.5–3 "Bureau of Marine Inspection and Navigation" to "Commandant."

5. In § 37.1–4 (h) "Bureau" to "Coast Guard."

6. In §§ 37.1–1 (b), 37.1–2, 37.2–1, 37.2–7, 37.10–3 (c), and 37.10–4 (b) "supervising inspector(s)" to "District Coast Guard Officer(s)."

7. In §§ 37.8–10 and 37.10–4 (a) "supervising inspector of the district" to "District Coast Guard Officer."

8. In § 37.1–2 "assistant or local inspector" to "inspector."

9. In § 37.8–10 "a local or assistant inspector" to "an inspector."

10. In § 37.3–11 (f) "inspector of this service" to "inspector."

11. In §§ 37.2–19 (f) and 37.4–3 "Inspector of this Bureau" to "inspector."

12. In § 37.1–2 "U. S. I." to "U. S. C. G."

13. In § 37.1–4 (j), (n), "B. M. I. N." to "U. S. C. G."

PART 38—TRANSPORTATION OF LIQUEFIED INFLAMMABLE GASES

Section 38.5–1 (f) is amended by changing the name "Director" to "Commandant."

NOTE: A revised edition of the "Tank Vessel Regulations" (46 CFR 30–35, 37, 38), containing these editorial changes and the other amendments published in previous issues of the FEDERAL REGISTER is being printed and may be obtained after May 15, 1945, from the Commandant (AOS), U. S. Coast Guard, Washington, D. C., or from offices of District Coast Guard Offices and Officers in Charge, Marine Inspection. (10 F.R. 3126–3129 incl., 24 March 1945.)

Subchapter F—Marine Engineering

PART 51—MATERIALS

PART 55—PIPING SYSTEMS

SEAMLESS COPPER PIPE

By virtue of the authority vested in me by R. S. 4405, 4417a, 4418, 4426, 4429, 4430, 4433, as amended, 49 Stat. 1544 (46 U.S.C. 375, 391a, 392, 404, 407, 408, 411, 367), and Executive Order 9083, dated February 28, 1942 (3 CFR, Cum. Supp.), the following amendments to the regulations are prescribed:

Section 51.14–1 is amended to read as follows:

§ 51.14–1 *Scope.* This specification covers seamless copper tubing and seamless copper pipe in all standard sizes for use at temperatures not exceeding 406° F. This material is suitable for steam, boiler feed, blow-off, compressed air, salt and fresh water lines. Such material shall be commercially round and free from cracks, seams, slivers, scale and other surface defects.

Section 55.19–3 is amended by changing paragraphs (e) and (g) to read as follows:

§ 55.19–3 *Detail requirements* * * *

(e) Seamless drawn copper pipe may be used for all purposes where the temperature does not exceed 406° F. but shall not be permitted in any system where it comes in contact with fuel oil, either internally or externally, except that short flexible copper connections of approved construction may be used for oil burners. Where copper pipe is used it must be properly annealed before installation.

* * * * *

(g) Seamless drawn brass pipe may be used where the temperature does not exceed 406° F. (10 F.R. 3697, 5 April 1945.)

Subchapter J—Rivers: General Rules and Regulations

PART 115—LICENSED OFFICERS

RENEWAL OF LICENSES

Pursuant to the authority of Executive Order No. 9083 (7 F.R. 1609), and to correct an error in Federal Register Document 45–3083 appearing in FEDERAL REGISTER of February 27, 1945 (10 F.R. 2251), § 115.9 is hereby amended so as to be identical with § 62.9 of this chapter as amended. (10 F.R. 3028, 21 March 1945.)

Waiver

TITLE 46—SHIPPING

Chapter I—Coast Guard: Inspection and Navigation

APPENDIX A—WAIVERS OF NAVIGATION AND VESSEL INSPECTION LAWS AND REGULATIONS

DECK OFFICERS, PROFICIENCY IN COMMUNICATIONS

Vessels engaged in business connected with the conduct of the war.

The Acting Secretary of the Navy having by an order dated October 1, 1942 (7 F.R. 7979), waived compliance with the navigation and vessel inspection laws administered by the U. S. Coast Guard, in the case of any vessel engaged in business connected with the conduct of the war, to the extent and in the manner that the Commandant, U. S. Coast Guard, shall

find to be necessary in the conduct of the war;

Now Therefore, I hereby find it to be necessary in the conduct of the war that there be waived compliance with the requirements of the provisions of certificates of inspection specified in 46 CFR 161.1, as amended, and the related provisions of 46 CFR 161.1 through 161.4, as amended, in the case of vessels engaged in business connected with the conduct of the war to the extent necessary to permit any particular vessel to include a particular deck officer on a particular voyage as one of the deck officers required by its certificate of inspection even though not in possession of satisfactory evidence of proficiency in wartime merchant ship communications, upon the condition that, by a certificate attached to the shipping articles, the Administrator, War Shipping Administration, or his designated representative, certifies that the specified deck officer has not yet obtained evidence of such proficiency and no deck officer of appropriate grade having such evidence is available for the voyage.

Dated: March 30, 1945 (10 F.R. 3562, 3 April 1945.)

Navigation and Vessel Inspection Circular No. 59

New Vessel Inspection Record for Ocean and Coastwise Vessels

UNITED STATES COAST GUARD,
Washington 25, D. C.,
13 April, 1945.

1. In order to provide its marine inspectors with readily available information as to the inspection status of inspected vessels the Coast Guard has developed a new Vessel Inspection Record (Form NAVCG 2832). It is believed that the use of this form will help to prevent unnecessary duplication of inspections, on the one hand, and to make sure that sufficient inspections and drills are conducted to ensure the safety of the vessel and crew, on the other hand.

2. This new record form will be installed and maintained on all domestic vessels of the following classes which are certificated for ocean or coastwise service: (a) freight vessels, including tankers, of 500 gross tons and over and (b) passenger vessels of any gross tons. The record will be kept in the pilot house of such vessels in a special metal container to be supplied by the Coast Guard.

3. The new record form will be installed and maintained by Coast Guard inspectors only, but it may be examined at any time by the master of the vessel. At the conclusion of every inspection the inspector will make an entry on the form which will show the type of inspection, date, port, drills conducted, and name of the inspector. All inspectors boarding the vessel will immediately examine this record to learn what types of inspections have been made on the ship as a basis for determining whether any further inspection is necessary. At the conclusion of every Annual Inspection, a new copy of the form will be installed, and the old copy will be removed and forwarded to Coast Guard Headquarters for review.

4. Copies of the Vessel Inspection Record will be installed on all affected vessels as soon as a supply of the forms and containers can be prepared and distributed to the various marine inspection offices.

(Signed) L. T. CHALKER,
Acting Commandant.

Equipment Approved by the Commandant

BOILER

Type MC80 Cyclotherm Steam Generator (Maximum working pressure of 125 pounds per square inch) (Assembly Dwg. No. C–549–E, dated 15 June 1944), submitted by General Furnaces Corp., 90 Broad Street, New York, N. Y. (Supersedes approval published 2 February, 1945, 10 F.R. 1418.) (10 F.R. 4589, 26 April 1945.)

DAVIT

Sheath screw davit, size 3–S–6–6 (General Assembly Dwg. No. 460–D, dated 24 July 1944, revised 19 September 1944) (Maximum working load of 7,000 pounds per arm, or 14,000 pounds per set), submitted by The Landley Company, 15 Park Row, New York, N. Y. (10 F.R. 4191, 18 April 1945.)

FEEDWATER REGULATORS

Copes marine boiler feedwater regulators, Copes Type "BI," Dwg. Nos. 23709–M, dated 11 March 1943 and 23708–M, dated 27 February 1945; Copes Type "P" for combination feed system, Dwg. No. 23712–L, dated 22 August 1944, for remote type Flowmatic, Dwg. No. 23716–M, dated 10 June 1944; Copes Type "SLH," Dwg. No. 23713–M, dated 1 March 1945, for relay operated, Dwg. No. 23606–M, for Flowmatic, 23715–M, dated 10 June 1944 and 21 December 1944; Copes direct operated Flowmatic type, Dwg. No. 23714–M, dated 10 June 1944 and 21 December 1944; Copes remote type Flowmatic for combination feed system, Dwg. No. 23717–L, dated 1 March 1945; manufactured by Northern Equipment Company, Erie, Pennsylvania. (The drawings listed herein are for basic designs only and where a specific installation drawing does not have the same drawing number as the basic design drawing such drawing shall carry as a cross reference the appropriate basic design drawing number or numbers.) (The listing for Copes Type "P" feedwater regulator above supersedes the approval of 27 June 1944, 9 F.R. 7119.) (10 F.R. 4191, 18 April 1945.)

FIRE EXTINGUISHER

Kidde Type 15Z, 15-pound carbon dioxide fire extinguisher with Navy type squeeze grip valve (Dwgs. No. 30183, dated 29 June 1944, No. 80887, dated 13 August 1943, No. 80853H, dated 11 June 1943, Rev. H, dated 11 April 1944, No. 66076, dated 25 August 1943, No. 80889, dated 16 August 1943), submitted by Walter Kidde & Company, Inc., 60 West St., Bloomfield, New Jersey. (This listing amends and replaces the approval published 6 February 1945, 10 F.R. 1582.) (10 F.R. 4589, 26 April 1945.)

FIRE-RESISTIVE SUBSTANCE FOR TREATMENT OF LIFE PRESERVER COVERS

Sinvalco #1861 compound for use in the treatment of cotton drill covers of life preservers, finished by the American Pad & Textile Company, Greenfield, Ohio, furnished by Sinclair and Valentine Co., 611 West 129th Street, New York 27, New York. (10 F.R. 4252, 20 April 1945.)

FLASHLIGHT

Three-cell waterproof molded flashlight, Type I, Size No. 2 (Assembly Dwg No. 3052, dated 18 January 1945, and Material List No. 3052, dated 7 February 1945), for use as an officer's signaling flashlight or as a lifeboat flashlight, submitted by Usona Manufacturing Company, Inc., 24 Eleventh Street, Toledo 2, Ohio. (10 F.R. 3937, 11 April 1945.)

EMBARKATION-DEBARKATION LADDER

Flexible embarkation-debarkation ladder (Dwg. No. 2, dated 12 October 1944), for use on vessels other than tank vessels, submitted by Fred A. Taubele, Portland 2, Oregon. (10 F.R. 3937, 11 April 1945.)

LIFE PRESERVER

Army-Navy Yoke Type adult kapok life preserver (Navy Department, Bureau of Ships Dwg. Nos. S3306–736709, S3306–736710, and S3306–736711 and Bureau of Ships Ad Interim Specification 23P15(INT)), Approval No. B–264, for use of military personnel, submitted by Chesapeake Appliance Corporation, 112 West Barre Street, Baltimore 1, Md. (10 F.R. 3937–3938, 11 April 1945.)

LIFE RAFT

20-person improved type well deck life raft, cork and balsa wood filled (Dwg. No. P–108, dated 14 March 1945), submitted by Roof Structures Inc., 45 West 45th Street, New York, N. Y. (10 F.R. 3482, 31 March 1945.)

LIFE RAFT

20-person improved type life raft, plywood construction, Foamglas filled (General Arrangement Dwg. No. 8059X, dated 21 March 1945, revised 30 March 1945), submitted by Colvin-Slocum Boats, Inc., Amesbury, Mass. (10 F.R. 3938, 11 April 1945.)

LUMINOUS MARKING FOR INTERIOR ACCOMMODATIONS

Luminous marking, designated Calcium Adhesive No. 309, with adhesive attached, submitted by John Mackler & Co., Chicago Heights, Ill.

Luminous markings, designated 567R and 581R, with adhesive attached, submitted by Luminescent Products Co., 1110 Industrial Trust Building, Providence 3, R. I.

Luminous markings, Lumite S, Types 1, 2, 3, and 4, with Lloyd LM adhesive, submitted by Interlaken Mills, Fiskeville, R. I. (10 F.R. 4191, 18 April 1945.)

AFFIDAVITS

It is required by the Marine Engineering Regulations that manufacturers submit affidavits before they manufacture items of equipment in accordance with these regulations for use on vessels subject to inspection by the Coast Guard. These affidavits are kept on file at Coast Guard Headquarters and a list of approved manufacturers is published for the information of all parties concerned. The affidavits received and accepted during the period from 16 March 1945 to 15 April 1945, are as follows:

C. A. Dunham Co., 451 East Ohio Street, Chicago 11, Ill., fittings.

J. A. Jones Construction Co., Inc., Panama City, Fla., flanges and fittings.

Marine Service & Machine Co., 30 Church Street, New York, N. Y., valves and fittings.

Oilgear Company, 1301–1417 West Bruce Street, Milwaukee 4, Wis., valves.

Refrigerating and Power Specialties Corp., 380 Brannan Street, San Francisco, Calif., cast fittings.

Rich Manufacturing Co., 3851 Santa Fe Avenue, Los Angeles, Calif., valves.

Wilcox, Crittenden & Co., Inc., Middletown, Conn., valves and fittings.

ITEMS SUITABLE FOR MERCHANT MARINE USE

ACCEPTABLE FUSIBLE PLUGS

The Marine Engineering Regulations require that fusible plug manufacturers who desire to have their products approved for marine service shall submit samples for testing from each heat to the Commandant. If the sample fusible plugs pass the test satisfactorily, the manufacturer is notified and then the plugs may be used on vessels subject to inspection by the Coast Guard. If the sample fusible plugs submitted do not pass the test, a fee of $20 for each sample submitted is required and must be paid to the National Bureau of Standards, Washington, D. C. For the information of all parties concerned, a list of approved heats which have been tested and found acceptable during the period from 16 March 1945 to 15 April 1945, is as follows:

The Gibson and Kirk Co., Baltimore 30, Md., heat Nos. 7, 8, and 9.

H. B. Sherman Mfg Co., Battle Creek, Mich., heat Nos. 468, 471, 475, 476, 477, 478, 479, 480, 481, and 482.

ELECTRICAL APPLIANCES

For the use of Coast Guard personnel in their work of inspecting merchant vessels, the following items of electrical equipment have been examined. This list is not intended to be an all-inclusive list of miscellaneous electrical equipment; accordingly, items not included may also be satisfactory for marine use.

Manufacturer and description of equipment	Location apparatus may be used				Date of action
	a	*b*	*c*	*d*	
Auth Electrical Specialty Co., Inc., New York, N. Y.:					
Pushbutton for interior communication service, watertight, catalog No. 230MI, drawing No. 122244, alteration 1	x	x	x	...	3-26-45
Bludworth Marine, New York, N. Y.: Model ES-101 Simplex Bludworth supersonic depth indicator	x	x	...	...	4-2-45
Buchanan Electrical Products Co., Inc., Metuchen, N. J.: Lok-Plug connectors; featherweight splice devices	...	...	...	...	3-31-45
Crouse-Hinds Co., Syracuse, N. Y.:					
Searchlight, 18", nonmagnetic, pilot-house control, drawing No. 52-KH2, revision of 12-26-44	x	x	x	...	4-3-45
Deck lighting fixtures, watertight, less guard and globe, 50 watts maximum, catalog Nos.:					
MLC 104, MLC 204, MLC 105, MLC 151, MLC 155, MLC 201, MLC 205, MLC 106, MLC 156, MLC 206, MLC 107, MLC 207, MLC 104P, MLC 204P, MLC 104C, MLC 204C, MLC 105C, MLC 155C, MLC 205C, MLC 106C, MLC 156C, MLC 206C, MLC 107C, MLC 207C, MLC 104PC, and MLC 204PC	x	...	...	...	4-6-45
Bulkhead lighting fixtures, watertight, less guard and globe, 50 watts maximum, catalog Nos.: MLB 104, MLB 204, MLB 104C, and MLB 204C	x	...	...	...	4-6-45
Pendent lighting fixtures, watertight, less guard and globe, 50 watts maximum, catalog Nos.:					
MLA 1104, MLA 2104, MLA 2155, MLA 1105, MLA 1205, MLA 1106, MLA 1206, MLA 2156, MLA 1107, MLA 2107, MLA 1204, MLA 2204, MLA 2205, MLA 2105, MLA 1155, MLA 1156, MLA 2106, MLA 2206, MLA 1207, and MLA 2207	x	...	...	...	4-6-45
Deck lighting fixtures, watertight, with guard and globe, catalog Nos.:					
MLC 104CG, MLC 104G, MLC 104SCG, MLC 104SC (with switch), MLC 104PSCG and MLC 104PG, 100 watts maximum, MLC 204CG, MLC 204G, MLC 204SCG, MLC 204SC (with switch), MLC 204PCG and MLC 204PG, 200 watts maximum	x	x	x	...	4-6-45
Crouse-Hinds Co., Syracuse, N. Y—Continued					
Deck lighting fixtures, watertight, with guard, globe and reflector, catalog Nos.:					
MLC 105CG and MLC 105G, 100 watts maximum	x	x	x	...	4-6-45
MLC 105SCG and MLC 105SG (with switch), 100 watts maximum	x	x	...	...	4-6-45
MLC 155CG and MLC 155G, 150 watts maximum	x	x	x	...	4-6-45
MLC 155SCG and MLC 155SC (with switch), 150 watts maximum	x	x	...	...	4-6-45
MLC 205CG and MLC 205G, 200 watts maximum	x	x	x	...	4-6-45
MLC 205SCG and MLC 205SG (with switch), 200 watts maximum	x	x	...	...	4-6-45
MLC 106CG and MLC 106G, 100 watts maximum	x	x	x	...	4-6-45
MLC 106SCG and MLC 106SG (with switch), 100 watts maximum	x	x	...	...	4-6-45
MLC 156CG and MLC 156G, 150 watts maximum	x	x	x	...	4-6-45
MLC 156SCG and MLC 156SG (with switch), 150 watts maximum	x	x	...	...	4-6-45
MLC 206CG and MLC 206G, 200 watts maximum	x	x	x	...	4-6-45
MLC 206SCG and MLC 206SG (with switch), 200 watts maximum	x	x	...	...	4-6-45
MLC 107CG and MLC 107G, 100 watts maximum	x	x	x	...	4-6-45
MLC 107SCG and MLC 107SG (with switch), 100 watts maximum	x	x	...	...	4-6-45
MLC 207CG and MLC 207G, 200 watts maximum	x	x	x	...	4-6-45
MLC 207SCG and MLC 207SG (with switch), 200 watts maximum	x	x	...	...	4-6-45
Bulkhead lighting fixtures, watertight, with guard and globe:					
MLB 104CG and MLB 104G, 100 watts maximum	x	x	x	...	4-6-45
MLB 104SCG and MLB 104SG (with switch), 100 watts maximum	x	x	...	...	4-6-45
MLB 204CG and MLB 204G, 200 watts maximum	x	x	x	...	4-6-45
MLB 204SCG and MLB 204SG (with switch), 200 watts maximum	x	x	...	...	4-6-45

a. Passenger and crew quarters and public spaces.
b. Machinery, cargo, and work spaces.
c. Open decks.
d. Pump rooms of tank vessels.

Manufacturer and description of equipment	Location apparatus may be used				Date of action
	a	*b*	*c*	*d*	
Crouse-Hinds Co., Syracuse, N. Y—Continued					
Pendent lighting fixtures, watertight, with guard and globe, catalog Nos.:					
MLA 1104G, 100 watts maximum	X	X	X	...	4-6-45
MLA 1104SG (with switch), 100 watts maximum	X	X	...	...	4-6-45
MLA 2104G, 100 watts maximum	X	X	X	...	4-6-45
MLA 2104SG (with switch), 100 watts maximum	X	X	...	...	4-6-45
MLA 2204G, 200 watts maximum	X	X	X	...	4-6-45
MLA 2204SG (with switch), 200 watts maximum	X	X	...	...	4-6-45
MLA 1204G, 200 watts maximum	X	X	X	...	4-6-45
MLA 1204SG (with switch), 200 watts maximum	X	X	...	...	4-6-45
Pendent lighting fixtures, watertight, with guard, globe and reflector, catalog Nos.:					
MLA 1105G, 100 watts maximum	X	X	X	...	4-6-45
MLA 1105SG (with switch), 100 watts maximum	X	X	...	...	4-6-45
MLA 1155G, 150 watts maximum	X	X	X	...	4-6-45
MLA 1155SG (with switch), 150 watts maximum	X	X	...	...	4-6-45
MLA 1205G, 200 watts maximum	X	X	X	...	4-6-45
MLA 1205SG (with switch), 200 watts maximum	X	X	...	...	4-6-45
MLA 2105G, 100 watts maximum	X	X	X	...	4-6-45
MLA 2105SG (with switch), 100 watts maximum	X	X	...	...	4-6-45
MLA 2155G, 150 watts maximum	X	X	X	...	4-6-45
MLA 2155SG (with switch), 150 watts maximum	X	X	...	...	4-6-45
MLA 2205G, 200 watts maximum	X	X	X	...	4-6-45
MLA 2205SG (with switch), 200 watts maximum	X	X	...	...	4-6-45
MLA 1106G, 100 watts maximum	X	X	X	...	4-6-45
MLA 1106SG (with switch), 100 watts maximum	X	X	...	...	4-6-45
MLA 2106G, 100 watts maximum	X	X	X	...	4-6-45
MLA 2106SG (with switch), 100 watts maximum	X	X	...	...	4-6-45
MLA 1156G, 150 watts maximum	X	X	X	...	4-6-45
MLA 1156SG (with switch), 150 watts maximum	X	X	...	...	4-6-45
MLA 2156G, 150 watts maximum	X	X	X	...	4-6-45
MLA 2156SG (with switch), 150 watts maximum	X	X	...	...	4-6-45
MLA 1206G, 200 watts maximum	X	X	X	...	4-6-45
MLA 1206SG (with switch), 200 watts maximum	X	X	...	...	4-6-45
MLA 2206G, 200 watts maximum	X	X	X	...	4-6-45
MLA 2206SG (with switch), 200 watts maximum	X	X	...	...	4-6-45
MLA 1107G, 100 watts maximum	X	X	X	...	4-6-45
MLA 1107SG (with switch), 100 watts maximum	X	X	...	...	4-6-45
MLA 2107G, 100 watts maximum	X	X	X	...	4-6-45
MLA 2107SG (with switch), 100 watts maximum	X	X	...	...	4-6-45
MLA 1207G, 200 watts maximum	X	X	X	...	4-6-45
MLA 1207SG (with switch), 200 watts maximum	X	X	...	...	4-6-45
MLA 2207G, 200 watts maximum	X	X	X	...	4-6-45
MLA 2207SG (with switch), 200 watts maximum	X	X	...	...	4-6-45
The Dayton Manufacturing Co., Dayton, Ohio:					
Lighting fixtures, watertight:					
Bulkhead fixture, 50 watts maximum, drawing No. 1495-4-1, revision 0:					
Type XIV-2-R, less guard	X	...	...	...	3-23-45
Type XIV-1-C, with guard	X	X	X	...	3-23-45
Bulkhead fixture, type XIII-1-C, key, 50 watts maximum, drawing No. 1492, revision 5	X	X	X	...	3-23-45
Water gauge light, 40 watts maximum, fixture No. B-5533, drawing No. 1889-1, revision 0	X	X	X	...	3-23-45
Ceiling fixture, 100 watts maximum, drawing No. 1497-4-1, revision 0:					
Types XIV-3-C and XIV-3-R, with guard	X	X	X	...	3-23-45
Type XIV-4-R, less guard	X	...	...	...	3-23-45
Lighting fixtures, nonwatertight:					
Ceiling light, 2 40-watt lamps maximum, fixture No. C-10795, drawings Nos. 1966 and 1966-1, revision 0	X	...	...	...	3-23-45
Ceiling light, 40 watts, maximum, fixture No. C-10794, drawing Nos. 1965 and 1965-1, revision 0	X	...	...	...	3-23-45
Ceiling light, 4 40-watt lamps maximum, fixture No. C-10761-1, drawing No. 1837-1, revision 0	X	...	...	...	3-23-45
The Dayton Manufacturing Co., Dayton, Ohio—Con.					
Lighting fixtures, nonwatertight—Continued.					
Ceiling light, type XI-3; 50 watts maximum, drawing No. 1494-1-1, revision 0	X	...	...	...	3-23-45
Ceiling light, type VIII-MR-III, 100 watts maximum, drawing No. 1651-1-1, revision 0	X	...	...	...	3-23-45
Mirror, desk or table light, 40 watts maximum, fixture No. B-5546, drawing Nos. 1963 and 1963-1, revision 0	X	...	...	...	3-23-45
Desk or berth light, 25 watts maximum, fixture No. B-5547, drawings Nos. 1964 and 1964-1, revision 0	X	...	...	...	3-23-45
Bulkhead light, 40 watts maximum, fixture No. B-5545, drawings Nos. 1962 and 1962-1, revision 0	X	...	...	...	3-23-45
Expediters, Ltd., San Francisco, Calif.:					
For use with nonwatertight equipment and in locations where nonwatertight equipment is permitted:					
Terminal tube, series 400.					
Fixture tube, series 500.					
Bulkhead tube, series 600.					
Kickpipe tube, series 700.					
90° terminal tube, series 490.					
90° fixture tube, series 590.					
"Y" terminal tube, series 400Y.					
"Y" fixture tube, series 500Y.					
Drawings Nos. 6634-1, 2, 3, 4, 5, 6, 7, 8 and 10, all alteration 1	X	...	...	...	3-19-45
Henschel Corporation, Amesbury, Mass.:					
Mechanical engine order telegraph equipment transmitters with reply:					
9", single engine, single face, drawing No. 10-102, alteration 4	X	X	...	...	4-4-45
9", single engine, double face, drawing No. 10-102-1, alteration 2	X	X	...	...	4-4-45
9", double engine, double face, drawing No. 10-102-2, alteration 3	X	X	...	...	4-4-45
6", single engine, single face, drawing No. 10-107, alteration 4	X	X	...	...	4-4-45
6", double engine, double face, drawing No. 10-107-1, alteration 4	X	X	...	...	4-4-45
6", single engine, double face, drawing No. 10-107-2, alteration 3	X	X	...	...	4-4-45
12", single engine, double face, drawing No. 10-780, alteration 2	X	X	...	...	4-4-45
12", single engine, single face, drawing No. 10-786, alteration 2	X	X	...	...	4-4-45
12", single engine, double face, drawing No. 10-786-1, alteration 1	X	X	...	...	4-4-45
12", double engine, double face, drawing No. 10-787, alteration 2	X	X	...	...	4-4-45
ILG Electric Ventilating Co., Chicago, Ill.: Porthole ventilating fan, model A portvente, drawing No. N-8839, alteration 0	X	X	X	...	3-30-45
Lovell-Dressel Co., Inc., Arlington, N. J.:					
Switch and receptacle, angle type, watertight, 10 amperes, 250 volts, catalog No. 2755, drawing No. 2755 (no alteration No.)	X	X	X	...	3-16-45
Switch and double receptacle, angle type, watertight, 10 amperes, 250 volts, catalog No. 2758, drawing No. 2758 (no alteration No.)	X	X	X	...	3-16-45
Manitowoc Shipbuilding Co., Manitowoc, Wis.: Running light tell-tale panel, drawing No. 15561, alteration 2	X	X	...	...	3-16-45
The Oakford Co., New York, N. Y.:					
Gangway lighting fixture, watertight, 100 watts maximum, designs 2211 and 122, drawing No. 2192-93, alteration 3	X	X	X	...	3-21-45
Pendent lighting fixture, watertight, 100 watts maximum, design 226G, drawing No. 2197, alteration 3	X	X	X	...	3-21-45
Perkins Marine Lamp & Hardware Corporation, Brooklyn, N. Y.: Blinker key, watertight, figure 9, drawing No. 9, alteration 2	X	X	X	...	4-1-45
Pilot Marine Corporation, New York, N. Y.: Salinity Indicating Equipment, drawings Nos. 647A, 648, 649A, 622, 650, 651, 652, and 370-6, all alteration 0	X	X	...	...	3-16-45
Wilmot Castle Co., Rochester, N. Y.: Operating room lighting fixture (this unit shall be installed not less than 7 feet above operating room floor), drawing No. 801, alteration 5	X	...	...	...	4-13-45
Zinsmeyer Co., Los Angeles, Calif.:					
Running light panel with dimmers, semiautomatic, watertight, pedestal mounting, drawing No. MT-41, alteration 0	X	X	X	...	4-12-45
Running light tell-tale and dimmer panel for wheelhouse, dripproof, drawing No. MT-42, alteration 0	X	X	...	...	4-12-45
Running light and transfer switch panels, drawings Nos. MT-43 and MT-44, both alteration 0	X	X	...	...	4-12-45

a. Passenger and crew quarters and public spaces.
b. Machinery, cargo, and work spaces.
c. Open decks.
d. Pump rooms of tank vessels.

Merchant Marine Personnel Statistics

MERCHANT MARINE LICENSES ISSUED DURING MARCH 1945

DECK OFFICERS

Region	Master										Chief mate										Second mate									
	Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers		Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers		Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers	
	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R
Atlantic coast	19	58	4	20	----	2	7	38	----	3	127	11	----	6	----	----	5	4	----	----	239	12	----	4	----	----	----	----	----	----
Gulf coast	6	16	----	3	----	----	----	1	2	8	28	2	----	----	----	----	2	----	----	----	44	1	----	----	----	----	----	----	----	----
Great Lakes and rivers	2	----	1	----	13	57	----	1	5	20	1	----	----	----	----	----	----	----	4	14	----	1	----	----	----	----	----	----	----	----
Pacific coast	14	47	2	----	----	1	9	14	----	----	71	9	----	----	----	----	1	2	2	----	115	3	----	----	----	----	----	----	----	----
Total	41	121	7	23	13	60	16	54	7	31	227	22	----	6	----	----	8	6	6	14	398	17	----	4	----	----	----	----	----	----

Region	Third mate										Pilots						Master mate				Total		
	Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers		Great Lakes		B. S. & L.		Rivers		Uninspected vessels, high seas				Original	Renewal	Grand total
	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R			
Atlantic coast	331	10	----	1	----	----	1	----	----	----	----	----	64	141	----	----	----	3	1	----	798	313	1,111
Gulf coast	14	1	----	----	----	----	----	----	----	----	----	----	19	24	----	----	----	----	----	----	115	56	171
Great Lakes and rivers	----	----	----	----	----	----	----	----	----	----	12	58	31	14	21	24	----	----	----	----	90	189	279
Pacific coast	231	3	----	----	----	----	----	----	----	----	----	----	28	48	1	1	----	3	----	----	474	131	605
Total	576	14	----	1	----	----	1	----	----	----	12	58	142	227	22	25	----	6	1	----	1,477	689	2,166

ENGINEER OFFICERS

Region	Chief engineer, steam				First assistant engineer, steam				Second assistant engineer, steam				Third assistant engineer, steam			
	Ocean		Inland		Ocean		Inland		Ocean		Inland		Ocean		Inland	
	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R
Atlantic coast	88	170	6	49	135	26	1	11	288	38	----	4	436	29	----	----
Gulf coast	21	22	----	10	26	9	1	3	27	3	----	----	9	4	----	----
Great Lakes and rivers	3	13	14	66	3	4	22	52	3	3	19	29	7	----	4	1
Pacific coast	30	30	1	4	59	7	----	----	85	12	----	----	204	4	----	----
Total	142	235	21	129	223	46	24	66	403	56	19	33	656	37	4	1

Region	Motor vessels								Uninspected vessels				Totals		
	Chief engineer		First assistant engineer		Second assistant engineer		Third assistant engineer		Chief engineer		Assistant engineer		Original	Renewal	Grand total
	O	R	O	R	O	R	O	R	O	R	O	R			
Atlantic coast	16	90	5	14	8	13	394	2	----	1	----	1	1,377	448	1,825
Gulf coast	6	17	4	5	5	2	3	1	----	----	----	----	102	76	178
Great Lakes and rivers	4	11	4	7	1	1	1	1	----	----	----	----	85	188	273
Pacific coast	8	26	1	8	5	2	187	3	----	2	----	----	580	98	678
Total	34	144	14	34	19	18	585	7	----	3	----	1	2,144	810	2,954

ORIGINAL SEAMEN'S DOCUMENTS ISSUED, MONTH OF MARCH, 1945

Region	Continuous discharge book	Certificate of identity	A. B., green, 3 years [1]	A. B., green, 9 months emergency [1]	A. B., blue, 18 months, 12 months [1]	A. B., blue, 6 months emergency [2]	A. B., blue, 6 months emergency [3]	Lifeboat, 12-24 months [4]	Lifeboat, 6-12 months emergency [4]	Q.M.E.D., 6 months	Q.M.E.D., emergency	Radio operators	Certificate of service	Tanker man	Staff officer	Total
Atlantic coast	82	3,270	73	528	35	49	0	3,085	0	279	856	316	2,244	11	189	11,017
Gulf coast	26	823	14	136	15	1	2	562	0	41	227	13	594	38	22	2,514
Pacific coast	115	3,257	68	347	99	19	0	565	0	210	519	41	2,694	7	115	8,056
Great Lakes and rivers	3,428	354	31	38	23	28	0	107	0	78	95	12	3,699	3	2	7,898
Total	3,651	7,704	186	1,049	172	97	2	4,319	0	608	1,697	382	9,231	59	328	29,485

[1] Unlimited.
[2] Great Lakes, lakes, bays, and sounds.
[3] Tugs and towboats and freight vessels under 500 tons (miscellaneous).
[4] 12 months deck or 24 months other departments.
[4] 6 months deck or 12 months other departments.

NOTE.—There were 394 Panamanian Employment Cards issued.

WAIVERS OF MANNING REQUIREMENTS FROM 1 MARCH TO 31 MARCH, 1945

Authority for These Waivers Contained in Navigation and Vessel Inspection Circular No. 31, Dated 13 March, 1943

Region	Number of vessels	Deck officers substituted for higher ratings	Engineer officers substituted for higher ratings	Able seamen substituted for deck officers	Ordinary seamen substituted for able seamen	Qualified members of engine department substituted for engineer officers	Wipers or coal passers substituted for qualified members of engine department	Wipers, coal passers or cadets substituted for engineer officers	Ordinary seamen or cadets substituted for deck officers	Total
Atlantic coast	711	256	436	24	1,021	51	154	17	26	1,985
Gulf coast	96	31	59	2	116	7	16	3	3	237
Pacific coast	438	207	297	25	955	85	303	18	14	1,904
Great Lakes										
Total	1,245	494	792	51	2,092	143	473	38	43	4,126

CREW SHORTAGE REPORTS FROM 1 MARCH TO 31 MARCH, 1945

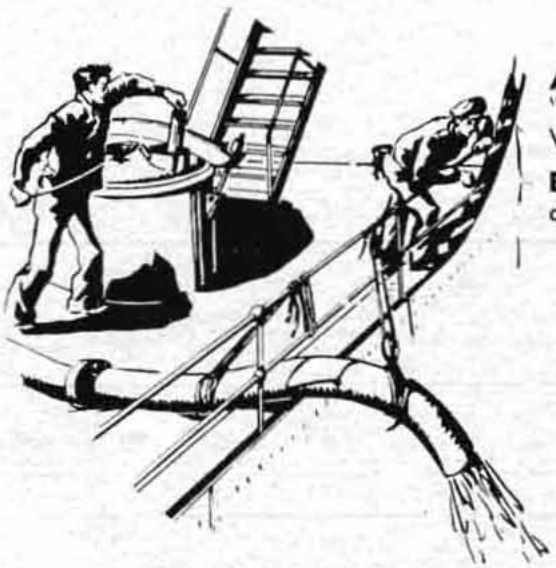
These Reports Submitted in Accordance With Navigation and Vessel Inspection Circular No. 34, Dated 1 May 1943

Region	Number of vessels	Ratings in which shortages occurred												Total
		Chief mate	Second mate	Third mate	Radio	Able seamen	Ordinary seamen	Chief engineer	First engineer	Second engineer	Third engineer	Qualified member engine department	Wiper or coal passer	
Atlantic coast	13	1	1	2		8	6				1	8		27
Gulf coast	10					1	3			1	1	7	3	16
Pacific coast	24		1	1		46	8		1	1	2	19	2	81
Great Lakes														
Total	47	1	2	3		55	17		1	2	4	34	5	124

COAST GUARD DISTRIBUTION:
A, B, C, D, E

TIPS FOR TANKERS

2 When handling ballast



A. Secure from Coast Guard, Captain of the Port, "Suggested Procedure For Disposal of Ballast Water"—5 Nov. 1943.

B. Subject to the provisions of the above procedure:

[a] Discharge as much ballast water as possible at sea, preferably 100 miles or more off shore before arrival in port.

[b] If ballast brought into port must be discharged INTO THE HARBOR, wash down AT SEA the tanks and pipe lines used for this ballast whenever possible and NOTE THIS FACT IN LOG. Discharge this clean ballast on arrival in accordance with the above "Suggested Procedure."

[c] If tanks can NOT be cleaned at sea, AVOID WHERE POSSIBLE, THE DISCHARGING OF THIS BALLAST OR THE DRAWING OFF OF BALLAST WATER INTO HARBORS. Where there is no other alternative than to run such ballast into harbors, NOTIFY THE CAPTAIN OF THE PORT BEFORE STARTING AND FOLLOW HIS INSTRUCTIONS.

[d] When ballast is discharged into harbors it should be discharged "OVER THE TOP" where it may be constantly inspected, and not through pump room sea connections.

[e] WHEN TAKING ON BALLAST IN HARBORS START CARGO PUMPS BEFORE OPENING PUMP ROOM SEA VALVES.

U. S. GOVERNMENT PRINTING OFFICE : 1944