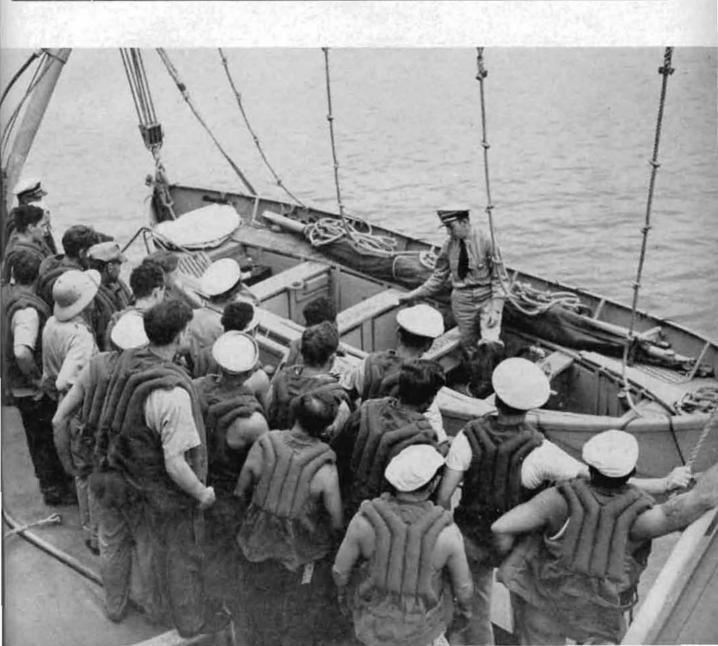
CG 129

# PROCEEDINGS OF THE

# MERCHANT MARINE COUNCIL



Vol. 3 June 1946 No. 6



# MERCHANT MARINE COUNCIL

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# The Merchant Marine Council of the United States Coast Guard

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# COUNCIL ACTIVITIES

The Council considered and recommended to the Commandant approval of several amendments to the regulations entitled, "Explosives or Other Dangerous Articles or Substances and Combustible Liquids on Board Vessels." These amendments affect two commodities. The existing regulations list a hazardous article under the descriptive name "bleaching powder," which normally contains a small amount of chlorine. Experience has indicated shipments of calcium hypochlorite containing more than 39 percent available chlorine are moving in commerce. As this commodity is an oxidizing material the regulations were changed by adding the article calcium hypochlorite compounds, dry, containing more than 8.80 percent available oxygen (39 percent available chlorine) and by amending the description of the article bleaching powder to cover bleaching powder, dry, containing less than 8.80 percent available oxygen (39 percent available chlorine).

The description for the article oakum was modified by adding the item "twisted jute packing" (rope) (treated or untreated). The original Coast Guard regulations included oakum, but limited its stowage to "on deck under cover." It appears that this limitation has caused freight rates to be increased considerably and industry has indicated that shipments have suffered water damage with consequent loss. Therefore, the stowage has been increased to permit stowage on 'tween decks as well as on deck under cover.

The publication of the pamphlet containing regulations entitled, "Construction or Material Alteration of Passenger Vessels of the United States of 100 Gross Tons and Over Propelled by Machinery" was recommended. This revised edition should be available for distribution within 3 or 4 months.

The Council is considering changes in the regulations regarding the reports of casualties in which vessels of the United States are involved. The proposals provide that submission of either Form NAVCG 2692 or NAVCG 924E be considered as the notice required by the statute if the completed form is submitted promptly. Another change involves establishing a limitation of \$1,500 as the factor in determining what constitutes "material damage" as used in the statute. Under present regulations both a report and a notice are required and \$500 is

the determining factor as to what is material damage. Copies of the proposed regulations have been submitted to industry with the request that comments should be submitted to the chairman, Merchant Marine Council, U. S. Coast Guard, Washington, D. C., as soon as possible but not later than 30 June 1946.

A recommendation has been submitted to the Coast Guard that it license and exercise control over compass adjusters engaged in the adjustment of compasses on merchant vessels subject to inspection. Any comments on this proposal should be submitted to the Chairman, Merchant Marine Council.

#### WAIVERS

A proposed Navigation and Vessel Inspection Circular on waivers issued during the war is being prepared and will list the waivers which will be cancelled together with the effective date for each rescission. This circular will deal mainly with waivers which permitted the use of materials or equipment which at the time issued were critical items because of war conditions. It is proposed to cancel those waivers which are no longer necessary in the national interest during the readjustment to posthostilities operations. Further study is being made of waivers which have to be retained for the time being. It is planned that any changes in the regulations will be referred to the merchant marine industry for comment prior to their promulgation.

#### OCEAN AND COASTWISE REGULATIONS

The pamphlet entitled, "General Rules and Regulations for Vessel Inspection, Ocean and Coastwise," dated March 1946, is now available and replaces the edition dated August 1943. This pamphlet contains all the amendments promulgated and published in the Federal Register on or before 15 March 1946. Copies of the publication may be obtained upon request from the offices of the various Coast Guard District Commanders, Officers in Charge, Marine Inspection. or the Commandant, U. S. Coast Guard, Washington 25, D. C.

The regulations in this pamphlet include the requirements for lifesaving appliances and fire-fighting apparatus, as well as regulations for fire prevention, special operating requirements, and inspection. These regulations are applicable to merchant cargo vessels, passenger vessels, and steam yachts navigating oceans and coastwise waters of the United States.

# The President's Reorganization Plan

The President, by Reorganization Plan No. 3 of 1946, prepared in accordance with the provisions of the Reorganization Act of 1945, has recommended the permanent transfer of functions of the Bureau of Marine Inspection and Navigation to the Coast Guard and the Bureau of Customs originally made by Executive Order No. 9083 under the authority of the First War Powers Act. This reorganization plan will go into effect in July unless Congress by specific legislation disapproves the plan.

From the President's Message to the Congress of the United States the following passages have been excerpted:

"I have found, after investigation, that each reorganization contained in the plan is necessary to accomplish one or more of the purposes set forth in section 2 (a) of the Reorganization Act of 1945.

#### DEPARTMENT OF THE TREASURY

"The functions of the Bureau of Marine Inspection and Navigation were transferred from the Department of Commerce to the Coast Guard and the Bureau of Customs in 1942 by Executive order under the First War Powers Act. This arrangement has been proved successful by the experience of the past 4 years. Part I of the reorganization plan continues the arrangement on a permanent

#### UNITED STATES COAST GUARD

"The principal functions of the Bureau of Marine Inspection and Navigation were those of the inspection of vessels and their equipment, the li-censing and certificating of officers and seamen, and related functions designed to safeguard the safety of life and property at sea. Thus these functions are related to the regular activities and general purposes of the Coast Guard. The Coast Guard administered them successfully during the tremendous expansion of wartime shipping, by virtue of improvements in organization and program, many of which ought to be continued.

"The plan also transfers to the Coast Guard the functions of the collectors of customs relating to the award of numbers to undocumented vessels. These functions, too, were temporarily transferred to the Coast

Guard in 1942."

The Reorganization Plan No. 3 of 1946 is composed of 10 parts. Part I dealing with functions of the Bureau of Marine Inspection and Navigation reads as follows:

"Prepared by the President and transmitted to the Senate and House of Representatives in Congress assembled, May 16, 1946, pursuant to the provisions of the Reorganization Act of 1945, approved December 20, 1945.

#### PART I. DEPARTMENT OF THE TREASURY

"SECTION 101. Functions transferred to the United States Coast Guard .-(a) There are hereby transferred to the Commandant of the Coast Guard those functions of the bureau, offices, and boards specified in the first sentence of section 104 of this plan, and of the Secretary of Commerce, which pertain to approval of plans for the construction, repair, and alteration of vessels; approval of materials, equipment, and appliances; classification of vessels; inspection of vessels and their equipment and appliances; issuance of certificates of inspection, and of permits indicating the approval of vessels for operations which may be hazardous to life or property; administration of load line requirements; enforcement of other provisions for the safety of life and property on vessels; licensing and certificating of officers, pilots, and seamen; suspension and revocation of licenses and certificates; investigation of marine casualties; enforcement of manning requirements, citizenship requirements, and requirements for the mustering and drilling of crews, control of logbooks; shipment, discharge, protection, and welfare of merchant seamen; enforcement of duties of shipowners and officers after accidents; promulgation and enforcement of rules for lights, signals, speed, steering, sailing, passing, anchorage, movement, and towlines of vessels and lights and signals on bridges; numbering of undocumented vessels; prescription and enforcement of regulations for outfitting and operation of motorboats; licensing of motorboat operators; regulation of regattas and marine parades; all other functions of such bureau, offices, and boards which are not specified in section 102 of this plan; and all other functions of the Secretary of Commerce pertaining to those functions of agencies abolished under section 104 of this plan which are not specified in section 102 of this plan, including the remission and mitigation of fines, penalties, and forfeitures incurred under the laws governing these functions and those incurred under the act of December 17, 1941 (55 Stat. 808), as amended.

(b) The functions relating to the award of numbers to undocumented vessels vested by law in the collectors of customs are hereby transferred to the Commandant of the Coast Guard.

"Sec. 102. Functions transferred to Bureau of Customs .- There are hereby transferred to the Commissioner of Customs those functions of the bureau, offices, and boards specified in the first sentence of section 104 of this plan, and of the Secretary of Commerce, which pertain to registry, enrollment, and licensing of vessels, including the issuance of commissions to yachts, the assignment of signal letters, and the preparation of all reports and publications in connection therewith; measurement of vessels. administration of tonnage duties, and collection of tolls; entry and clearance of vessels and aircraft, regulation of vessels in the coasting and fishing trades, and limitation of the use of foreign vessels in waters under the jurisdiction of the United States; recording of sales, conveyances, and mortgages of vessels; protection of steerage passengers; all other functions of such bureau, offices, and boards which were performed by the Bureau of Customs on behalf thereof immediately prior to the effective date of Executive Order No. 9083 of February 28, 1942 (7 F.R. 1609); and the power to remit and mitigate fines, penalties, and forfeitures incurred under the laws governing these functions.

"SEC. 103. Powers of the Secretary of the Treasury. - The functions transferred by sections 101 and 102 of this plan may be performed through such officers and employees of the United States Coast Guard and the Bureau of Customs, respectively, as may be designated by the Commandant of the Coast Guard and the Commissioner of Customs, respectively, and shall be performed subject to the direction and control of the Secretary of the Treasury except as otherwise required by law with respect to the United States Coast Guard whenever it operates as a part of the Navy.

"Sec. 104. Abolition of agencies .-The Bureau of Marine Inspection and Navigaton, the office of the director thereof, the offices of supervising inspectors, principal traveling inspectors, local inspectors, assistant inspectors, shipping commissioners, deputy shipping commissioners, and the board of supervising inspectors, the boards of local inspectors, the marine casualty investigation board, and the marine boards are hereby abolished. The Secretary of the Treasury shall provide for winding up those affairs of the said abolished agencies which are not otherwise disposed of herein."

Admiral J. F. Farley, USCG, Commandant of the Coast Guard, made the following statement concerning the President's Reorganization Plan:

"In view of the phrasing of Section 104 of the President's Reorganization Plan No. 3 which provides for the abolishing of certain offices and boards of the former Bureau of Marine Inspection and Navigation, a statement as to the results of this provision may be helpful.

"This proposal does not alter the duties to be performed by a marine inspection service: it merely eliminates certain titles assigned to personnel in a previous organization. Otherwise all of the statutes affecting marine inspection remain in full force and effect. The President's proposal would have the effect of making permanent Executive Order 9083 by which in March 1942, the functions of the Bureau of Marine Inspection and Navigation were transferred on a temporary basis to the Commandant of the Coast Guard.

"The Coast Guard has been administering the marine inspection duties under the provisions of this Executive Order for four years. If the Reorganization Plan becomes effective, future administration will generally follow the pattern of the past. Permanent legislation will be requested to protect the present and future status of the former permanent Bureau of Marine Inspection and Navigation personnel as members of the regular Coast Guard and also to insure means of obtaining in the future personnel fully qualified in merchant marine matters.

"The Coast Guard will continue to work in the closest possible harmony with the maritime industry as a whole so that the regulatory duties of the service may be intelligently and cooperatively exercised. It is likewise imperative that maritime interests as a whole cooperate and assist the Coast Guard with the best available expert advice in solving the present and future problems facing both the maritime interests and the Government."

### MARITIME SESSION OF INTERNATIONAL LABOR ORGANIZATION

A final maritime session of the International Labor Organization was held in Seattle, Wash., on 6 June 1946. On subsequent dates thereto, proposals in the form of draft conventions, recommendations, and resolutions were considered for adoption. Those adopted must be ratified and proclaimed by the President of the United States by and with the advice of the Senate before they become obligatory upon the United States Maritime Industry. A large portion of the responsibility for administering the ratified proposals will rest upon the U.S. Coast Guard.

Preliminary discussions regarding the general welfare (employment, social, and shipboard living conditions) of merchant seamen on an international scale, had previously been held in Copenhagen, Denmark, on 15 November 1945. There, representatives of more than 20 member maritime nations were present. Each nation was represented by a tripartite grouppersons designated by the association of shipowners, the government, and the seafarer's organizations.

In Seattle the tripartite principle was continued. Delegations from more than 30 nations were present in the form of a world parliament for discussing maritime labor, economic, and social problems. Each country was entitled to send 4 delegates, 2 representing the government, 1 representing the association of employers, and 1 representing organized seamen. Each delegate had one vote, but was assisted by as many advisors as was deemed essential. For example, the United States delegation consisted of: 2 government delegates and 15 advisors, 1 shipowner delegate with 11 advisors, and 1 seafarer's delegate with 8 advisors. Congressman Henry M. Jackson and Secretary of Labor Louis B. Schwellenbach were assisted by members of the Department of Labor, Coast Guard, Maritime Commission, Congress, State Department, and Social Security Board. Mr. Maitland S. Pennington, representing the National Federation of American Shipping, was assisted by prominent members of the various shipping associations. Mr. Harry Lundeberg represented the seamen and was advised by members of the C. I. O. and the A. F. of L.

All delegates and advisors were present between 6 June and 29 June and discussed the following subjects of interest to the maritime profession:

- 1. Social Security for seafarers. 2. Crew accommodations on board
- ship.
- 3. Food and catering on board ship. 4. Entry, training, and promotion for seafarers.
  - 5. Holidays with pay for seamen.
- 6. Continuous employment for seafarers.
- 7. Recognition of seafarers' organizations.
- 8. Wages, hours, and manning.

All proposals on the foregoing subjects probably will not be adopted by the conference. Those that may be adopted merely represent minimum international standards which may actually fall short of what already exists in many advanced countries. Herein lies one of the chief difficulties of an international convention. Every advanced country wants the adopted standards to be exactly the same as, or better than, those in its own country in order to strengthen its competitive position. From the point of view of world progress this would be of little value, as only a very few countries would agree to such an arrangement. Instead, the idea is to set up an international minimum which may fall short of the standards of the best countries but is well ahead of those in the more backward countries. In order to forestall retrogression in the advanced countries, every country that ratifies the minimum must do so on the condition that nothing in the Convention will be allowed to affect any higher standards that may have previously existed in that country.

In connection with the organizational structure of the International Labor Organization, it is well to point out that its constitution provides for three organs: an International Labor Conference, an Executive Council, and a permanent secretariat known as the International Labor Office. I. L. O. is an instrument created in the Treaty of Versailles to undertake to secure and maintain fair and humane conditions of labor on an international scale. Because social peace is conducive to international peace, and the shipping field is the oldest form of international contact, special maritime sessions have been created within the I. L. O. It should be noted, therefore, that the maritime field is the only one to which the I. L. O. gives specialized treatment, as evidenced by the Seattle Conference. The I. L. O. has been exercising considerable influence on the world-wide merchant marine from 1920 to the present time. Its recent proposals, when ratified, will continue this influence in the New World Organization for Peace.

# **Clogged Fuel Lines**

The Marine Engineering Regulations (title 46, chapter I, subchapter F, Code of Federal Regulations) set up certain requirements for the installation of fuel piping and tanks to supply emergency generators. These generators are designed to cut in automatically upon the failure of the ship's regular power supply in order to furnish electricity for radio and emergency lighting.

In the nature of things these power plants operate only at widely separated periods, during accidents such as grounding or other casualties wherein the main engine room of the ship is knocked out. Short, periodical test runs are also made in order to insure that the equipment is in working order.

As a result of the long periods of idleness to which this equipment is subject it is possible that sediment can accumulate in the tanks to the ex-

tent that the piping could become plugged up in the event of continuous operation for any great length of time. This possibility was realized in the case of a recent grounding where a Diesel driven emergency generator ran for several hours and then was disabled because the fuel line was plugged up solid with scale and dirt.

In order to prevent such accidents, chief engineers of vessels equipped with emergency generators, should clean out both fuel tanks and piping as often as convenient but not less than once a year at the time of the annual inspection. Some form of strainer should be installed in the fuel line close to the tank and this strainer should be watched carefully for signs of sediment.

# PILOT RULES FOR CERTAIN INLAND WATERS

A revised edition of the free pamphlet entitled, "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," dated March 1946, is now available upon request from the offices of the various Coast Guard District Commanders, Officers in Charge, Marine Inspection, or the Commandant, U. S. Coast Guard, Washington 25, D. C.

This pamphlet also contains the international rules for prevention of collisions which are statutory and must be followed by all public and private vessels of the United States when upon the high seas and all waters connected therewith which are navigable by seagoing vessels. However, nothing in the international rules shall interfere with the inland rules for preventing collisions or the operation of any special rule made by any local authority relative to the navigation of any harbors, rivers, or inland waters. The inland rules for preventing collisions are statutory and the pilot rules are regulations established by the Commandant, United States Coast Guard. These rules and regulations must be followed by all public and private vessels navigating the harbors, rivers, and inland waters of the United States, except the Great Lakes and their connecting and tributary waters as far east as Montreal and the Red River of the North and rivers emptying into the Gulf of Mexico and their tributaries. The international rules and the inland rules for preventing collisions at sea and on waters connected therewith have been set up in comparison form for easy reference. The regulations containing the pilot rules for certain inland waters follow the statutes.

The new edition of the Pilot Rules contains the amendments made to the regulations since the last edition of the publication and published in the Federal Register on or before 15 March 1946. These amendments include requirements for the lights for barges, canal boats, and scows in tow of steam vessels on certain inland waters; boundary lines between inland waters and the high seas in the Territory of Hawaii; and navigation lights, fog bells, and sound-producing devices for both motorboats and certain motor vessels. (33 C. F. R. 312.16, 302.3, 302.175; 46 C. F. R. 25.1-1 to 25.3-1, 26.1-1, and 27.1-1.) A short index has also been added.

### SAFEGUARDING MEDICAL SUPPLIES

The War Shipping Administration has issued a Supplement No. 3 to Operations Regulation No. 99, (pertaining to all vessels owned by or under bare-boat charter to the War Shipping Administration, regarding the safeguarding of medical supplies. It is a serious matter to have medical supplies stolen while in a foreign port since replacements are difficult or impossible to obtain. For the information of all concerned, the War Shipping Administration regulation is quoted below:

"It has come to our attention that pilferage of medical supplies, particularly penicillin, from W. S. A. owned and operated vessels is increasing. In view of the limited supply of penicillin available to War Shipping Administration vessels General Agents should impress upon masters and officers the importance of exercising extraordinary care in preventing its misappropriation. The principal reason for the loss of penicillin has been due to the fact that it has been stored in the ship's reefer boxes where adequate protection is not maintained since these boxes are not kept locked at all times and the entry of personnel is not strictly controlled.

"As a matter of information, penicillin need not be kept under refrigeration at all times as is generally believed, but can be stored for considerable periods without deterioration in a relatively cool place. It can, therefore, be stored, while in temperate zones, in the master's or purser-pharmacist mate's cabin or safe and while in tropic zones penicillin should be stored in the refrigerator while at sea, but during the vessel's stay in port should be removed to the master's or pharmacist mate's safe or cabin or other suitable secure place."

### VESSELS TRANSITING THE SUEZ CANAL

The Suez Canal Authority has recently announced that transportation of dangerous cargoes on board vessels transiting the Suez Canal will be subject to a strict application of its rules governing vessels carrying dangerous cargoes on board. This change will affect vessels carrying gasoline containers and dangerous materials with inflammable characteristics and owners, charterers, agents, and masters of vessels, should give consideration to the Suez Canal Authority circular quoted below:

"I have the honor to call your attention to the grievous risks which result for the navigation of the Canal due to the irregularities following the conditions of loading:

"Present conditions in one same hold and/or in the tween decks of this hold of gasoline containers and dangerous materials of the same category (inflammable materials).

"Loading of gasoline cans in a hold adjacent to the engine or fire room.

"I believe it would not be difficult in the moment of loading to take voluntary measures to avoid these irregularities. In consequence, I ask you if you would inform your workers that if these irregularities of loading occur it will be necessary to apply to judgments of article 16 ss. 4B of our rules of navigation.

"Gasoline and the containers with materials of the same category (1343 categorie).

"Entrance to the Canal and its ports is forbidden."

### MARINE INFORMATION BROADCASTS

A schedule of marine information broadcasts has been adopted by the Coast Guard and appears in table form below for ready reference. schedule of broadcasts includes the regular broadcasts of weather forecasts, notices to mariners, and hydrographic information, as well as emergency broadcasts regarding storm warnings, advisories, and urgent marine information, but does not include the Great Lakes and the inland waters. The marine information concerns the Atlantic coast, Gulf coast, and Pacific coast, Territory of Alaska, and the Territory of Hawaii.

The stations designated to broadcast storm warnings, advisories, and urgent marine information by radiotelegraph will do so upon receipt of the information. This information will be repeated three times within the next period of 6 hours, on either the even or the odd hour, depending upon the station, unless the information is superseded or canceled. Any emergency information which supersedes a previous broadcast will be handled in the same manner as the original information and will extend the emergency broadcast an additional 6 hours. All radiotelegraph broadcasts will be made on the stations' working frequencies after preliminary announcements are made on 500 kilocycles with subsequent shifts to indicated station working frequency. All radiotelephone broadcasts will be preceded by appropriate announcements on 2670 kilocycles with the regular broadcasts to follow on 2698 kilocycles. All radiotelephone broadcasts will be made once through at a good writing speed.

#### STATIONS BROADCASTING MARINE INFORMATION

Station and call letters	Time (G. C. T.)	Fre- quency (ke)	Emis- sion	Nature of broadcast
Rockland, Maine (NOE)	0530 and 1730. Upon receipt and on even hour intervals.	2698 2698	A-3 A-3	Regular broadcasts. Emergency broadcasts.
Boston, Mass. (NMF)	0348 and 1548. 0400 and 1600. Upon receipt and on even hour	2698 425 425	A-3 A-1 A-1	Regular broadcasts. Do. Emergency broadcasts.
	intervals. Upon receipt and en odd hour intervals.	2698	A-3	Do.
New York, N. Y. (NMY-2).	0400 and 1600 Upon receipt and on even hour in- intervals.	474 474	A-2 A-2	Regular broadcasts. Emergency broadcasts.
New York, N. Y. (NMY)	0400 and 1600 Upon receipt and on odd bour in- tervals.	2698 2698	A-3 A-3	Regular broadcasts. Emergency broadcasts.
Baltimore, Md. (NIQV)	0548 and 1748. Upon receipt and on even hour in- tervals.	2698 2698	A-3 A-3	Regular broadcasts. Emergency broadcasts.
Norfolk, Va. (NMN)	0430 and 1630	2698 410	A-3 A-1	Regular broadcasts.
	Upon receipt and on even hour in- tervals.	410	Λ-1	Emergency broadcasts.
Charles o o orașe	Do	2698	A-3	Do.
Charleston, S. C. (NMB)	0548 and 1748. 0430 and 1630. Upon receipt and on odd hour in- tervals. Upon receipt and on even hour in-	2698 425 425	A-3 A-1 A-1	Regular broadcasts. Do. Emergency broadcasts.
	tervals	2698	A-3	Do.
Jacksonville, Fla. (NMV)	0500 and 1700 Upon receipt and on odd hour in- tervals.	2698 2698	A-3 A-3	Regular broadcasts. Emergency broadcasts.
	Do	464	A-1	Do,
Miami, Fla. (NMA)	0400 and 1600. Upon receipt and on even hour in- tervals.	482 482	A-2 A-2	Regular broadcasts. Emergency broadcasts.
Key West, Fla. (NOK)	0418 and 1618. Upon receipt and on even hour in- tervals.	2698 2698	A-3 A-3	Regular broadcasts. Emergency broadcasts.
St. Petersburg, Fla. (NOF)	0518 and 1718. Upon receipt and on even hour in- tervals.	2698 2698	A-3 A-3	Regular broadcasts. Emergency broadcasts.
Mobile, Ala. (NOQ)	0530 and 1730. Upon receipt and on odd hour in- tervals.	2698 410	A-3 A-1	Regular broadcasts. Emergency broadcasts.
	Upon receipt and on even hour in- tervals	2698	A-3	Do.
New Orleans, La. (NMG)	0400 and 1600. Upon receipt and on even hour intervals.	448 448	A-2 A-2	Regular broadcasts. Emergency broadcasts.
Galveston, Tex. (NOY)	0400 and 1600 Upon receipt and on even hour intervals.	2698 425	A-3 A-1	Regular broadcasts. Emergency broadcasts.
	Upon receipt and on even hour in- tervals	2698	A-3	Do.
San Juan, P. R. (NMR)	0300 and 1500	2698 127 127	A-3 A-1 A-1	Regular broadcasts, Do, Emergency broadcasts.
Total Carlo Tallian	intervals. Upon receipt and on odd hour in-	2098	A-3	Do.

#### STATIONS BROADCASTING MARINE INFORMATION-Continued

Station and call letters	Time (G. C. T.)	Frequency (kc)	Emis- sion	Nature of broadcast
Long Beach, Calif. (NMQ).	0400 and 1600. 0400 and 1600. Upon receipt and on odd hour in-	448 2698 2098	A-1 A-3 A-3	Regular broadcasts. Do. Emergency brodacasts.
	tervals. Upon receipt and on even hour intervals.	448	Λ-1	
Monterey, Calif. (NOJ)	0448 and 1648 Upon receipt and on even hour intervals.	2698 2698	A-3 A-3	Regular broadcasts. Emergency broadcasts.
San Francisco, Calif. (NMC-2).	0400 and 1600	418 418	A-2 A-2	Regular broadcasts. Emergency broadcasts.
San Francisco, Calif. (NMC).	0418 and 1618. Upon receipt and on odd hour in- tervals.	2698 2698	A-3 A-3	Regular broadcasts. Emergency broadcasts.
Westport, Wash. (NOV)	0400 and 1600	480 2698 480	A-1 A-3 A-1	Regular broadcasts. Do, Emergency broadcasts.
	intervals. Do	2098	A-3	Do.
Seattle, Wash. (NMW)	0400 and 1600 0430 and 1630 Upon receipt and on even hour	410 2698 410	A-1 A-3 A-1	Regular broadcasts. Do. Emergency broadcasts.
STATE OF THE PARTY OF	intervals.	2698	A-3	Do.
Ketchikan, Alaska (NMJ)	0530 and 1730 0530 and 1730 Upon receipt and on even hour intervals.	425 2698 425	A-1 A-3 A-1	Regular broadcasts. Do. Emergency broadcasts.
	Do	2698	A-3	Do.
Honolulu, T. H. (NMO)	0000 and 2130. Upon receipt and on odd hour intervals.	2698 2698	A-3 A-3	Regular broadcasts, Emergency broadcasts,

#### BELL SYSTEM COAST HARBOR STATIONS

Station	Call letters	Fre- quency (kc)	Present G. C. T. schedule
Boston, Mass New York, N. Y Wilmington, Del Norfolk, Va. Charleston, S. C. Miami, Fla. Tampa, Fla. New Orleans, La. Galveston, Tex. San Pedro, Calif. San Francisco, Calif. Eureka, Calif. Portland, Oreg. Seattle, Wash.	(WEH) (WGB) (WJO) (WDR) (WFA) (WAK) (KQP) (KOU) (KLH) (KOX)	2506 2522 2538 2538 2566 2514 2550 2598 2530 2566 2506 2506 2506 2598 2522	0420-1620 0350-1550 0430-1630 0400-1600 0400-1600 0400-1600 0400-1600 0100-1830 0448-1648 0110-1840

#### HEARING UNITS

Coast Guard Merchant Marine Hearing Units and Details investigated a total of 5,118 cases during the months of January and February 1946. From this number hearings resulted involving 167 officers, and 897 unlicensed men. In the case of officers, 9 licenses were ordered revoked. 49 were suspended, 86 were suspended on probation, 23 were voluntarily surrendered, 8 were closed with admonitions, and 21 cases were dismissed. Of the unlicensed personnel 59 were revoked, 313 were suspended, 428 were suspended on probation, 200 voluntarily surrendered, 14 closed with admonition, and 46 dismissed after hearing.

# Respiratory Equipment

It has been noted from studying the casualties occurring on merchant vessels that a considerable number of these have occurred through the failure of ship's personnel to understand the construction, purpose, and protective limitations of the respiratory equipment found on shipboard. In an effort to reduce the number of casualties occurring, the above points will be discussed in this article as they apply to the fresh-air breathing apparatus, the canister-type gas mask, and the flame safety lamp.

In using this equipment it is also necessary to clearly understand its proper upkeep, the correct adjustment and above all, its stowage location on shipboard. However, this can only be accomplished through the use of the respiratory protectors in drills and from a study of the instruction booklet which accompanies each piece of equipment. For this reason the fitting and testing of protective equipment will not be discussed to any length in this article.

The fresh-air breathing apparatus is of simple construction, consisting of a facepiece, a hose, and a handoperated pump. The pump is located in a carrying case and when in operation is placed on deck in the fresh air adjacent to the compartment being entered with suction so placed as to prevent ingress of contaminated vapors. A long 1-inch hose is led from the pump and attached to the facepiece. As the wearer makes his way through the gas-affected area, he trails the hose, keeping it at all times free and clear. Fresh air is pumped to him through the hose by an attendant at the fresh-air pump.

The only limitations to the freshair breathing apparatus are the length of hose which is generally less than 150 feet and the places which may be traversed without the hose becoming entangled and fouled. Since fresh air is provided for respiratory purposes there is no time limit to its use, and the equipment can be worn with safety in any concentration of gas and in

any oxygen deficiency.

The oxygen-breathing apparatus is of more complicated construction than the fresh-air mask and is characterized by having the process of inhaling and exhaling accomplished entirely within the equipment carried by the wearer. In this apparatus the exhaled gases pass through a regenerator containing a chemical substance which purifies these gases by removing the carbon dioxide waste. This purified air is allowed to pass freely into the breathing bag from where it mixes with new oxygen coming from an oxygen cylinder which is also a part of the apparatus.

Since the breathing cycle is selfcontained, this type of respiratory mask is also a reliable protection in any concentration of gas and in any oxygen deficient chamber. However, there is a limit to the length of time in which it may be used with complete The oxygen-breathing apsafety. paratus is made in three sizes; the 1/2-hour size, the 1-hour size, and the 2-hour size. On this apparatus there is a pressure gage which indicates in atmospheres the pressure of the oxygen in the cylinder. In a full cylinder the pressure is approximately 135 atmospheres or 1985 pounds per square inch. When the gage indicator approaches the 15 atmosphere mark (printed in red) the wearer is advised to return to the fresh air where the oxygen cylinder, which is now rapidly approaching exhaustion, may be replaced by a full cylinder. It is important to note at this point that when the oxygen cylinder is used up and replaced by a new one, the regenerator must be emptied and refilled with new chemicals. Each new cylinder of oxygen requires a refilling of the regenerator. Unless these two items are replaced simultaneously the protection afforded by such an apparatus will be questionable.

The third type of respiratory protector is the canister-type gas mask. This item consists of a facepiece, an inhalation tube, and a canister. There are various types of canisters and, therefore, it is important to know what gases will be encountered in entering the space and to confirm from the label on the canister that it is designed to give protection from the gases in question. On shipboard two kinds of canisters are usually found, one being a general purpose type which affords protection against almost any kind of gas likely to be encountered, the other being a type designed for use against a particular refrigerant used. However, these canisters, regardless of type, give protection in gas concentrations up to 2 percent only and no more, with the exception that in ammonia gas they will give protection up to 3 percent.

The canister-type gas mask is usually equipped with an automatic timer which indicates the service time undergone by the canister. However, this timer is designed for carbon monoxide only since that gas is tasteless and odorless. Other gases can, as a general rule, be recognized by taste or odor and when the presence of such a gas is noticed in the mask, the timer should be ignored and a retreat to fresh air made at once. Regardless of the gas exposed to, do not remain in a space when the timer shows that the life of the canister is exhausted.

In connection with the canisters, it is important to be familiar with the time limits of their usefulness. Canisters are constructed with a hole in the bottom through which gases pass. At time of manufacture this hole is covered with a seal. With this seal intact, the canister may be used any time within 5 years from the date of manufacture which is noted on the canister. Before the canister is put to use this seal must be removed and the date of breaking the seal must be entered on the canister in ink. Do not enter this date with pencil because it will possibly become illegible after a short period of time. One year from this date of breaking the seal, the canister should be discarded even though it may not have been put to much service. In use the canister life should be based on the timer or when it is noticed that gases are passing through. However, a canister should not be used for more than 2 hours even though the timer may not show complete exhaustion of the canister and even though the passage of gases is not noticed by the wearer's sense of smell or taste. The service life of a canister as set forth above is based on a gas concentration of less than 2 percent. With a higher concentration, the service life will naturally be less and this should be kept in mind. The

time limits of usefulness as set forth above are not to be considered as minimum periods of positive usefulness since the chemicals in the canisters deteriorate more rapidly in damp atmospheres, resulting in a shorter life than that indicated. The atmospheric condition surrounding the place of stowage has a considerable bearing on the shelf life of canisters and therefore the time limits as given should be considered as average limits under normal conditions only.

In using this type of mask it is very essential that the wearer know its protective limitations. The most important limitation is that the mask provides no protection in spaces where there is an oxygen deficiency. The air we breathe contains approximately 20 percent oxygen and 80 percent nitrogen. The gas mask will not afford protection when the oxygen content has been reduced to 16 percent. In order to detect the oxygen deficiency the flame safety lamp is used. This lamp will not burn when the deficiency of oxygen reaches the low point of 16 percent. Therefore, before using the canister-type mask, a flame safety lamp should be lowered into the space to be entered to first ascertain whether there is an oxygen deficiency. If the lamp goes out, the fresh-air mask or the oxygen-breathing apparatus must be used because the canister gas mask will afford no protection. Whenever this type of mask is worn the flame safety lamp should be carried along by the wearer of the mask. When the flame safety lamp goes out, he will know that a location has been encountered which is deficient in oxygen and a withdrawal to fresh air should be made at once.

The flame safety lamp has its limitation in that it will not reveal the degree of concentration of gases other than oxygen. It is possible to have sufficient oxygen in a space to support life and still have a concentration of carbon monoxide which will produce death. For this reason care must be exercised in entering spaces with a canister-type gas mask. Where possible, it is desirable to have the atmosphere of the space chemically analyzed so that a true picture of the hazards of the space to be entered can be known by the individual concerned.

The flame safety lamp is so constructed that it can be used with safety in spaces containing combustible gases. The lamp is equipped with a gauze mesh which permits the entry of gases. Should these gases be combustible, the ignition and burning is confined within the lamp so that the atmosphere outside the lamp will not be ignited with possibly an explosion. However, acetylene and hydrogen gases are of such light character that

they will penetrate the fine gauze protector in the light and cause an explosion before the presence of the gas is known.

Although the fresh-air mask, oxygen-breathing apparatus, and canister-type gas mask together with the flame safety lamp have been discussed with regard to their construction, purpose, and protective limitations, they are not the only types of protective equipment which will be found on shipboard. However, the foregoing types are the only ones that should be worn in entering spaces liable to contain dangerous atmospheres. The other types, such as the spray-gun mask, will not afford protection in such spaces. They are designed for different purposes and their limitations should be known before making use of such masks.

There is one item of equipment which has not been mentioned as yet and which is very essential in the use of any of the foregoing breathing apparatus. That item of equipment is the life line. No individual should be permitted to enter any dangerous space without having a life line attached to him and without having a man on deck continually observing his actions so that aid can be called immediately when assistance is needed. By means of the life line, rescue can be easily performed without further endangering the lives of others.

Ship's personnel should make themselves fully acquainted with all of the foregoing respiratory equipment. The instruction booklets should be thoroughly studied so that the proper method of fitting and testing the equipment will be understood. Drills should be held periodically to train the crew in the proper fitting and adjusting of these masks. Occasionally it is a good idea to fill a confined space with smoke by burning rags in a bucket so that individuals can enter the area with the equipment and thus gain assurance and confidence of positive protection. When such a set-up can be arranged, the student should take the flame safety lamp along to watch so as to become familiar with the effect of gas or smoke on the blaze of the lamp. At the same time he gets the experience of breathing through the gas-mask canister or living within the fresh-air or oxygen-breathing apparatus as the case may be. Where breathing apparatus may be used by more than one person, the masks, especially any mouth and nose pieces, should be disinfected after each person has used them.

The importance of being thoroughly trained in the use and limitations of the respiratory equipment cannot be stressed too strongly. Only recently the Coast Guard was advised of a

casualty on a tank vessel, the pumproom of which contained gasoline fumes and quite likely an oxygen deficiency. Through the failure of ship's personnel to know the location of the respiratory equipment and its use and limitations, four men entered this compartment and collapsed. Each man used a different type of equipment and through lack of familiarity with the equipment, did not derive the desired protection. The freshair breathing apparatus was used and apparently was not fitted properly, since gas leaked in around the facepiece. The oxygen-breathing apparatus was equipped with an oxygen cylinder which was nearly exhausted and did become exhausted during use. A spray-gun mask was used and this type of equipment provided no protection in such a dangerous space. The fourth man entered without any form of equipment. None of these four men were equipped with life lines which consequently hindered rescue. The collapse of each man and the lack of a life line for safety purposes further endangered the lives of their rescuers. This case well illustrates that when this equipment is in the hands of a novice, it may constitute a hazard to life, in being improperly used and in giving a false sense of security to the user. The effectiveness of this equipment depends upon the knowledge and skill of the ship's personnel.

### INTERNATIONAL CONFER-ENCE ON RADIO AIDS

Commodore Edward M. Webster, USCG, headed the United States delegation at the International Conference on Radio Aids to Marine Navigation, which was held in London from May 7 to 22. The purposes of the conference are to share information on radio aids to navigation work throughout the world, and to discuss international standardization of marine radio navigational aids. It is an assembly of United Nations' experts to coordinate international efforts in radar, Loran, and other new radio aids to navigation systems developed during the war years, with emphasis on the field of electronics.

Invited to the conference by the British Foreign Office were representatives of the following countries: Australia, Belgium, Canada, Denmark, Eire, Finland, France, Greece, Holland, India, Italy, Newfoundland, New Zealand, Norway, Poland, Portugal, South Africa, Spain, Sweden, the United States of America, the Union of Soviet Socialist Republics, and Yugoslavia.

The United States delegation included representatives of the Federal Communications Commission, War and Navy Departments, the Coast and Geodetic Survey, the Civil Aeronautics Administration, National Federation of Ship Owners, Lake Carriers' Association, State Department, Maritime Commission, War Shipping Administration, and Coast Guard.

In London discussions and demonstrations of equipment took place, covering the following subjects:

- Radar, radar beacons, corner reflectors, shore based radar, and shipshore radio telegraphy.
  - 2. Position fixing systems.
- International standardization with special reference to frequency allocation.
  - 4. Future trends of development.
- Meeting with manufacturers of navigational aids.
  - 6. Outstanding items.

This was the first time that the wartime technical secrets of radar and Loran were generally disclosed to the public. Some of the delegates had never seen radar or Loran. These members never had received the details of many new electronic advancements because of conditions existing during the war. For the most part the meetings consisted of technical engineering discussions, but the benefits of disclosing to the public the advantages of new navigation aids are certainly universal and far-reaching. A free exchange of views and ideas was had between the delegates.

The British, as hosts, suggested various topics which were then discussed by all the delegates. The merits of radar and the question of proper frequency allocation received considerable interest and discussion.

Already the use of Loran by merchant shipping is coming into being, since the Swedish Line has equipped the GRIPSHOLM with Loran and the Waterman Line in the Pacific has installed Loran on one of its vessels with a view to further installations. The Maritime Commission Training Stations and training ships in the United States are equipped with Loran re-Loran, radar, and radioceivers. beacons have been adapted for government use and are gradually being used privately in the United States. One of the results of international meetings, such as the London meeting, will be that the universal use of these wartime developments may come about in the course of the next few vears.

The U. S. delegation gave papers on radiobeacons, Loran systems, and merchant marine radar. In these papers it was stated that the U. S. Coast Guard was now operating and would continue to operate upwards of 180 radiobeacons along the Great Lakes and coasts of the U. S. and some 50 Loran stations providing exten-

sive coverage in the Atlantic and Pa-

While further operational trials are needed on new experimental devices to allow the mariner to decide for himself, it appeared that generally a shipboard radar with some form of radar beacon system offers the mariner valuable assistance in navigating his ship in pilotage waters and for anticollision purposes.

Further, agreement was apparent on the need for maintaining, extending and improving the world-wide marine radiobeacon system.

The U. S. delegation disclosed to the meeting the extent of the Loran system operated by the U. S., Canada, and Great Britain jointly and which system is already being used by peacetime shipping and air services over the oceans of the world.

It was agreed that it was desirable, whenever possible and expedient, that radio aids to navigation should be used in common for civil aviation and surface shipping.

Besides Commodore Webster, the following Coast Guard officers attended the conference: Capt. C. H. Peterson, Capt. L. M. Harding, Commander Guy L. Ottinger, and Lt. Comdr. Arthur L. Budlong.

#### DANGER SIGNAL ON THE GREAT LAKES

The Commandant is considering a recommendation that the danger signal required by the Great Lakes Pilot Rules be changed. The present danger signal consists of several short and rapid blasts of the whistle, not less than 4, as set forth in sections 322.2 and 322.8 of 33 C.F.R. The proposed danger signal under consideration consists of several short and rapid blasts of the whistle, not less than 5, which was requested by the merchant marine industry on the Great Lakes.

If the danger signal consisting of not less than 5 short and rapid blasts of the whistle is adopted, it will become effective on 1 August 1946, and will be published in the July issue of the Proceedings of the Merchant Marine Council.

#### MOTORBOAT REQUIREMENTS: CORRECTION

In the article "Motorboat Requirements" on page 69 of the May Proceedings of the Merchant Marine Council, the statement regarding fire extinguishers carrying a label or stamp showing that the extinguisher is of a type approved by the Coast Guard is not usually practiced.

In the table listing "Requirements for Motorboats not in Commercial Service" on page 70, the statement under the heading "Class 2" should be changed from "25 to 40 feet" to "26 to 40 feet."

# LESSONS FROM CASUALTIES

#### COLLISION IN FOG BANK

Shortly after entering a fog bank, a passenger vessel hit and sank a fishing trawler. This collision raises several questions on safe navigation for a vessel approaching and entering fog banks, particularly for officers in charge of the navigation of vessels.

In daylight, under conditions of good visibility, the passenger vessel was proceeding on a course which took the vessel into a bank of fog. No change in course was made although the fog bank might have been skirted

if this had been done.

On entering the fog a signal was sounded on the whistle as required by the applicable rules of the road. Almost instantly the trawler loomed out of the fog, but at such a short distance that the collision which took place could not have been avoided by any means which were open to the larger vessel. As a result the trawler was sunk with the loss of several of her crew.

The rules are very clear on what is required of the trawler in a case such as this. However, apparently there is doubt in some minds as to what is required of the vessel which is approaching a fog bank from an area

of clear visibility.

Unfortunately the rules are not explicit on this point. Pertinent articles of the international rules, for example, provide (1) that in a fog a prescribed signal shall be made and (2) that every vessel shall, in a fog, go at a moderate speed, having careful regard to the existing circumstances and conditions.

While it might be argued that when in the clear area the vessel is not in a fog and thus not bound by the above rules, such argument has not been accepted by the admiralty courts which have had occasion to decide on similar cases. Good seamanship, which in a case like this is nothing more than common sense, would demand that a warning of a vessel's approach be given and a reduction in speed be made.

In the case of *The Papoose*, 85 F. 2d 54, the court said:

"The serious matter is the failure of the Wright to sound fog signals. Though she was not actually in the fog, she was running along a heavy bank but 300 yards distant, out of which a ship might emerge at any time as the Papoose in fact did. Both the Island Rules, art. 15 (33 U. S. C. A., sec. 191) and the International Rules, art. 15 (33 U. S. C. A., sec. 91) provide that ships must sound signals as de-

scribed 'In fog, mist, falling snow, or heavy rainstorm, whether by day or night . . .' Compliance requires the sounding of the signals by a vessel not only when she is herself in the fog, but is so close to it that her position should be made known to a vessel which the fog might be hiding. William H. Taylor, 278 Fed. (2 CCA); Perkionen, 27 Fed. 573 (D. C.). In view of these decisions the argument here made that there was no positive breach of the statute cannot be treated as sound."

The decision rules only on the matter of sounding a fog signal, but the same result was reached in a case which had before it the question of speed of a vessel entering a fog bank. In that case the court held that the rule on moderate speed in a fog applies to steamers entering a fog bank as well as to those in the fog (The Charlotte, 128 F. 38).

The decisions do not state at what point the fog rules become binding on a vessel approaching a fog bank. In line with the rulings of the courts on what is moderate speed in a fog, it would seem, if the circumstances require it, that the fog signal be started and a speed be set as would enable a vessel to come to a standstill, by reversing her engines at full speed, before she could collide with a vessel which might emerge from the fog.

Some may say that if the passenger vessel had been equipped with radar the collision would not have occurred. There has been much publicity on radar in recent months and frequently it is referred to as an "anticollision" device. So it may well be, but so is the steam whistle an "anticollision" device. They are "anticollision" devices only if the humans having control of them use them properly and at the right time.

Radar in this instance would have been an "anticollision" device only if the mate on watch had ordered it started in sufficient time for it to have "warmed up" by the time the vessel was no less than 2 or 3 miles from the fog. It would have detected the presence of the trawler in the fog, but avoidance of a collision would, as it always does, depend on a human being, the officer in charge on the bridge.

## Renewing Packing Grommets on Economizer Clean-out Plug

Scalding water showered a second assistant engineer when an economizer clean-out plug on a boiler of a Liberty ship suddenly "blew out" during his attempt to renew packing grommets. The engineer was severely burned and suffered other head and body injuries when he jumped away from the hot water and struck a lower grating. Fortunately, the Liberty ship was in port at the time and the engineer was rushed to a hospital.

The boiler had been "secured" and allowed to cool for 14 hours before the repairs were started. It was disclosed during the investigation that the vent valve on the upper part of the economizer had been opened, but the drain valve at the bottom had not been opened. The closed drain valve allowed the accumulation of hot water to collect in the economizer, which probably leaked over from the other feed line through the cross connection. The injured engineer had considerable engineering experience and had repacked the clean-out plug on a number of previous occasions in precisely the same manner. Not noticing that the drain valve was closed. he started to renew the packing grommets. Slackening the clean-out plug under these conditions was inviting disaster. The plug "blew out" and scalding water was showered over the engineer.

Accidents of this nature are most unfortunate, but they can be avoided. Preparations for servicing or repairing the power plant equipment of any ship should be thoroughly reviewed and checked before any work is started. All proper precautions should be taken to safeguard personnel from injury and to prevent damage to the plant. Too frequently, it is found that some simple precautionary measure which would have prevented an accident was entirely overlooked. In this case the engineer failed to note that the drain valve at the bottom of the economizer had not been opened.

### Steam Piping on Liberty Ship

The necessity for providing for expansion and contraction in steam and exhaust piping was illustrated by a recent fatal accident on board a Liberty ship when an elbow in the exhaust piping from the forward deck machinery failed. It was discovered that the damaged elbow was part of a steam line rigidly fastened between two bulkheads.

The exhaust and the steam lines supplying the forward deck machinery are normally secured to the deck house bulkheads by means of three flange fittings. Aft of the aforementioned fittings the piping extends ap-

proximately 10 feet straight ending in elbows, which in turn are bolted to spool pieces extending through the starboard fiddley bulkhead. The hole in the fiddley bulkhead should be cut large enough so that the piping can expand and contract in a fore and aft direction when the steam is turned on and off.

On the Liberty ship where this accident occurred and on several other vessels examined subsequently, it was found that the spool pieces were hard up against the after side of the hole in the fiddley bulkhead when the steam was turned on. The "Marine

Engineering Regulations and Material Specifications" requires by Paragraph 55.19-5 (c) that piping installations shall be provided with hangers, supports, and anchorages so arranged as not to interfere with the expansion and contraction of the piping. The anchorages which interfered with the expansion of the piping contributed to the failure of the elbow are contrary to the intent of the safety regulations. This type of accident is preventable.

The deck steam line installations on Liberty ships and other vessels should be examined to determine that ample room for expansion or contraction of the piping exists. When the steam piping is cold, there should be at least three-fourths of an inch clearance provided around the spool piece where it passes through the fiddley bulkhead so that when the pipe length increases because of an increase in temperature the spool piece will not bind on the after edge of the hole in the fiddley bulkhead. When the piping is hot, equal care should be taken to see that clearance exists so that the spool piece will not bind on the forward edge when the piping contracts.

# **APPENDIX**

# **Amendments to Regulations**

# TITLE 33—NAVIGATION AND NAVIGABLE WATERS

### Chapter 1—Coast Guard: Department of the Treasury

PART 6—SECURITY OF PORTS AND THE CONTROL OF VESSELS IN THE NAVI-GABLE WATERS OF THE UNITED STATES

SUBPART C—ANCHORAGE AND RESTRICTED
AREAS

The anchorage and restricted areas for the Third, Fourth, Fifth, Sixth, and Tenth Naval Districts were published in the Federal Register dated 2 May 1946, 11 F. R. 4793-4804. Information concerning such areas may be obtained from the Coast Guard District Commanders of the above mentioned Naval Districts.

#### TITLE 46-SHIPPING

### Chapter I—Coast Guard: Inspection and Navigation

All the changes in the regulations are now in effect. The exact effective date may be obtained from the Federal Register in which the amendment was published.

Subchapter N-Explosives or Other Dangerous Articles or Substances, and Combustible Liquids on Board Vessels

PART 146—TRANSPORTATION OR STORAGE OF EXPLOSIVES OR OTHER DANGEROUS ARTICLES OR SUBSTANCES, AND COM-BUSTIBLE LIQUIDS ON BOARD VESSELS

Section 146.04-5. List of explosives and other dangerous articles and combustible liquids is amended as follows:

Following the article "Calcium hypochlorite (See: 'Bleaching powder')" add: In column 1, "Calcium hypochlorite compounds, dry, con-

taining more than 8.80% available oxygen (39% available chlorine.)" In column 2, "Oxy. M." In column 3, "Yellow."

On the line with the article "Oakum" add in column 1: "(See: Twisted jute packing (rope))."

Following the articles "Turpentine substitutes" add: In column 1, "Twisted jute packing (rope) (treated or untreated)." In column 2, "Haz."

Section 146.22-100. Table E.—Classification: Inflammable solids and oxidizing materials is amended as follows:

Following the article "Calcium chlorite" add: In column 1, "Calcium hypochlorite compounds, dry, containing more than 8.80% available oxygen (39% available chlorine)." In column 2. "Decomposed by moisture. If exposed to excessive heat, or to the rays of the sun it may decompose spontaneously evolving vapor, with sufficient pressure to rupture. The vapors from ruptured containers have been known to ignite spontaneously. When exposed gives off pungent vapors (chlorine) that are corrosive. Keep dry. May destroy textiles. Do not stow in the same compartment with corrosive liquids (white label) nor with turpentine. Stow well away from foodstuffs, living quarters and all sources of artificial heat." In column 3. "Yellow." In column 4. "Stowage:" "On deck under cover." "Tween decks." "Under deck, but not overstowed." "Outside containers:" "Steel barrels or drums:" "(ICC-6A, 6B, 6C) not over 55 gal. cap." "(ICC-17E, 37D, 37E, 37F) STC, not over 55 gal. cap." In column 5, "Stowage:"
"On deck under cover." "Tween decks "On deck under cover." "Tween decks readily accessible." "Outside containers:" "Steel barrels or drums." "(ICC-6A, 6B, or 6C) not over 55 gal.

cap." "(ICC-17E, 37D, 37E, or 37F) STC not over 55 gal, cap." In column 6, "Ferry stowage (AA)." "Outside containers:" "(ICC-6A, 6B, 6C) not over 55 gal, cap." "(ICC-17E, 37D, 37E, 37F) STC not over 55 gal, cap." In column 7, "Ferry stowage (BB)." "Outside containers:" "(ICC-6A, 6B, 6C) not over 55 gal, cap." "(ICC-17E, 37D, 37E, 37F) STC not over 55 gal cap."

Section 146.27-100. Table K.—Classification: Hazardous articles is amended as follows:

Under the article "Bleaching powder" in column 1 delete "Bleaching powder" and add in lieu thereof: "Bleaching Powder, dry, containing less than 8.80% available oxygen (39% available chlorine);" and delete "(calcium hypochlorite)" and add in lieu thereof: "For calcium hypochlorite compounds, dry, containing more than 8.80% available oxygen (39% available chlorine) refer to "Calcium hypochlorite compounds, dry" in § 146.22–100."

Under the article "Oakum" add: In column 1, "Twisted jute packing (rope) (treated or untreated)." In columns 4 and 5 under "Stowage," "Tween decks." (11 F.R. 6099, 5 June 1946; effective 14 June 1946.)

# Equipment Approved by the Commandant

BUOYANT CUSHION FOR MOTORBOATS

Approval No. B-296, 15" x 15" x 2" fibrous glass buoyant cushion, filled with 40 ounces of fibrous glass in compliance with Navy Specification 23-G-7, dated 2 January 1946, Coast Guard Dwg. No. 160,005, Alt. O, dated

28 February 1946, manufactured by the Comfort Cushion Company, 5062– 84 Loraine, Detroit 8, Michigan. (11 F.R. 5639, 23 May 1946.)

#### LIFEBOATS

36.5' x 11.75' x 5.25' aluminum hand-propelled lifeboat, 135-person capacity, General Arrangement Dwg. No. 2894-A, dated 28 January 1946, submitted by the Welin Davit and Boat Division of the Robinson Foundation, Perth Amboy, New Jersey.

36.5' x 11.75' x 5.25' aluminum motor lifeboat, 130-person capacity, General Arrangement Dwg. No. 2896-A, dated 19 April 1946, submitted by Welin Davit and Boat Division of the Robinson Foundation, Perth Amboy, New Jersey. (11 F.R. 5639, 23 May 1946.)

#### SAFETY VALVES

Lunkenheimer Figure 653 Modified steel duplex pop safety valve, 150 and 300 pounds pressure ratings respectively, maximum temperature 450° F., Drawings L-8593 and M-9029, submitted by the Lunkenheimer Company, Beekman Street and Waverly Ave., Cincinnati 14, Ohio. (11 F.R. 5012, 7 May 1946.)

#### WATER INDICATORS

Yarway Remote Level Indicators for Marine Boilers, Plan No. EL-904-971, 125 pounds per square inch; Plan No. EL-904-972, 600 pounds per square inch; Plan No. EL-904-973, 900 pounds per square inch; Plan No. EL-904-974, 1,500 pounds per square inch, submitted by Yarnall-Waring Co., Chestnut Hill, Philadelphia 18, Pa. (Supersedes approval 7 November 1944, 9 F.R. 13240, insofar as new construction is concerned.) (11 F.R. 5012, 7 May 1946.)

# ITEMS SUITABLE FOR MERCHANT MARINE USE

#### ACCEPTABLE FUSIBLE PLUGS

The Marine Engineering Regulations require that 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. For the information of all parties concerned, a list of approved heats which have been tested and found acceptable during the period ending 15 May 1946, are as follows.

The Lunkenheimer Co., P. O. Box 360, Annex Station, Cincinnati 14, Ohio, Heat Nos. 238 to 244 inclusive. The H. B. Sherman Manufacturing Co., Battle Creek, Mich., Heat Nos. 526, 536 to 541 inclusive, 543 to 548 inclusive, 551, 554 to 558 inclusive, 560, 563 through 567, 569, 570, and 572 through 580.

The Walworth Co., Greensburg, Pa., Heat No. 121.

#### **ELECTRICAL APPLIANCES**

The following list supplements that published by the United States Coast Guard under date of 15 May 1943, entitled "Miscellaneous Electrical Equipment Satisfactory for Use on Merchant Vessels," as well as subsequently published lists, and is for the use of Coast Guard personnel in their work of inspecting merchant vessels. Other electrical items not contained in this pamphlet and subsequent listings may also be satisfactory for marine use but should not be so considered until the item is examined and listed by Coast Guard Headquarters. Before listings of electrical appliances are made, it is necessary for the manufacturer to submit to The Commandant MMT, United States Coast Guard, Washington 25, D. C., duplicate copies of a detail assembly drawing, including a material list with finishes of each corrosive part, of each item.

	Locati	on appara	tus may t	be used.	
Manufacturer and description of equipment	Passen- ger and crew quarters and public spaces	Machin- ery cargo and work spaces	Open deeks	Pump rooms of tank vessels	Date o action
Auth Electrical Specialty Co., Inc., New York, N. Y.:	T VI			acid.	
Push button, interior communications, waterproof, four gang, Cat. No. 232, drawing 3446, Alt. 0.  Push button, interior communication, waterproof, three gang, Cat. No. 232, drawing 3546, Alt. 0.	x	x	x	mais	4-26-
three gang, Cat. No. 232, drawing 3546, Alt. 0	x	x	x	ALL HAM	4-26-4
Push button, interior communication, waterproof,	x	-			4-26-
Push button, interior communication, waterproof, single gang, Cat. No. 230 MI, drawing No. 3546, Alt. 0. Dayton Manufacturing Co., Dayton, Ohio: Cabinet fixture, nonwatertight, 2 25-watt lamps, maxi-	- 1	X			3-20-
mum, fixture No. B-5438, drawing No. 1308, Rev. 1 Berth light, nonwatertight, 40-watt lamp, maximum,	X	-	morte Sel	100000000	4-16-
fixture No. B-5452-1, drawing No. 1365-1, Rev. 3	x		-		4-16-
Bracket fixture, nonwatertight, fixture No. B-5458, drawing No. 1394, Rev. 4. Chronometer box light, nonwatertight, 25-watt lamp, Maximum, Fixture No. B-5475, drawing No. 1520,	X		-	M > 51 101	4-16-
Rev. 4	x	and the	Section .	110/00	4-16-
Bracket fixture, nonwatertight, 40-watt lamp, maximum, fixture No. B-5540, drawing No. 1956, Rev. 0 Desk light, adjustable arm, nonwatertight, 60-watt lamp, maximum, fixture No. L-15148, drawing No.	x				4-16-
X46D284, Rev. 0	x			materia	4-16-
lamp, maximum, fixture No. B-5605, drawing No. 1996, Rev. 8. Ceiling fixture, nonwatertight, 100-watt lamp, maximum, fixture No. C-10814, drawing No. 46-D-121,	x			i anian	5-13-
Rev. 1.  Ceiling fixture, center lockup, nonwatertight, 2 60-watt lamps, maximum, fixture No. C-10812, drawing No.	×	el-cores	-	restore	5-13-
46-D-154, Rev. 1 Ceiling fixture, waterproof (less guard), 2 25-watt lamps, maximum, fixture No. C-10820, drawing No. X-46-	x		Herry		5-13-
D-429, Rev. 0. Ceiling fixture, nonwatertight, 60-watt lamp, maximum, fixture No. C-10822, drawing No. X-46-D-452,	x			T	5-13-
Rev. 0	X		CALERYN		5-13-
0. Berth light, nonwatertight, 40-watt lamp, maximum,	X	of reces	**********		4-26-
fixture No. B-5453, drawing No. 1376, Rev. 2 Celling fixture, waterproof (less guard), 75-watt lamp, Maximum, fixture No. C-10819, drawing No. X46D329,	*x	19-10-11-01			4-26-
Rev. 0 Ceiling fixture, nonwatertight, 60-watt lamp, maximum,	x	H PHO	1222112		4-26
fixture No. C-16861, drawing No. 1975, Rev. 3. Ceiling fixture, waterproof (less guard), 60-watt lamp, maximum, fixture No. C-10816, drawing No. X46D285,	X				4-25
Rev. 0 Ceiling fixture, nonwatertight, 25-watt lamp, maximum, fixture No. C-10818, drawing No. X46D310,	X				4-25
Rev. 0  Desk lamp, adjustable arm, nonwatertight, 60-watt lamp, maximum, fixture No. L-15149, drawing No.	x				4-25
X46D313, Rev. 0. Ceiling fixture, nonwatertight, 25-watt lamp, maximum,	X				4-25
fixture No. C-19817, drawing No. X46D309, Rev. 0 Ceiling fixture, waterproof (less guard), 75-watt lamp, maximum, fixture No. C-19815, drawing No. X46D271,	x				4-25
Rev. 0. Ceiling fixture, nonwatertight, 60-watt lamp, maxi-	x				4-25
mum, fixture No. C-10577, drawing No. 1000, Rev. 6.	x				4-16

	Location	on appara	tus may t	e used	
Manufacturer and description of equipment	Passen- ger and crew quarters and public spaces	Machin- ery eargo and work spaces	Open decks	Pump rooms of tank vessels	Date of action
Dayton Manufacturing Co., Dayton, Ohio-Continued.	FOR I	E.P.	1.3	8.0	
Ceiling fixture, waterproof (less guard), 1 60-watt lamp, maximum fixture No. C-10002, drawing No. NY46D3		La VI	Par	Av. To	
Rev. A Ceiling fixture, waterproof (less guard), 1 60-watt lamp, maximum, fixture No. C-12000, drawing No. NY46D4,	*				5-13-46
Rev. 0. Ceiling fixture, nonwatertight, 2 60-watt lamps, maxi-	x	********	********	********	5-13-46
mum, fixture No. C-10424, drawing No. 564-A, Rev. 7. Ceiling fixture, nonwatertight, 2 60-watt lamps, maxi-	x				5-13-46
mum, fixture No. C-10448, drawing No. 662, Rev. 6	x				5-13-46
Ceiling fixture, nonwatertight, 2 75-watt lamps, maximum, fixture No. C-10449, drawing No. 663, Rev. 6	x .				5-13-46
Bath wall fixture, nonwatertight, 1 60-watt lamp, maximum, fixture No. B-5446, drawing No. 1320 Rev. 6	x				5-13-46
Chiffodesk light, nonwatertight, 40-watt lamp, maximum, fixture No. B-5448, drawing No. 1323, Rev. 3.  Louvre berth light, nonwatertight, 40-watt lamp, maximum, fixture No. B-5604, drawing No. 1993,	- x				5-13-46
maximum, fixture No. B-5604, drawing No. 1993, Rev. 7	x				5-13-46
Ceiling fixture, waterproof (less guard), 60-watt lamp, maximum, fixture No. C-10811, drawing No. X46D 266, Rev. 2	x				5- 1-46
Empire Switchboard Corp., New York, N. Y.: Lighting distribution panel, and power distribution panel for maximum load of 2 horsepower per branch					
circuit, 2/2W 125/250V D. C. or 3/2W 125V D. C., drawing No. S-7125, Alt. 1.	x	x			4-17-46
drawing No. S-7125, Alt. 1.  Hopeman Brothers, Inc., New York, N. Y.:  Typical detail of switch box in H. M. door jamb, non-watertight, drawing No. 72, Revision 4/24/46.	x				5- 7-46
Kindorf Co., San Francisco, Calif.: Cable hanger devices	x	x			4-26-46
Cable straps, series A. Channel type hangers, U and straight types. Bar type hangers, Styles 1-1, D1-1, KW, 134, D134, and KS. Locking devices, standard type.					
Pilot Marine Corp., New York, N. Y.: Salinity indicator system.	x	x			5- 3-46
Drawing Nos.647A, Rev. 0 and 647B, Rev. 0—Type 6 Celland Valve Assembly, Drawing Nos. 650C Rev. 0, 650D Rev. 0, 650E Rev. 0, and 650F Rev. 0—Internal Circuit Diagrams. Drawing No. 675, Rev. 0—Cell, Assembly drawing Nos. 690, Rev. 1 and 637, Rev. 0—Elementary Wiring Diagram, Model No. 82A10.					
Drawing Nos. 692 Rev. 0 and 692A Rev. 0—Panel Interior, Model No. S2A10. Drawing Nos. 693A, Rev. 1 and 693B Rev. 1—Panel Exterior, Model No. S2A10.					
Rudder Angle Indicator System, 115 Volts 60 Cycles, Single Phase A. C. Drawing No. P. M. 1618 Rev. 0—Transmitter, Model	x	x			5- 2-40
RITA1.  Drawing No. P. M. 16210 Rev. 0—Indicator.  Drawing No. P. M. 1635 Rev. 0—Indicator Assembly,  Models R3CRA2 and 3.  Drawing No. P. M. 1617A Rev. 0—Indicator Unit.					
Model RIRA1.  Power failure alarm panel, Model No. 2PF, drawing	-	1	VEN.		
No. PM-1300A Rev. 2.  Russell and Stoll Co., Inc., New York, N. Y.:  Bulkhead lighting fixture, waterproof, 100-watt lamp,	×	x	*********		5- 2-40
maximum, Cat. No. 1378	x	x	x		5- 6-40
Westinghouse Electric Corp., Washington, D. C.: Marine searchlight, 18", drawing No. 21-A-1038, Sub. 1	x	x	x		5-14-40

#### CHESAPEAKE BAY

A proposal changing the boundary line between the inland waters and the high seas for Chesapeake Bay and tributaries is being considered by the Commandant. The present boundary line between the inland waters and the high seas is now defined as a line drawn from Cape Charles Lighthouse to Cape Henry Lighthouse. The recommendation under consideration is a line drawn from Cape Henry Lighthouse to Cape Henry Junction Lighted Whistle Buoy, thence to Cape Charles Lighthouse.

If this change in boundary line is approved by the Commandant, it will be made effective 1 August 1946 and will be published in the July issue of the Proceedings of the Merchant

Marine Council.

#### DANGEROUS PLACES IN MACHIN-**ERY SPACES**

In the machinery spaces on a number of Liberty vessels, gratings were not installed over the top of the main condensers to provide safe platforms for oiling the intermediate pressure lengths, for adjusting the cut-offs, and for accessibility to the indicator cocks. Operating personnel should exercise every precaution when working over the top of the main condensers which are not provided with safe platforms until such time gratings are installed.

In most Liberty vessels gratings with hand rails over the main condensers have been provided. These gratings and hand rails insure the safety of engine room personnel during the performance of their duties.

# Merchant Marine Personnel Statistics

# MERCHANT MARINE LICENSES ISSUED DURING APRIL 1946

#### DECK OFFICERS

Chief mate

Second mate

1,497

Master

Region	0e	ean	Cor	ust- ise	Gr La	eat kes	B, 8	. &	Riv	ers	Oce	an	Con	st-	Gre Lak	at B	. 8. & L.	Riv	ers	Occ	nan	Co	ast- ise	Gree	t B	S. & L.	Rivers
	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	R	0	R	0	R	0	R	0	R O	R	O R
Atlantic coast	74 13	37 19 2 33	1 1	9 1 1 1 1	13	50	11 3	30 3 6	6	5 4 17	96 30 27	8 6 2 2	1	2			3 2 1 2 5	3 4	4 10	102 45 35	10		1			2	
Total	120	91	6	12	13	52	15	39	6	26	153	18	1	3 .			5 8	7	14	182	17	-	1			2	
							7	hird	mat	te		M		B	W	,	Pilots			1	1	Maste	r ma	te		Tota	1
Region				Oc	ean		oast- vise		reat		S. & L.	R	ivers	Gi	rent	В. 8	. & L.	R	ivers	1	Inin		ted ve	ssels.	Origi nal		Grane total
				0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R		0	R	0	R			
Atlantic coast Gulf coast Great Lakes and rivers Pacific coast			**	214 27	1		2		1					16	63	60 27 20 5	86 25 25 37	16	2			3		1	565 149 75 144	208 69 190 97	777 211 26 24

### ENGINEER OFFICERS

Ch	def engi	neer, stea	m	First a	ssistant	engineer,	steam	Second a	ssistant	engineer	, steam	Third assistant engineer, stea			
Ocer	ın	Inla	nd	Occ	an	Inla	nd	Ocea	m	Inh	and	Ocean		Inland	
0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R
70 27 3 23	116 29 11 22	9 3 10	24 7 59 3	127 26 10 27	26 8 4 6	2 8	8 2 30 1	150 35 7 51	33 5 2 8	9	23	340 43 1 174	18 5 4 2	3	
123	178	22	93	190	44	10	41	243	48	9	24	558	29	3	TO T
	10074			Motor	vessels			2.73	τ	ninspect	ed vessel	s		Totals	
	Ocer O 70 27 3 23	Ocean  O R  70 116 27 29 3 11 23 22	Ocean Inla O R O  70 116 9 27 29 3 3 11 10 23 22	O R O R  70 116 9 24 27 29 3 7 3 11 10 59 23 22 3	Ocean         Inland         Ocean           O         R         O         R         O           70         116         9         24         127           27         29         3         7         26           3         11         10         59         10           23         22         3         27           123         178         22         93         190	Ocean         Inland         Ocean           O         R         O         R         O         R           70         116         9         24         127         26         8           27         29         3         7         26         8         8           3         11         10         69         10         4         23         22         6	Ocean         Inland         Ocean         Inland           O         R         O         R         O         R         O           70         116         9         24         127         26         2           27         29         3         7         26         8         3         11         10         59         10         4         8         2         2         3         27         6          123         178         22         93         190         44         10 <td>Ocean         Inland         Ocean         Inland           O         R         O         R         O         R           70         116         9         24         127         26         2         8           27         29         3         7         26         8         2         2           3         11         10         59         10         4         8         30           23         22         3         27         6         1         1           123         178         22         93         190         44         10         41</td> <td>Ocean         Inland         Ocean         Inland         Ocean           O         R         O         R         O         R         O         R         O           70         116         9         24         127         26         2         8         150           27         29         3         7         26         8         2         35           3         11         10         59         10         4         8         30         7           23         22         3         27         6         1         51         51           123         178         22         93         190         44         10         41         243</td> <td>Ocean         Inland         Ocean         Inland         Ocean           O         R         O         R         O         R         O         R         O         R           70         116         9         24         127         26         2         8         150         33         27         29         3         7         26         8         2         35         5         5         3         11         10         59         10         4         8         30         7         2         2         35         5         5         3         27         6         1         51         8           123         178         22         93         190         44         10         41         243         48</td> <td>Ocean         Inland         Ocean         Inland         Ocean         Inland           O         R         O         R         O         R         O         R         O         R         O         R         O         O         R         O         A         R         A</td> <td>Ocean         Inland         Ocean         Inland         Ocean         Inland           O         R         O         A         O         R         O</td> <td>Ocean         Inland         Ocean         Inland         Oc</td> <td>Ocean         Inland         Ocean         Inland         Ocean         Inland         Ocean           O         R         O         &lt;</td> <td>Ocean         Inland         Ocean         Inland         Ocean         Inland         Ocean         Inland         Ocean         Inland           O         R&lt;</td>	Ocean         Inland         Ocean         Inland           O         R         O         R         O         R           70         116         9         24         127         26         2         8           27         29         3         7         26         8         2         2           3         11         10         59         10         4         8         30           23         22         3         27         6         1         1           123         178         22         93         190         44         10         41	Ocean         Inland         Ocean         Inland         Ocean           O         R         O         R         O         R         O         R         O           70         116         9         24         127         26         2         8         150           27         29         3         7         26         8         2         35           3         11         10         59         10         4         8         30         7           23         22         3         27         6         1         51         51           123         178         22         93         190         44         10         41         243	Ocean         Inland         Ocean         Inland         Ocean           O         R         O         R         O         R         O         R         O         R           70         116         9         24         127         26         2         8         150         33         27         29         3         7         26         8         2         35         5         5         3         11         10         59         10         4         8         30         7         2         2         35         5         5         3         27         6         1         51         8           123         178         22         93         190         44         10         41         243         48	Ocean         Inland         Ocean         Inland         Ocean         Inland           O         R         O         R         O         R         O         R         O         R         O         R         O         O         R         O         A         R         A	Ocean         Inland         Ocean         Inland         Ocean         Inland           O         R         O         A         O         R         O	Ocean         Inland         Oc	Ocean         Inland         Ocean         Inland         Ocean         Inland         Ocean           O         R         O         <	Ocean         Inland         Ocean         Inland         Ocean         Inland         Ocean         Inland         Ocean         Inland           O         R<

				Motor	vessels			577		Ininspec	ted vesse	ls	Totals			
Region	Chief engineer				assistant Second assist- ant engineer		Third assistant engineer		Chief engineer		Assistant engineer		Origi-	Re-	Grand	
	0	R	0	R	0	R	0	R	0	R	0	R	nal	newal	total	
Atlantic coast. Gulf coast. Great Lakes and rivers	48 8 5 10	41 24 11 16	16 5 5 8	12 5 2 6	20 7 3 7	5 1 1 2	240 14 1 114	3	i	i	3		1,022 168 65 418	287 86 149 67	1, 30 25 21 48	
Total	71	92	34	25	37	9	369	4	1	1	3		1,673	589	2, 26	

## ORIGINAL SEAMEN'S DOCUMENTS ISSUED, MONTH OF APRIL 1946

Region	Contin- uous dis- charge book	Certifi- cate of iden- tity	A. B., green, 3 years 1	emer-	A. B., blue, 18 months, 12 months	A. B., blue, 6 months emer- gency 1	emer-		U. S. mer. doc.	Q. M. E. D., 6 months	Q. M. E. D., emer- gency	Radio oper- ators	Certifi- cate of service	Tanker man	Staff officer	Total
Atlantic coast	13 294 6	0 0 9 0	94 11 66 36	286 98 200 27	180 24 137 89	7 0 0 16	0 0 0	710 85 363 123	3, 527 969 1, 299 1, 276	497 141 356 177	473 208 220 88	11 2 7 0	2,695 776 980 1,447	15 16 0 20	238 43 176 6	8, 737 2, 386 4, 117 3, 311
Total	317	9	207	611	430	23	0	1, 281	7,071	1, 171	999	20	5, 898	51	463	18, 551

### CREW SHORTAGE REPORTS FROM 1 APRIL TO 30 APRIL 1946

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

						Rat	tings in wh	ich shortag	es occurred					
Region	Number of vessels	Chief mate	Second mate	Third mate	Radio	Able seamen	Ordinary seamen	Chief engineer	First engineer	Second engineer	Third engineer	Qualified member engine de- partment	Wiper or coal passer	Total
Atlantic coast	27 30 9 18	1	1 2	5 6 4 2		26 18	3 5		3 2	3 2 1	6 7 1 5	22 14 6 14	8 7 1 11	78 63 13 49
Total	84	1	4	17		55	12		5	7	19	56	27	203

### WAIVERS OF MANNING REQUIREMENTS FROM 1 APRIL TO 30 APRIL 1946

# Authority for these Waivers Contained in Navigation and Vessel Inspection Circular No. 31, Dated 13 March 1943 and Navigation and Vessel Inspection Circular No. 37, Dated 6 July 1943

Region	Number of vessels	Deck officers substituted for higher ratings	Engineer officers sub- stituted for higher ratings	Able seamen substituted for deck officers	Ordinary seamen sub- stituted for able seamen	Qualified mem- bers of engine department substituted for engineer officers	Wipers or coal passers sub- stituted for qualified mem- bers of engine department	Wipers, coal passers or cadets sub- stituted for engineer officers	Ordinary seamen or endets sub- stituted for deck officers	Total
Atlantic coast Gulf coast Pacific Great Lakes	680 242 244 4	200 94 60	345 111 111	61 20 22	1, 570 585 503 3	104 45 59	333 142 190 1	25 3 6	29 9 6	2, 667 1, 018 966 4
Total	1, 170	354	567	112	2, 661	208	675	34	44	4, 655

I Unlimited.

I Great Lakes, lakes, bays, and sounds.

I Tugs and towboats and freight vessels under 500 tons (miscellaneous).

I 2 months deck or 24 months other departments.

NOTE.-There were 47 Panamanian Employment Cards issued.

