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VICE ADMIRAL R. R. WAESCHE, U. S. C. G.
Commandant of the Coast Guard

The Merchant Marine Council of the United States Coast Guard

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Commandant

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Special Assistant to the
Commandant

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Technical Division, U. S. C. G.

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Chief Counsel, U. S. C. G.

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The Cover: Officers on bridge stand vigilant watch as ships pass close in dense fog.

COUNCIL ACTIVITIES

THE Delta Shipyard builders of colliers, Design EC2-S-AW-1, intended solely for the coal trade, requested through the District Coast Guard Officer, 8th Naval District, that permission be granted for these vessels to operate as colliers without complying with the requirement that smothering systems be installed in cargo compartments. It was argued that inasmuch as these vessels would carry no other commodity than coal that this fire extinguishing equipment would serve no useful purpose. After consideration of all the facts involved, including the operating experiences of colliers which carried this equipment during the many years this regulation has been in effect, it was determined that the request should be granted. It was the opinion of the Council, and so recommended to the Commandant, that imposition of this requirement under these circumstances was not needed in the attainment of greater safety of life at sea. The appropriate sections of the regulations were amended so that vessels engaged exclusively in the carriage of coal in bulk and carrying no other combustible cargo at any time no longer need be equipped with steam or inert gas fire extinguishing systems in the holds, 'tween decks, or other closed cargo compartments.

The Council during the month of January recommended the issuance of several waivers of the navigation and vessel inspection laws.

The Commandant's waiver order of July 1, 1943, authorized the effectuation of waivers of navigation and ves-

sel inspection laws by DCGO's and their designated representatives; and, in the case of vessels in foreign ports, by designated representatives of the Commandant. This original order has been amended to permit the issuance of waivers by designated representatives of the Commandant in Canal Zone ports as well as foreign ports. The waiver order and Navigation and Vessel Inspection Circular No. 56, covering this subject, may be found in the appendix.

Upon a showing of necessity by the U. S. Maritime Commission compliance with the navigation laws and regulations has been waived to the extent necessary to permit the acceptance of auxiliary boilers, although the safety devices used in effecting automatic operation of these boilers have not been approved, on U. S. Maritime Commission vessels, Designs C1-M-AV1 and R1-M-AV3.

At the request of the War Shipping Administration and upon an indication that effective prosecution of the war would be impeded by application of 46 USC 669 and 670, requiring certain articles to be carried in the slop chests of vessels upon a voyage exceeding 14 days length or bound from a port on the Atlantic to a port on the Pacific, the Commandant has waived compliance with these laws provided that the slop chest contains the items and quantity designated in the waiver order. It is to be noted that this is not a change in the present requirements. If it is desired, vessels may be operated under the same requirements which existed prior to the is-

suance of this waiver. However, if it is desired, the slop chest may be provided in accordance with the waiver.

A plan for issuing extra gasoline coupons to merchant seamen ashore between foreign, intercoastal, and coastwise voyages has been published by the War Shipping Administration and Office of Price Administration. O. P. A. amendment No. 169 to Ration Order No. 5, effective January 12, 1945, sets forth the procedure for obtaining this extra gasoline in quantities based upon the length of time spent at sea. The Coast Guard is cooperating with these agencies in effecting this plan by furnishing merchant seamen with documentary evidence of the time spent afloat in such form that the local ration boards can determine the amount of gasoline to be issued and then indorse the document so as to prevent re-use. Navigation and Vessel Inspection Circular No. 55, set forth in full in the Appendix, states the procedure to be followed by the Coast Guard. If a seaman holds a certificate of identification he may present the original Certificate of Discharge to the ration board as evidence of sea service. Seamen holding a continuous discharge book will be furnished a copy of Form 718-E, Record of Entry in Continuous Discharge Book, to present to the ration board.

In order to classify the various types of improved flotation equipment which have been, or may be, submitted for approval, the Council has issued a report classifying, defining, and stating the functions of the various pieces of flotation equipment.

Several inquiries have been received from shipbuilders desiring to know what the minimum cubic-foot-per-person capacity of lifeboats on passenger vessels will be in the post war period and what method or formula will be used for determining this capacity. It is felt that these inquiries have arisen from a misunderstanding of the emergency regulations. Section 153.3 (c), Subchapter O, does not apply to passenger vessels; only on Ocean and Coastwise cargo and tank vessels certi-

ficated for the first time after January 1, 1943, is the cubic carrying capacity of lifeboats required to be calculated upon the basis of 15 cubic feet per person. Lifeboats on passenger vessels continue to be governed by rules existing prior to the war. Moreover, it was determined that it is impossible, in view of the forthcoming International Convention on Safety of Life at Sea, to make any commitments pertaining to changes in the regulations to become effective in the post war period. The Coast Guard committee working on the agenda for this convention includes many members of industry who are considering all proposed changes. The work of this committee has only begun. The industry generally will be kept thoroughly informed and consulted concerning all matters to be submitted to the convention.

Four changes in specifications were approved. An addendum has been added to every Coast Guard specification for equipment for merchant vessels providing that alternate materials and constructions conforming substantially with those set forth in a particular specification and which will meet the minimum requirements for the service intended will be considered upon submission of the article or device. The Coast Guard does not purchase merchant marine safety equipment; this is done by the vessel operator. Accordingly, Coast Guard specifications for merchant vessel equipment are not contract specifications. The sole purpose of such specifications is to assure that safety equipment will provide the degree of safety of life at sea intended by the navigation laws and regulations issued thereunder. It is the purpose of this addendum to permit manufacturers and operators to obtain immediately the benefits of any technical advance in materials and construction by abolishing the necessity of first seeking a revision of a specification. The Council also approved revisions of the specifications for "C" ration biscuits, helium containers for balloons for lifeboat radio antenna, and hermetically sealed cans for drinking water and provisions for lifeboats.

River Panel for 1945

THE Western River Panel of the Merchant Marine Council at the November meeting in St. Louis recommended to the Commandant that panel membership should be rotated, that tenure should be for a fixed period of time, and that a chairman should be appointed annually. The panel subsequently submitted to Vice Admiral Waesche the names of persons recommended for membership upon the panel during 1945. Membership upon the panel will be for a period of 1 year. Ten persons have

accepted panel membership for the present year.

Mr. Chester C. Thompson, President of the American Waterways Operators, Incorporated, a former Congressman from the State of Illinois, who also served 5 years as President of the Inland Waterways Corporation, operator of the Federal Barge Lines, has accepted the appointment as Chairman of the Western River Panel for 1945. Long prominent in public life in Illinois, Mr. Thompson is a director and member of the Ex-



Mr. Chester C. Thompson, newly appointed Chairman of Western River Panel for 1945.

ecutive Committee of the Mississippi Valley Association. He also is a member of the Advisory Committee of the Office of Defense Transportation. Mr. Thompson has always worked for the advancement of waterway transportation and for the improvement of the country's inland waterway systems.

Mr. H. M. Baskerville of Minneapolis, Minn., operator of the Upper Mississippi Towing Corporation and president of one of the largest oil and fuel companies in the Northwest, has been reappointed to membership on the Panel. Mr. Baskerville is one of the leading independent waterway operators in the United States and is one of the pioneers in the movement of petroleum products on the upper Mississippi River. He represents the Upper Mississippi region.

Capt. William Shelby Chandler, for many years a familiar figure to pilots, captains, and operators on the Mississippi and Ohio Rivers, is serving on the Panel for the first time, representing the Lower Ohio River. As Senior Superintendent of Navigation, Ohio River Division, Corps of Engineers, United States Army, Captain Chandler has seen and been a part of the great growth and improvement in the Mississippi Waterway System.

Mr. Henry F. De Bardeleben, Executive Vice President and General Manager of the De Bardeleben Coal Corporation, Birmingham, Ala., that State's largest producer of bituminous coal, has consented to continue to serve on the Panel. Operator of the Coyle Lines, a leader in affairs of the Gulf Coast area, and one of the strongest advocates of improvement of the Gulf Intracoastal Waterway, Mr. De Bardeleben is recognized as one of the leaders of the coal and river transportation industries in the South. He serves on the panel as the

representative of the Lower Mississippi and Gulf Coast regions.

Mr. George T. Griffith, Marine Superintendent of the Carnegie Illinois Steel Co., is River Transportation Manager for this company in the Pittsburgh area. He is a veteran river captain and pilot who in his present position operates the largest captive fleet on the river system. Mr. Griffith is thoroughly versed in the problems of the river. He is the Upper Ohio River panel representative.

Mr. John I. Hay, operator of a barge line bearing his name, and a former New Orleans cotton broker, serves with the Panel for the first time, as the representative of the Illinois Waterway. He was one of the leaders initiating the movement of petroleum products by way of the Mississippi River system and is acquainted with all aspects of river transportation.

Capt. Aubrey D. Haynes, Marine Superintendent of the Mississippi Valley Barge Line Co., brings a wide background of river experience to the Panel. Captain Haynes is a longtime river pilot and captain, who comes from a family of river men. His father and brothers are all associated with activities on the river, and all are widely known. Captain Haynes represents the Middle Mississippi region.

Capt. William B. Rodgers, Vice President of the McCrady-Rodgers Co. and a former State Senator from Pennsylvania, again serves on the Panel as the Upper Ohio representative. "Captain Bill" with his father and brothers has been long established in the sand and gravel and river towing business in the Pittsburgh area and is among the leaders advocating the development and improvement of the river system. He has for several years been president of the Pittsburgh Coal Exchange.

Capt. Joseph Streckfus, President of Streckfus Steamers and one of the outstanding excursion boat operators in the United States, again represents the Middle Mississippi on the Panel. He entered into this business with his father and brothers at the turn of the century. "Captain Joe" is particularly well known as the designer of his own vessels, which are among the most luxurious in the country. An outstanding proponent of the adoption of proper measures for the safety of passengers upon river vessels, Captain Streckfus is known in this respect as "tougher than the Coast Guard."

Col. L. E. Willson (his rank was gained in World War I, where he made a distinguished war record with the United States Army), operator of the Arrow Transportation Co., Sheffield, Ala., is a contractor, a sand and gravel producer, and his firm is one of the leading water carriers in the Ten-

nessee River region. He has been one of the leading proponents of the development of the Tennessee River Valley and its waterway and is widely known among the water carriers of that region. He is the representative of the Tennessee waterway.

Capt. Donald T. Wright, Capt. Slack Barrett, Mr. F. W. Haecker, Mr. A. C. Ingersoll, and Mr. Alfred S. Os-

bourne, the retiring Panel members, have been thanked by the Commandant for the time and effort they unstintingly devoted to the success of the Panel. The record of the River Panel for the past two years is gratifying evidence of the results obtainable in the field of maritime safety through the cooperation of the maritime industry and the Coast Guard.

International Safety at Sea Committee

INVITATIONS were issued to members of the General Committee on the proposed International Safety at Sea Conference to attend a meeting at Washington on February 7, 1945. The purpose of this meeting was to consider the general plan and tentative agenda for the proposed conference and to approve the technical committees appointed to formulate revised proposals. The meeting was to be presided over by the Commandant, with Assistant Secretary W. L. Clayton of the Department of State and Assistant Secretary D. W. Tracy of the Department of Labor addressing the membership.

The General Committee consists of representatives of Federal agencies which have an interest in maritime safety matters and of representatives of the shipping industry, shipbuilders, American Bureau of Shipping, The Propeller Club of the United States, the Maritime Law Association, marine underwriters, and the National Fire Protection Association.

During the afternoon of the same

day the three proposed group committees were to meet at Coast Guard Headquarters to organize the work of their respective subcommittees. The first group, having to do with ship construction matters, is headed by Vice Admiral H. L. Vickery, U. S. N., Vice Chairman of the Maritime Commission, with Mr. H. Gerrish Smith, President, Shipbuilders Council of America, as acting chairman. This group includes the committees on: Admeasurement, Structural Standards, Subdivision, Stability and Load Lines, Electrical Equipment, and Fire Prevention and Protection. The second group, under the chairmanship of Commodore H. C. Shephard, deals with lifesaving procedures and includes committees on: Lifesaving Equipment, Cargo Stowage and Gear, Personnel and Operations and Rules of the Road. The third group, under Capt. E. M. Webster, covers rescue procedures and is made up of committees on: Aids to Navigation, Meteorology, Air/Sea Rescue, Ice Patrol, and Communications.

Confined Spaces

By John M. Techton, Chief Chemist, Sun Shipbuilding & Drydock Co., Chester, Pa.

IN considering the subject of confined spaces, it may be stated that all compartments on a ship should be regarded with suspicion until inspected and proven innocent. This is indeed true, as almost any portion of a ship may be confined, by the closing of a door, a hatch or other access to that space.

These compartments may differ according to the type of vessel concerned, but for the purpose of discussion I have divided the term "vessels" into general classifications, namely, tank vessels for liquid cargoes, and dry hold vessels for general cargoes.

From our point of view the most hazardous conditions exist in the cargo tanks in which many and varied cargoes are carried, such as crude oils of all types, gasoline, naphtha, benzol, toluene, gas and furnace oils, kerosene, creosotes, heavy fuel oils, lubricating oils, casinghead gasoline, aviation spirits, and even crude molasses. All petroleum products definitely present all three hazards—fire, explosion, and asphyxiation. These are, of course, usually eliminated by the

methods now familiar to all of us—washing, steaming and gas-freeing operations and various ventilation methods. The usual hydrocarbon gases from petroleum may be found at any time in these tanks. They may differ in their constituents, but all have common characteristics in that they form explosive and flammable gases as well as being asphyxiating. Hydrogen sulphide may also be found as a result of certain crudes being carried in these tanks.

Residue from a molasses cargo may under certain conditions ferment, and carbon dioxide will be formed. This gas, being heavier than air, will give no warning of its presence, unless adequate tests are taken before men are permitted to enter.

Other dangers exist in these tanks, in the form of rust and scale, slop oil and residue in the bottoms or on the internal framing, oil in cargo lines, leaky heater and steam smothering coils and pipe handrails, all of which may release sufficient gas to cause the concentration to rise to a dangerous point.

Cement boxes, used for emergency repairs, and cement bottoms in tanks may retain sufficient oil to vaporize and become dangerous. Temperature changes may likewise affect the concentration, and many a tank, gas-free in the early morning, has been found to be explosive after several hours exposure to the hot sun.

The same hazards that exist in these cargo tanks may also exist in the pumprooms, cofferdams, fuel oil tanks and other compartments that are adjacent to oil-carrying compartments or connected with them by pipe lines.

Fore and after peaks on tankers are usually water tanks. On cargo ships they are frequently used for fuel oil. Where they are used for water, however, there is a possibility of contamination due to leakage, pipe lines or other causes; and no inspection of a vessel can be complete without a thorough inspection of the peaks.

These are kept closed ordinarily, and in such closed compartments there may exist a deficiency of oxygen, which may be due to lack of air circulation or absorption by paint and other substances.

Innerbottom tanks both forward and under the engine and boiler rooms on tank vessels usually contain water, but in some types of ships they carry oil. A closed innerbottom tank is hidden to the world until it is opened for inspection and should never be slighted.

Carbon dioxide lines, loading and discharging lines, vent lines, and other pipe apparatus on deck are oftentimes filled with liquids or sediment that is both flammable and explosive and should be carefully inspected, cleaned, washed, and ventilated as may be necessary before work is permitted on them.

To get away from cargo tanks, there are many compartments on all types of vessels that may be the source of destructive fires. In ships' paint lockers are found such flammable materials, as paint, thinners, oils and solvents, just waiting for a spark to fall.

The bosun's locker may contain canvas (new or old, clean or dirty, it will all burn), rope yards, marlin, and many other materials that will ignite easily.

Chain lockers sound very innocent, but there may be several barrels of oil in them, to prevent the chain from rusting. Better look there.

The lamp locker has flammables in it. It is true that we all use electricity on our modern vessels, but those emergency lights use kerosene, and the place may be dirty and oily.

Chips, the ship's carpenter, usually has plenty of work to do, and oftentimes his shop is littered with shavings and wood. Here is a good place for a fire to start.

Manila rope storage should be carefully watched, particularly in these days when manila is practically irreplaceable, and all rope and cordage spaces should be carefully inspected.

In fact, almost any compartment of a vessel may well be considered a hazard until a close inspection reveals what is there. To a trained observer many things are apparent that another person will pass by.

On general cargo and other types of vessels many of the forementioned hazards will be found, but the situation in the cargo-carrying space is quite different.

The innerbottoms on these vessels may or may not contain fuel oil, though as a rule they do. The cargo holds of a ship present quite a different story, and, instead of a liquid cargo moved through pipe lines by pumps, we may find anything from a sack of coffee or a hold full of grain to a jeep or something larger. Proper stowage is of course necessary to prevent damage to ship, cargo, and personnel. Aside from this, foul bilges may generate the familiar hydrogen sulphide, and decomposition of organic substances may cause toxic conditions or oxygen deficiency. Again there may be oil there, due to leakage, breakage, and other causes.

Many cargoes, particularly cargoes of plant origin, both absorb oxygen and give off toxic gases. Among them are linseed cake, rosin, tobacco, potatoes, oranges, and similar products which, aided by moisture, may cause a more or less dangerous increase in carbon dioxide content and also, under certain conditions, generate carbon monoxide.

Two accidents caused by oxygen deficiency have been noted—one in a hold where rice bran had heated spontaneously, and a second where hides and coffee had been wet as a result of a grounding. In still another case, "dry ice" had been packed into the hold of a barge to keep a cargo of cherries fresh, and four stevedores and a deckhand who went to aid them met instant death from carbon dioxide poisoning when they entered the hold.

I remember one vessel on which we worked where the bottom of the ship had been opened up as a result of grounding on a reef. Water in a hold mixed with some caustic in the cargo, and several men were burned before we became aware of the source.

Another cargo, castor pomace, used as a fertilizer, I understand, will generate carbon dioxide, and caused a fatality at Tampa, Fla., in 1940. Dunnage, wood battens for stowing cargo, lumber, and similar cargoes may present grave fire hazards.

Refrigerated vessels also may have all the hazardous conditions mentioned. In addition, cork, in block, granulated, or powdered form, used

extensively for insulating these vessels, can be regarded as a constant source of danger, particularly the powdered form, in which fire may spread with lightning-like rapidity. Again, cork may produce a slow smoldering fire which will break out suddenly over large areas.

Latex carried as a cargo is oftentimes stabilized by ammonia, which acts as a preservative and as an anti-coagulant. In many cases sufficient ammonia remains in the tanks after they are emptied; to prevent putrefaction, and in some cases on record the latex residue oxidized and caused a serious deficiency in oxygen.

Engine and boiler rooms on all classes of vessels are often the scene of the start of a destructive fire. Oil in the bilges, on the tank tops—in fact, anywhere, may become ignited and before being brought under control, destroy much valuable property. Inspect them well, and clean up when necessary and, if in doubt, clean anyway.

Another point here—when you have had a fire of this type, watch that CO₂ system! Some one may operate it without warning, and lives will be lost. I mention a case on a naval vessel under repairs, where a man in a small compartment kept using CO₂ hand type extinguishers as they were passed to him until he became unconscious from the high concentration set up. Remember that after any fire there may exist an oxygen deficiency or an excess of carbon dioxide.

Boilers, when just opened up may contain an atmosphere deficient in oxygen. Boiler flues and ducts, also the stack may contain excess amounts of CO₂, and even carbon monoxide may be found where motor exhaust gases or stack gases are encountered.

Coal in bunkers and in cargoes is of course flammable and will burn. Care must be taken to prevent spontaneous combustion of this fuel.

The crews' quarters of a vessel and the passenger accommodations may present some dangerous conditions—insulation may be flammable. Kapok, used in many articles, will ignite very easily and burn fast; electric wiring may fail and a short circuit cause a fire; clothing and furnishings may become ignited from various sources.

Ammunition and explosives on ships should be carefully located, marked with signs, guards posted as necessary, and all work near these areas brought under strict control. The safety precautions of the U. S. Navy have been followed by us and have proven satisfactory to all concerned.

Following tests and inspections at our yard, we label all tanks and compartments according to the conditions in which they are found.

Stickers are placed on them which denote the condition, such as "Safe—This Tank Is Gas Free," "Fuel Oil," "Danger—Explosive Gas," "See Chemist Before Starting Work," and "Warning—Do Not Enter This Tank." These stickers are printed in appropriate colors, and workmen are instructed to be guided accordingly.

Workmen in our yard entering tanks, cofferdams, pumprooms, and all closed compartments for any work, hot or cold, are required to have the permission of the chemist. Written permits issued only by him are required for all hot work.

Hatches, deck, shell, and bulkheads of fuel oil tanks are marked with signs and yellow paint, as are any other compartments with dangerous concentrations of gas.

Thorough knowledge of the lay-out of a vessel is very important. Relationship of tanks, bunkers and holds to the other sections of a ship, the recognition of bulkheads, hatches, etc., and a general knowledge of the lay-out of a ship's fire system are very important factors to the man charged with the safety of the vessel.

Fire equipment of all types must be brought aboard and placed at strategic points; fire lines from shore must be hooked up, and there should always be someone to assume this responsibility and see that orders are fully carried out.

Grounds for welding work must be correctly placed so that they clear the fuel oil and other live compartments; electric and welding cables must be kept from contact with any portion of the deck overtop of fuel oil tanks and those that show gas. Ventilation must be resorted to in many cases to clear tanks and other compartments. (Numerous types of blowers are found in general use.)

Ship repairs call for all types of work at all times, yet there are many jobs that conflict. We cannot open a cargo line, or a gasoline pump, while we are driving rivets or welding a seam in that compartment. Coordination must take place to accomplish your work. If all of your repair work is properly coordinated it will eliminate many potential hazards, give you a better safety record and, above all, protect your men.—*Safety Engineering*, July 1944.

Merchant Marine Personnel

A REVISED edition of Subchapter K, "Rules and Regulations for Licensing and Certificating of Merchant Marine Personnel" will be available for distribution about March 1, 1945. The last edition of Subchapter K was published in March 1940, and has been out of print for some time.

This forthcoming edition has been revised for the greater convenience of merchant officers and seamen. This new edition contains all of the rules and regulations relating to the licensing and certificating of merchant marine personnel as well as the regulations previously contained in Subchapter K, including all amendments through February 20, 1945. Officers and seamen will no longer find it necessary to search through various subchapters to find the applicable regulations. There is also included, for convenience, some rules and regulations concerning seaman's allotments, Shipping Commissioners' functions, manning, and similar matters.

An appendix has been added to these regulations containing Navigation and Vessel Inspection Circular No. 26 dealing with physical requirements for licensed officers and certificated men, and certain wartime orders which, while not a part of these rules and regulations, affect or pertain to maritime documents.

Coast Guard Merchant Marine Hearing Units and Details, during the month of December, handled cases involving 196 officers and 1,949 unlicensed men. In the case of officers, 22 were suspended, 43 were suspended on probation, 11 voluntarily surrendered, 75 were admonitions, and 45 were dismissed. Of the unlicensed personnel, 18 were revoked, 229 were suspended, 570 were suspended on probation, 175 voluntarily surrendered, 768 were admonitions, and 189 were dismissed.

Cumulative Supplement of Code of Federal Regulations

THE Cumulative Supplement to the Code of Federal Regulations which contains all amendments to regulations published in the *Federal Register* from June 2, 1938, through June 1, 1943, is now obtainable from the Superintendent of Documents, Government Printing Office, Washington, D. C. This supplement includes Books 7 and 8, which contain the material chiefly affecting the Coast Guard. Each volume or book is sold for \$3 per copy.

Book 7 includes Title 33 of the Code of Federal Regulations entitled, Navigation and Navigable Waters. Book 8 contains Title 46, entitled, Shipping, and is divided into three chapters. Chapter I contains all amendments covering the merchant marine inspection regulations. Chapter II contains the regulations of the United States Maritime Commission. Chapter III contains the regulations of the War Shipping Administration.

British-American Collaboration on Welded Ships

DURING December 1944, a representative of the Merchant Marine Technical Division went to London to contact the Admiralty Ship Welding Committee and discuss the current problem relating to the structural failure of steel ships. The Admiralty Ship Welding Committee is actively engaged in studying this problem and is the British counterpart of our Board to Investigate the Design and Methods of Construction of Welded Steel Merchant Vessels.

Following a short visit on the other side, the United States representative joined three British representatives on board the British motor tankship *Niso* and returned to the United States. The *Niso* was equipped with various instruments for the purpose of taking technical data on the behavior of the ship at sea, and the joint party cooperated in various studies on the return voyage. Upon arrival in the United States, the three British representatives, Mr. G. M. Boyd, Welding Engineer of the Director of Merchant Shipbuilding Department in the Admiralty, and Messrs. F. B. Bull and K. J. Pascoe of the Director of Scientific Research Department of the Admiralty, were introduced to the members of the American Board and Subboard to Investigate the Design and Methods of Construction of Welded Steel Merchant Vessels at meetings in New York and Washington. Following this, the British representatives visited the Government departments, some of the laboratories where research work is being performed, as well as several American shipyards.

The personal contacts made by this mutual exchange of representatives have proved immeasurably valuable to both nations. The opportunity of surveying the independent approach made by two groups studying a complicated, far-reaching, and difficult problem has served to clarify many of the technical points. Even more important, however, it has served to produce on both sides a greater respect for the volume and quality of investigation and research being performed by equivalent groups. One of the most important points made clear by this interchange is that people on both sides of the water consider this problem of prime importance to the entire future of ship construction and the personal interchange of information has proved so successful that it is probable that arrangements will be made to carry on some similar exchanges in the future.

U. S. Coast Guard Merchant Marine Publications

REGULATIONS.

General Rules and Regulations for Vessel Inspection, Ocean and Coastwise, August 1943. The regulations in this booklet cover lifesaving, fire-fighting, and inspection requirements, and certain operating rules for merchant vessels, except tank vessels, that navigate on ocean and coastwise waters and are subject to the jurisdiction of the Coast Guard.

Subchapter O, Regulations Applicable to Certain Vessels and Shipping During Emergency, December 1944. This pamphlet contains the wartime emergency requirements which are supplementary or amendatory to the general rules and regulations for merchant vessels, including tank vessels. The regulations include lifeboat, life raft, and lifesaving appliances, special operating requirements, inspection and certification of vessels, marine engineering materials, qualifications for licensed officers, storage of high explosives on tank vessels, and hull construction for tank barges.

Marine Engineering Regulations and Material Specifications, December 1944. The regulatory requirements covering boilers, pressure vessels, and appurtenances, which include castings, piping, valves and mountings, etc., and the design, construction, installation, and inspection thereof, are contained in this publication. These regulations are applicable to merchant vessels, including tank vessels, subject to the jurisdiction of the Coast Guard.

General Rules and Regulations for Vessel Inspection, Great Lakes, August 1944. These regulations contain requirements for lifesaving, fire-fighting, and inspection, and certain operating rules for merchant vessels, except tank vessels, that navigate on the Great Lakes and are subject to the jurisdiction of the Coast Guard.

General Rules and Regulations for Vessel Inspection, Bays, Sounds, and Lakes Other Than the Great Lakes, August 1944. The regulations in this pamphlet set forth lifesaving, fire-fighting, and inspection requirements and certain operating rules for merchant vessels, except tank vessels, that navigate on the waters of the bays, sounds, and lakes other than the Great Lakes in the United States and are subject to the jurisdiction of the Coast Guard.

General Rules and Regulations for Vessel Inspection, Rivers, August 1944. In this pamphlet the regulations cover lifesaving, fire-fighting, and inspection requirements and certain operating rules for merchant vessels, except tank vessels, that navigate on the

waters of the United States and are subject to the jurisdiction of the Coast Guard.

Tank Vessel Regulations. A revised edition is in process of publication and will be available in May 1945. This publication will contain regulations applicable to all tank vessels, regardless of tonnage, size, or manner of propulsion, and whether carrying freight or passengers for hire or not, except public vessels owned by the United States other than those engaged in commercial service. The regulations will include lifesaving, fire-fighting, and inspection requirements and special operating rules for tank vessels navigating on ocean and coastwise waters as well as inland waters of the United States.

Load Lines, January 1943. The regulations for the establishment of load lines for certain merchant vessels of 150 gross tons or over and subdivision load lines for certain passenger vessels are contained in this booklet as well as an appendix containing certain applicable laws, Executive orders, etc.

Motorboats and Certain Vessels Propelled by Machinery Other Than by Steam More Than 65 Feet in Length, April 1941. The regulations applicable to motorboats and certain motor vessels for lifesaving, fire-fighting, and enforcement requirements and qualifications, etc., for motorboat operators are set forth in this pamphlet as well as recommended practices for the care of motorboats and their operation. A Supplement No. I, containing all the amendments made to these regulations, is being prepared and will be available upon request in May 1945.

Construction or Material Alteration of Passenger Vessels of the United States of 100 Gross Tons and Over, Propelled by Machinery, December 1944. This pamphlet contains the regulations concerning the construction or material alteration of passenger vessels of the United States of 100 gross tons and over, propelled by machinery, or the conversion of vessels of 100 gross tons and over, propelled by machinery to passenger vessels. These regulations are applicable to passenger vessels navigating on ocean and coastwise waters as well as inland waters of the United States.

Overtime Services, January 1945. The regulations in this pamphlet apply to those vessels which may require inspection or the supplying, signing on, or discharging of crews at night or on Sundays and holidays and require that extra compensation shall be paid by the master, owner, or agent of the vessel to certain Coast Guard per-

sonnel or certain customs officers and employees.

PILOT RULES.

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, February 1944. The statutory international and inland rules for preventing collisions at sea and on the waters connected therewith are set forth in comparison form. The regulatory pilot rules and the boundary lines between the high seas and inland waters are also included.

Pilot Rules for the Great Lakes and Their Connecting and Tributary Waters and the St. Marys River, August 1943. This pamphlet contains the statutory and regulatory pilot rules relating to the navigation of United States vessels on the waters of the Great Lakes and their connecting and tributary waters, as well as certain anchorage and navigation regulations for the St. Marys River, Mich. Certain applicable War Department Rules and Regulations governing the display of signals on, and the operation of, all craft and accessories working on wrecks, engaged in dredging, surveying, or other work of improvement, and the use and navigation of the waters in the vicinity, in the Great Lakes and their connecting and tributary waters as far east as Montreal have been also included.

Pilot Rules for the Rivers Whose Waters Flow Into the Gulf of Mexico and Their Tributaries and the Red River of the North, August 1943. The applicable laws and regulations setting forth the pilot rules governing vessels navigating the western rivers and the Red River of the North are given in this publication. The regulations which set forth the boundary lines between the high seas and inland waters have also been included as well as certain applicable War Department Rules and Regulations governing the display of signals on, and the operation of, all craft and accessories working on wrecks, engaged in dredging, surveying, or other work of improvement, and the use and navigation of the waters in the vicinity, in the rivers whose waters flow into the Gulf of Mexico, and their tributaries and the Red River of the North.

MISCELLANEOUS.

Laws Governing Marine Inspection, September 15, 1943. This booklet contains the marine inspection laws as set forth in title 52 of the Revised Statutes of the United States, as amended, with certain acts and executive orders which are supplementary thereto. In the introduction an

explanation is given of certain administrative changes under Executive Order No. 9023 which transferred certain marine inspection functions of the former Bureau of Marine Inspection and Navigation to the Commandant, United States Coast Guard.

Wartime Safety Measures for Merchant Marine, April 1944. This booklet is a revised edition of the one published in January 1943. The material covers wartime safety regulations with comments and recommendations concerning safety of life at sea, requirements that apply to merchant vessels navigating ocean and coast-

wise waters. Also included are suggestions for what to do when in a lifeboat or life raft, how best to attract attention of ships and planes, and the most efficient use of lifesaving equipment, as well as recommendations for the care of survivors and the prevention and treatment of malaria.

A Manual for the Safe Handling of Inflammable and Combustible Liquids, March 1943. This pamphlet tells about the essential requirements for the safe handling of oil cargoes and has been prepared especially for the use of tankermen. The information is based on the regulations and also

includes questions covering the handling of liquid inflammable and combustible cargoes in bulk, barrels, and cases.

Manual for Lifeboatmen and Able Seamen, August 1944. This pamphlet contains general and specific information for the guidance of lifeboatmen and able seamen, such as the necessary qualifications for certificates, descriptions of various lifesaving devices and their use, and an enumeration of the duties of lifeboatmen and able seamen, including the resuscitation of apparently drowned, shocked, or asphyxiated personnel.

LESSONS FROM CASUALTIES

Violations of Oil Pollution Act

The spilling or pumping of oil into harbors creates one of the gravest fire and explosion hazards to vessels and waterfront installations. The Oil Pollution Act, 33 U. S. C. 431-437, seeks to prevent these dangers by making it unlawful for any person to discharge oil from a vessel into the coastal navigable waters of the United States. Violators of the act are subject to a criminal penalty of imprisonment of not less than 30 days nor more than 1 year and to a fine of not less than \$500 nor more than \$2,500.

The violating vessel may be proceeded against for the collection of the monetary penalties.

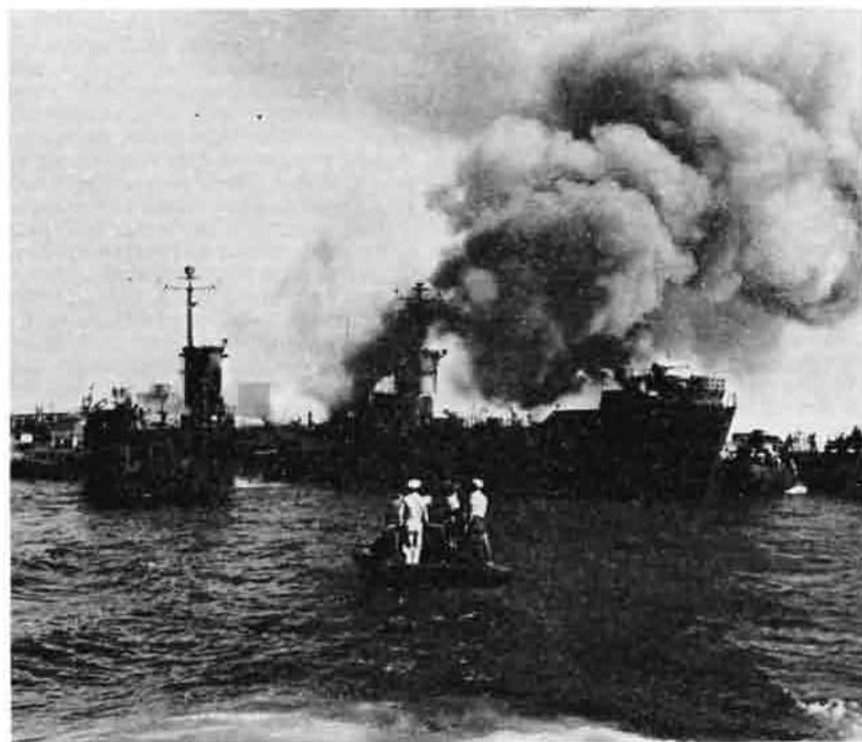
The reasons this law should be implicitly obeyed are obvious and practical. This war with its vast increase of shipping and ship movements gives great urgency to these reasons. Yet this act is frequently violated. For example, during the year 1944, in the 8th Naval District Gulf Coast area, 121 cases of violation were reported.

Oil pollution violations have been the direct cause of serious war losses. On October 21, 1944, a comparatively small amount of oil spillage caused a

flash fire at Berth 223, Los Angeles, which engulfed two Navy LSM's killing 10 naval personnel, 6 civilians, and injuring over 100 persons including 15 naval officers and seamen. Property damage in excess of \$225,000, including over \$100,000 damage to the LSM's, was incurred.

The LSM's 211 and 212 were moored side by side alongside the wharf at Berth 223. At 1:55 p. m. a spark from spot welding operations on the bow of the inboard LSM ignited flammable vapor from volatile oil floating on the water alongside the ship and trapped under the dock. The ignition of this oil and vapor resulted in a flash fire. A huge sheet of flame spread instantly upwind over the weather and gun decks of both vessels and downwind over the deck of the wharf. This sheet of flame caused the explosion of numerous oxyacetylene cylinders and fuel tanks of welding equipment located on the LSM's and wharf. This initial blast seared all persons in its path, and, while of only a few seconds duration, was undoubtedly responsible for the loss of life and injuries in this fire. It was among the personnel of the LSM 211 and 212 where the greatest loss of life occurred, either directly from burns or from leaping overboard and drowning.

A Coast Guard Port Security harbor patrol boat reported the fire by radio at the instant of its occurrence. The rapidity with which the flame spread may be observed by the accompanying photograph taken by a Coast Guard Port Security fire fighting unit about five minutes after the start of the fire. At this time the under structure and deck of the wharf, the LSM's 211 and 212, a portable power crane, 12 electric welding machines, and 10 trucks and automobiles were entirely involved with fire. The inboard LSM 211 had considerable fire on deck with smoke coming up from below deck.



2 LSM's and wharf at Los Angeles burning as a result of oil spillage October 21, 1944.

The outboard LSM was afire topside and in the forward gun turrets.

The two probable sources of oil spillage causing this disaster involved small quantities of oil. A tanker at Berth 151 in pumping ballast from the number 1 tank discharged from 50 to 150 barrels of toulene into the water an hour and five minutes before the fire occurred. A few hours before the accident a barge loading a cargo vessel with bunker fuel twice spilled an unestimated quantity of diesel fuel into the water because of faulty ship-board connections.

This disaster is clear evidence of the necessity not only of preventing any oil spillage in harbors but also of immediately reporting to the Coast Guard Captain of the Port any spillage observed. The danger of flash fires from oil spillage will continue to be great so long as harbors remain crowded and welding operations on piers and on shipboard continue at the present rate.

Liquid Death

Review of personnel casualty reports discloses the lengths to which some seamen will go to get what they

believe to be a drink of intoxicant and their utter ignorance of the effects of some of the mixtures. Wood alcohol, since it is carried by most ships as part of the paint locker stores, is the most common ingredient. Apparently there seems to be prevalent a fallacious belief that if wood alcohol is filtered through a loaf of bread, its toxic properties are removed. There is, of course, absolutely no foundation for this belief, but nevertheless case after case shows that somebody gambled his life or his eyesight upon it.

The casualty reports make pretty grim reading, for death by methyl alcohol is an agonizing one. A ship's maintenance man mixes hair tonic and wood alcohol and dies 6 hours after drinking it, first having lost his sight; a ship's cook, abstracting it from the paint locker, dies after 2 days of agony; a boatswain, securing his supply from the same source, mixes it with fruit juice with the same fatal result.

Sometimes the casualty is due to lack of knowledge that the ingredient is poisonous, though this would never be the case when the alcohol comes from the paint locker. For example,

two seamen arranged to purchase what they thought was grain alcohol from a Navy seaman at the base where the ship was discharging. Actually it was wood alcohol stolen from that ship's cargo. One of the seamen died and the other was hospitalized with permanent loss of sight.

The urge for drink leads to utter disregard of elementary caution. Thus one second mate died from drinking carbon tetrachloride which happened to be in a half-filled beer bottle. The odor should have told him that it certainly was not liquor. Perhaps the most remarkable case involved a first assistant who believed that the steward had some liquor in his medicine cabinet, and finding there a bottle marked "Poison," announced that he wasn't going to be fooled by that trick and took a drink. The contents happened to be sulphuric acid!

Part of the safety measures taken aboard every ship could well be a warning to the crew as to the ghastly and certain effects that flow from drinking wood alcohol or any other so-called intoxicant whose origin is unknown.

APPENDIX

Amendments to Regulations

TITLE 46—SHIPPING

Chapter I—Coast Guard: Inspection and Navigation

Subchapter D—Tank Vessels

PART 35—OPERATIONS

INSPECTION PRIOR TO MAKING CERTAIN REPAIRS

By virtue of the authority vested in me by R. S. 4405, 4417a, as amended (46 U. S. C. 375, 391a), and Executive Order 9083, dated February 28, 1942 (3 CFR, Cum. Supp.), I find that an emergency exists and the following new regulation to the Tank Vessel Regulations is necessary in the conduct of the war and shall be made effective as of January 15, 1945.

Part 35 is amended by the addition of a new center heading and a new § 35.6-1 which read as follows:

INSPECTION PRIOR TO MAKING CERTAIN REPAIRS

§ 35.6-1 *Repairs involving riveting, welding, burning, etc.—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 certificated 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. (10 F. R. 485, 12 January 1945.)

Subchapter G—Ocean and Coastwise: General Rules and Regulations

PART 61—FIRE APPARATUS; FIRE PREVENTION

Section 61.4 (a) (1) is amended to read as follows:

§ 61.4 *Steam and inert-gas fire extinguishing systems—(a) General requirements.* (1) All mechanically propelled vessels carrying combustible cargo in the holds, 'tween-decks, or other closed cargo compartments, except those engaged exclusively in the carriage of coal in bulk, shall be equipped with means for extinguishing fire in such compartments by the use of a steam fire-extinguishing system or by the use of any inert-gas fire-extinguishing system approved by the Commandant. (10 F. R. 670, 17 January 1945.)

Subchapter H—Great Lakes: General Rules and Regulations

PART 77—FIRE APPARATUS; FIRE PREVENTION

Section 77.4 (a) (1) is amended to read as follows:

§ 77.4 *Steam and inert-gas fire extinguishing systems.* (See § 61.4 of this chapter, which is identical with this section.) (10 F. R. 671, 17 January 1945.)

Subchapter I—Bays, Sounds, and Lakes Other Than the Great Lakes: General Rules and Regulations

PART 95—FIRE APPARATUS; FIRE PREVENTION

Section 95.4 (a) (1) is amended to read as follows:

§ 95.4 *Steam and inert-gas fire-extinguishing systems.* (See § 61.4 of this chapter, which is identical with this section.) (10 F. R. 671, 17 January 1945.)

Subchapter J—Rivers: General Rules and Regulations

PART 114—FIRE APPARATUS; FIRE PREVENTION

Section 114.6 (a) (1) is amended to read as follows:

§ 114.6 *Steam and inert-gas fire-extinguishing systems.* (See § 61.4 of this chapter, which is identical with this section.) (10 F. R. 671, 17 January 1945.)

Subchapter O—Regulations Applicable to Certain Vessels and Shipping During Emergency

PART 153—BOATS, RAFTS, AND LIFESAVING APPLIANCES; REGULATIONS DURING EMERGENCY

Section 153.6 (m) (1) is amended to read as follows:

§ 153.6 *Additional equipment for lifeboats on self-propelled ocean and coastwise vessels.* * * *

(m) *Provisions.* * * *
(1) Fourteen ounces of biscuits known as Type C, Type I, or Type IV (without salt topping) rations covered by U. S. Army Specification.¹

Section 153.6a (a) (7) (i) is amended to read as follows:

§ 153.6a *Additional equipment for lifeboats on seagoing barges of 100 gross tons or over.* (a) * * *

(7) *Provisions.* * * *
(i) Fourteen ounces of biscuits known as Type C, Type I, or Type IV (without salt topping) rations covered by U. S. Army Specification.¹

Section 153.7 (c) (1) is amended to read as follows:

§ 153.7 *Additional equipment for life rafts approved prior to March 15, 1943, for ocean and coastwise vessels.* * * *

(c) *Provisions.* * * *
(1) Fourteen ounces of biscuits known as Type C, Type I, or Type IV (without salt topping) rations covered by U. S. Army Specification.¹

Section 153.7a (aa) (1) is amended to read as follows:

¹ The size and number of biscuits in each package, as well as the general specifications for the package covering, are as follows:

Each biscuit should measure approximately 2 3/16" square by 3/16" thick. The biscuits will be packed 12 to a box and heat sealed in moisture- and grease-resisting wax glassine paper; or four to a package covered by a wrapping or bag made from a sheet of duPont 450 MST-54 or Sylvania 450 PMCSX cellophane with securely fastened closures. The materials used for packaging shall be odorless and tasteless.

§ 153.7a *Equipment for life rafts approved on and after March 15, 1943.* * * *

(aa) *Provisions.* * * *
(1) Fourteen ounces of biscuits known as Type C, Type I, or Type IV (without salt topping) rations covered by U. S. Army Specification.¹ (10 F. R. 671, 17 January 1945.)

Waivers

TITLE 46—SHIPPING

Chapter I—Coast Guard: Inspection and Navigation

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

SLOP CHEST; MINIMUM SPECIFICATIONS FOR VESSELS

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

The Acting Secretary of the Navy having by order dated 1 October, 1942 (7 F. R. 7979), waived compliance with the Navigation and Vessel Inspection Laws administered by the United States 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; and

The War Shipping Administration having indicated that the efficient prosecution of the war would be impeded by the full application of certain laws requiring that every vessel of burden of seventy-five gross tons or upward and bound on a voyage exceeding in length fourteen days, or bound from a port on the Atlantic to a port on the Pacific, or vice versa, except vessels engaged in the whaling or fishing business, shall be provided with a slop chest containing at least one suit of woolen clothing for each seaman and a complement of clothing, boots, shoes, hats or caps, underclothing and outer clothing, oiled clothing and everything necessary for the wear of a seaman, also a full supply of tobacco and blankets;

Now, therefore, upon request of the War Shipping Administration, I hereby find it to be necessary in the conduct of the war that there be waived compliance with the Navigation and Vessel Inspection Laws administered by the U. S. Coast Guard, R. S. 4572 and Act of June 26, 1884 (46 U. S. C. 669, 670), in the case of any vessel engaged in business connected with the conduct of the war, so as to permit a vessel proceeding on a voyage to which the above sections of law apply without having on board a slop chest in full compliance with statutes: *Provided*, That such vessel

is supplied with a slop chest containing at least the following items and amounts when on a voyage of 3 or 6 months' period with a complement of officers, crew and armed guard of 75, and if the length of voyage and/or number of officers, crew and armed guard varies from that above, the amounts of the items shall be increased or decreased in direct proportion thereto:

Item No.	Items	Units	For 3 months		For 6 months	
			For 3 months	For 6 months	For 3 months	For 6 months
1	Blades, Razor, Gem type	Pkg. 5.	75	150		
2	Blades, Razor, Gillette Type	Pkg. 5.	75	150		
3	Belts, Web, Army Type	Each.	12	24		
4	Boots, Rubber, 34		6	6		
5	Boots, Rubber, Knee		3	6		
6	Brushes, Shaving		12	12		
7	Brushes, Tooth		48	72		
8	Caps, Engineers		12	24		
9	Caps, Firemen		24	36		
10	Caps, Watch, Wool		6	6		
11	Cards, Playing		12	24		
12	Cards, Pinochle		4	6		
13	Coats, Dungaree		12	24		
14	Coats, Khaki					
15	Coats, Oilskin, Long		6	6		
16	Coats, Oilskin, Short		3	3		
17	Coats, Rubber, 34 Length		3	3		
18	Cream, Shaving		48	96		
19	Gloves, Leather Palm		24	48		
20	Gloves, Canvas		36	48		
21	Gloves, Woolen		12	18		
22	Hats, Sailors, White—Middy		12	12		
23	Hats, Sailors, White—Blue		6	6		
24	Handkerchiefs, White		72	144		
25	Handkerchiefs, Colored		36	75		
26	Laces, Shoe, 27" Black	Pair	24	36		
27	Melton Jackets	Each	12	12		
28	Paste, Tooth		48	72		
29	Razors, Gem Type	Each	6	6		
30	Razors, Gillette Type	Each	6	6		
31	Shirts, Blue, Chambray	Each	24	48		
32	Shirts, Khaki	Each	24	48		
33	Shirts, Wool	Each	12	24		
34	Shirts, Sweat	Each	6	6		
35	Shoes, Work, Low	Pair	18	24		
36	Shoes, Work, High	Pair	6	6		
37	Slippers, Romeo	Pair	12	24		
38	Socks, Light, White	Pair	72	144		
39	Socks, Light, Black	Pair	72	144		
40	Socks, Heavy, Wool	Pair	24	36		
41	Socks, Heavy, Boot	Pair	12	12		
42	Son'westers	Each	6	12		
43	Suits, Oilskin	Each	6	12		
44	Sweaters, Turtleneck	Each	6	6		
45	Trousers, Cooks	Pair	3	3		
46	Trousers, Dungaree	Pair	12	24		
47	Trousers, Khaki	Pair	12	24		
48	Trousers, Oilskin	Pair	6	6		
49	Undershirts, Light		84	144		
50	Undershirts, Heavy		12	24		
51	Underdrawers, Light		36	72		
52	Underdrawers, Heavy		12	24		

1 carton per man per week (cigarettes): (13 weeks—3 months) (26 weeks—6 months):

	For 3 months	For 6 months
Cigarettes, total various brands:	1,100	2,200
Cartons	1,100	2,200
Tobacco, total various (2 oz.) brands: (8 oz.)	60 halves	122 half (lb. tins.
Chewing, cuts	6 lbs.	
Bull Durham: sacks	50	
Snuff, tins	36	
Papers, cigarette: Books	48	
Pipes, corncob	24	
Cigarettes: 1 carton per week per man plus 10%.		
Tobacco: 1 1/2 oz. per week per man.		

(10 F. R. 732, 19 January 1945)

INSPECTION OF AUXILIARY BOILERS TO BE INSTALLED ON CERTAIN U. S. MARITIME COMMISSION VESSELS

The Acting Secretary of the Navy having by order dated 1 October, 1942 (7 F. R. 7979), waived compliance with

the Navigation and Vessel Inspection Laws administered by the United States 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; and

The United States Maritime Commission having indicated that the efficient prosecution of the war would be impeded by the application of certain inspection regulations in 46 CFR requiring the approval of auxiliary boilers on U. S. Maritime Commission vessels, Designs C1-M-AV1 and R1-M-AV3;

Now, therefore, upon request of the U. S. Maritime Commission, I hereby find it to be necessary in the conduct of the war that there be waived compliance with the Navigation and Inspection Laws and the regulations promulgated thereunder administered by the U. S. Coast Guard to the extent necessary to permit the acceptance of auxiliary boilers, notwithstanding the fact that the safety devices used in effecting automatic operation of the aforesaid installations have not been approved, on U. S. Maritime Commission vessels; Designs C1-M-AV1 and R1-M-AV3. (10 F. R. 900, 24 January 1945).

**VESSELS ENGAGED IN BUSINESS CONNECTED
WITH CONDUCT OF WAR—WAIVER OF
COMPLIANCE**

The Commandant, United States Coast Guard, having by order dated 1 July, 1943 (8 F. R. 9164; F. R. Doc. 43-10646) pursuant to the authority of the order of the Acting Secretary of the Navy dated 1 October, 1942 (7 F. R. 7979; F. R. Doc. 42-9999) found necessary in the conduct of the war waiver of compliance with the navigation and vessel inspection laws administered by the Coast Guard to the extent and in the manner and upon the terms and conditions therein set forth, and finding the following amendment necessary in the conduct of the war; *It is ordered*, That said order dated 1 July, 1943, be and it hereby is amended in the following respects:

1. The third sentence of paragraph numbered "1" of said order dated 1 July, 1943; is deleted, and there is inserted in lieu thereof the following "The application shall be delivered to the District Coast Guard Officer or his designated representative at the port where the vessel is located. In the case of vessels in foreign ports, or Canal Zone ports, at which the Coast Guard has established facilities, the application shall be delivered to the designated representative of the Commandant." (10 F. R. 582, 16 January 1945.)

Marine Inspection Memorandum No. 84

Licensing of merchant marine personnel on probation imposed pursuant to action under R. S. 4450, as amended; change in policy concerning

UNITED STATES COAST GUARD,
Washington 25, D. C.
22 January, 1945.

1. Reference is made to paragraph 12 of HQ letter dated 17 June 1944, to "All DCGO's and all Coast Guard Merchant Marine Hearing Units," and paragraph 3 of Marine Inspection Memorandum No. 71, dated 11 May 1944, and, Part III, section 431 (a) of the Manual for Hearing and Examining Officers Merchant Marine Hearing Unit, June 1944.

2. Heretofore it has been HQ policy to disapprove all applications for original licenses from persons who are on probation as a result of action under R. S. 4450, as amended, until such time as the period of probation has been satisfactorily completed; also, Coast Guard personnel concerned with the issuance of licenses have been directed not to grant a raise in grade of license to an applicant who is on probation until such time as the probation has been satisfactorily completed.

3. Hereafter, notwithstanding that a seaman is under probation imposed under a R. S. 4450 proceeding, an original license or raise in grade of license may be issued to such seaman if he meets all the requirements for such original license or raise in grade. However, an original license or raise in grade of license issued under these circumstances will be subject to the same probationary conditions as were imposed against the seaman's certificates or licenses in the R. S. 4450 proceedings. For example, an AB who is found guilty of misconduct in a R. S. 4450 proceeding and given a 6-months' suspension to be ineffective if no violation is found against him for a period of one year may apply for a Third Mate's license before the expiration of the year of probation and if he meets all the requirements for such licenses, including HQ approval as to character, it may be issued to him. However, if after he has received that license but prior to the expiration of the year's probationary period he is found guilty of another violation then the 6-months' suspension will be made effective against the license as Third Mate as well as against the AB certificate.

4. The change of policy herein made is effective immediately and is applicable with respect to all mer-

chant-marine personnel now on probation. Nothing herein shall be construed to permit an examination for an original license or a raise in grade of license during any period when a suspension without probation or revocation imposed pursuant to R. S. 4450, as amended, is effective against it.

5. Outstanding directives and instructions are changed to correspond with this change in policy as follows:

(a) Paragraph 12 of HQ letter, dated 17 June, 1944, to "All DCGO's and all Coast Guard Merchant Marine hearing units" on the subject of merchant marine personnel activities is hereby revoked.

(b) Paragraph 3 of Marine Inspection Memorandum No. 71, dated 11 May 1944, is hereby revoked and Marine Inspection Memorandum No. 71 is amended by the inclusion of the following paragraph 3:

"Wording of orders wherein probation is granted. To avoid difficulties encountered by foreign MMDs when violation of probation occurs, all Hearing Officers are directed to add, after the statement of the order and the probation, the following:

"If this probation is violated, the order for which probation was granted shall become effective with respect to all certificates and licenses here involved, and also any certificates or licenses acquired by you during the period of probation, at such time as designated by any Coast Guard Hearing Officer finding the violation, and may be added to or form a part of any additional order which is entered by such hearing officer."

"In the event Form NAVCG 2639-C is available, it will not be necessary to add the above statement since it is provided on this form.

"In all cases where probation is granted Hearing Officers should fully explain the conditions of this probation as indicated above to the person involved."

(c) Part III, Section 431 of the Manual for Hearing and Examining Officers, Merchant Marine Hearing Unit, June 1944, is amended as follows:

Paragraph (a) is hereby revoked and the following paragraph (a) is substituted therefor:

"(a) When a Hearing Officer wishes to order a suspension subject to probation use of Form NAVCG 2639-C is best for indicating the "findings and order" and the following language should be used:

"That your license (or certificate of service) #12345 and all other valid licenses (or certificates of service) now held by you be and the same are hereby suspended for a period of --- months.

"The suspension ordered shall not be effective provided no charge under R. S. 4450, as amended, is proved against you for acts committed within _____ months of _____ 194____."

"The provisions printed in Form NAVCG _____ which indicate that a Hearing Officer finding a violation may make the suspension ordered effective and that this suspension shall extend to any licenses or certificates obtained during the period of probation shall be fully explained to the person involved. (c. f. Par. 3 Min. No. 71)

"Care should be taken not to have the basis suspension subject to a probation, run from a definite date as such language renders the order contradictory on its face in the event of a violation of probation at a later date."

6. A supply of Findings and Order forms (Form NAVCG 2639-C) is indicated in Paragraph 5 (b) above will be forwarded for the use of Hearing Officers in those cases wherein probation is granted. In order that all seamen hereafter placed on probation will be aware that the terms of their probation extend to licenses and certificates acquired during the probationary period, the statement included in the probationary order should be explained to them.

(Signed) R. R. WAESCHE,
Commandant.

Navigation and Vessel Inspection Circulars No. 55

UNITED STATES COAST GUARD,
Washington 25, D. C.,
6 January 1945.

1. The War Shipping Administration and the Office of Price Administration have under consideration a proposal to issue extra gasoline coupons to merchant seamen ashore between foreign, intercoastal and coastwise voyages, in quantities based upon the length of time spent at sea. They have sought the cooperation of the Coast Guard in furnishing such seamen with documentary evidence of time spent afloat in such form that the document can be indorsed by the local ration board so as to prevent reuse.

2. The Coast Guard is desirous of so cooperating and finds that in the case of seamen holding certificates of identification, the original Certificate of Discharge (Form 718-A) offers satisfactory evidence of service and can be used by local ration boards for such indorsement as they desire. In the case of seamen holding continuous

discharge books a special document will have to be issued, since it is not desired to permit extraneous entries in such books.

3. Coast Guard officers, or masters of American flag vessels, acting as shipping commissioners will furnish to each seaman holding a continuous discharge book, at the time of his discharge, a copy of Form 718-E, Record of Entry in Continuous Discharge Book, notwithstanding the fact that this form is furnished in pads alternately marked "Headquarters copy" and "Issuing Officer's copy" and contains instructions that it is not to be given to seamen. In case of loss of this form by the seaman no replacement copy will be supplied.

4. Present regulations regarding the preparation, distribution, and use of Form 718-E are otherwise unaffected.

(Signed) R. R. WAESCHE,
Commandant.

No. 56

Waivers of navigation and vessel inspection laws in Canal Zone ports and foreign ports

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

The document accompanying this circular is an order of 12 January 1945, amending the Commandant's waiver order of 1 July 1943 (8 F. R. 9164) which in turn was inclosed with Navigation and Vessel Inspection Circular No. 37. The original order authorized the effectuation of waivers of navigation and vessel inspection laws (a) by DCGO's and their designated representatives, and (b) in the case of vessels in foreign ports by designated representatives of the Commandant. The amendment permits waivers by designated representatives of the Commandant in the case of Canal Zone ports as well as foreign ports. The Canal Zone ports, though subject to the jurisdiction of the United States, are not included within any of the Coast Guard marine inspection districts established and defined by letter, 2 February 1944, Assistant Commandant to all DCGO's.

(Signed) R. R. WAESCHE,
Commandant.

Equipment Approved by the Commandant

BOILER

Type MC 80 Cyclotherm Steam Generator (Maximum working pressure of 125 pounds per square inch) (Assembly Dwg. No. C-549-C, dated 15 June 1944), submitted by General Furnaces Corp., 90 Broad Street, New York, N. Y.

HATCHET FOR LIFEBOATS AND LIFE RAFTS

Hatchet for lifeboats and life rafts, No. 0 size, designated No. 425 Bridgeport Belt Ax, submitted by Bridgeport Hardware Manufacturing Corp., Bridgeport 5, Conn.

LIFEBOATS

28' x 9' x 3' 11 1/2" aluminum alloy motor-propelled lifeboat (54-person peacetime capacity, 40-person wartime capacity) (Construction and Arrangement Dwg. No. 2810-1, dated 24 March 1944, alteration dated 30 November 1944), submitted by Welin Davit and Boat Corp., Perth Amboy, N. J.

28' x 9' x 3' 11 1/2" aluminum alloy oar-propelled lifeboat (59-person peacetime capacity, 44-person wartime capacity) (Construction and Arrangement Dwg. No. 2810-3, dated 20 March 1944, alteration dated 30 November 1944), submitted by Welin Davit and Boat Corp., Perth Amboy, N. J.

22' x 6.8' x 2.8' metallic oar-propelled lifeboat (25-person peacetime capacity, 17-person wartime capacity) (General Arrangement Dwg. No. G-348, dated 12 September 1944), submitted by C. C. Galbraith & Son, Inc., 99 Park Place, New York, N. Y. (10 F. R. 97, 2 January 1945.)

18' x 6' x 2' 4 1/2" metallic oar-propelled lifeboat (15-person peacetime capacity, 12-person wartime capacity) (General Arrangement Dwg. No. 2014, dated 20 December, 1944), submitted by Imperial Lifeboat & Davit Co., Inc., Athens, New York. (10 F. R. 403, 9 January 1945.)

LIFE FLOATS

10-person rectangular balsa wood life float (Dwg. No. M-751, dated 25 October 1943, revised 18 December 1944), submitted by Roof Structures, Inc., 45 West 45th Street, New York, N. Y.

25-person rectangular balsa wood life float (Dwg. No. M-790, dated 13 January 1945), submitted by Roof Structures, Inc., 45 West 45th Street, New York, N. Y.

LIFE PRESERVER

Model No. 2 adult kapok life preserver (C. G. Dwg. No. F-49-6-1, Alt. 1, and Specification dated 10 June, 1944), Approval No. B-256, manufactured by Colvin-Slocum Boats, Inc., Amesbury, Mass. (for general use). (10 F. R. 884, 23 January 1945.)

LIFE RAFTS

20-person improved type life raft, Model No. 16-S, balsa wood and Styrofoam filled (General Arrangement Dwg. No. LR216-S-44, dated 29 December, 1944), submitted by the Royal Marine Equipment Corp., 310 West 68th Street, New York, N. Y.

20-person improved type life raft, Model No. 16-C, balsa wood and cork filled (General Arrangement Dwg. No.

LR216-C-44, dated 29 December, 1944), submitted by the Royal Marine Equipment Corp., 310 West 68th Street, New York, N. Y. (10 F.R. 403, 9 January 1945.)

15-person improved type life raft, Styrafoam, Type Q103.6 and balsa wood filled, Model No. 17-S (Dwg. No. LR217-S-45, dated 12 January, 1945), submitted by the Royal Marine Equipment Corp., 310 West 68th Street, New York, N. Y. (10 F.R. 884, 23 January 1945.)

LUMINOUS MARKING FOR INTERIOR ACCOMMODATIONS

Luminous marking, designated Lunex A, submitted by the Lunex Corp., Davenport, Iowa.

Luminous marking, designated Conti-Glo 61P90B, submitted by the Continental Lithograph Co., Cleveland, Ohio. (10 F.R. 691, 17 January 1945.)

SAFETY VALVE

Lonergan Model ODP Marine safety valve, 1 1/2", 2" and 2 1/2" types (Assembly Dwg. No. B-1277S, dated 20 September, 1941, revised 8 January, 1945) (Maximum working pressure 300 pounds per square inch, maximum temperature 450° F.), submitted by J. E. Lonergan Co., 211-217 Race Street, Philadelphia, Pa. (10 F.R. 884, 23 January 1945.)

TELEPHONE SYSTEMS

Sound powered telephone equipment, Type A, Model WT-1, with 6" external bell, bulkhead mounting, watertight (Dwg. No. 11, dated 19 April 1944), submitted by Hose-McCann Telephone Co., 177 Pacific Street, Brooklyn, N. Y. (10 F.R. 403, 9 January 1945.)

Sound powered telephone assembly, Model 101, splashproof, bulkhead mounting (without sound powered telephone handset) (Dwg. No. 101-S. C., Alt. C), submitted by Reukauf Engineering Co., Brooklyn, N. Y.

Sound powered telephones, watertight aluminum cases, bulkhead mounting, Model MD-102, Alt. 36, dated 19 December 1944; pedestal mounting, Model MD-103, Alt. 36, dated 19 December 1944; each telephone without sound powered telephone handset), submitted by Reukauf Engineering Co., Brooklyn, N. Y.

These two telephones can only be used for installation on the following eighty-one (81) cargo vessels of the EC2-S-C1 design:

Builder's hull Nos.

Delta Shipbuilding Co., 2839 to 2862, inc. Inc.
J. A. Jones Construction Co., Inc., Brunswick, Ga.
J. A. Jones Construction Co., Inc., Panama City, Fla.
New England Shipbuilding Corp., 3099 to 3118, inc. ing Corp.
St. Johns River Shipbuilding Corp., 81 and 82.

Builder's hull Nos.

Southeastern Ship- 79 to 88, inc. building Corp.
Todd-Houston Ship- 199 to 208, inc. building Corp.

WINCH

Single electric lifeboat winch for gravity davits, Type S. E. W. 27 (Arrangement Dwg. No. A. A. 129, dated 26 April 1944) (working load of 13,500 pounds at the drum, 6,750 pounds per foot), submitted by Lane Lifeboat & Davit Corp., foot of 40th Road, Flushing, N. Y.

TERMINATION OF APPROVAL

Coast Guard approval of the following items of equipment has been terminated as the manufacturer no longer produces the same:

PARACHUTE FLARES

Parachute cartridge flare, brass shell, submitted by Acme Protection Company, 201 S. Highland Avenue, Pittsburgh 6, Pa. (Approved 1936.)

Parachute cartridge flare, aluminum shell, submitted by Acme Protection Company, 201 S. Highland Ave., Pittsburgh 6, Pa. (Approved 29 April 1936.)

SIGNAL PISTOL

Signal pistol, hammerless, grip marked "Acme" (Dwg. 500, dated 15 April 1936), submitted by Acme Protection Co., 201 S. Highland Ave., Pittsburgh 6, Pa. (Approved 1936.) Signal pistols now in service may be continued in service if in serviceable condition. (10 F. R. 884, 23 January 1945.)

CERTIFICATION OF ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of Ships' Stores and Supplies certificated for use on board vessels in accordance with the provisions of Part 147 of the regulations governing Explosives or Other Dangerous Articles on Board Vessels, are as follows:

Noco Met. Nocon Products Corporation, 30 Broad Street, New York 5, N. Y. Certification No. 176, 16 January 1945.

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 in-

formation of all parties concerned, a list of approved heats which have been tested and found acceptable during the period from December 16, 1944, to January 15, 1945, is as follows:

The Lunkenheimer Co., Cincinnati 14, Ohio, heat Nos. 210 and 211.

H. B. Sherman Manufacturing Co., Battle Creek, Mich., heat No. 470.

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 December 16, 1944, to January 15, 1945, are as follows:

Engineering Specialties Co., Inc., 33 Cortlandt Street, New York 7, N. Y., valves and fittings.

Commercial Filters Corp., 18 West Third Street, Boston, Mass., Fulfillers.

Jerguson Gage & Valve Co., 87 Fells-way Street, West, Somerville, Mass., gages and valves.

Triulzi Manufacturing Co., 2450 East 54th Street, Los Angeles, Calif., valves and fittings.

Wm. W. Nugent & Co., Inc., 410-412 North Hermitage Avenue, Chicago 22, Illinois, strainers and valves.

Numbered and Undocumented Vessels

The table below gives the cumulative total of numbered but undocumented vessels in each Coast Guard District for the month shown. Generally speaking, undocumented vessels are those of less than 5 net tons engaged in trade and those of less than 16 gross tons used exclusively as pleasure vessels. These vessels are required to be numbered under the provisions of the Act of June 7, 1918, as amended (46 U. S. C. 288).

Coast Guard district	1944		
	October	November	December
1. Boston	26,391	26,398	26,397
3. New York	44,034	43,985	44,017
4. Philadelphia	17,838	17,832	17,833
5. Norfolk	36,042	36,085	36,051
6. Charleston	5,972	5,998	6,011
7. Miami	14,583	14,649	14,710
8. New Orleans	31,087	34,242	34,322
9. Cleveland	82,569	82,496	82,443
9. St. Louis	47,036	47,077	47,080
10. San Juan	285	286	290
11. Long Beach	7,342	7,327	7,295
12. San Francisco	17,914	17,933	17,949
13. Seattle	35,461	35,507	35,528
14. Honolulu	1,616	1,620	1,628
17. Ketchikan	5,564	5,576	5,578
Total	376,734	377,011	377,132

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.

Manufacture and description of equipment	Location apparatus may be used				Date of action	Manufacture and description of equipment	Location apparatus may be used				Date of action
	a	b	c	d			a	b	c	d	
Appleton Electric Co., Chicago, Ill.: Junction box, marine type, (hub cover), watertight, drawing No. 60118, alt. 0					1-13-45	The Oakford Co., Inc., New York, N. Y.: Lighting fixtures, watertight: Deck type, 100 watts maximum, catalog No. 246G, drawing No. 2174, sub. 10-5-44	x	x	x		12-16-44
Auth Electrical Specialty Co., New York, N. Y.: Magazine Fire Alarm Panel, catalog No. 5720, drawing No. 82043, alt. 3	x	x			12-21-44	Deck type, key, 100 watts maximum, catalog No. 246G-K, drawing No. 2173, sub. 10-5-44	x	x	x		12-16-44
Coast Marine Engineering Co., Long Beach, Calif.: COMAR terminal tube (octagon body), replacement cap and nipple, drawing No. 6-1201-1818, alt. 2	x	x	x		1-13-45	Bulkhead type, key, 100 watts maximum, catalog No. 256G-K, drawing No. 2177, sub. 10-5-44	x	x	x		12-16-44
Durkee Marine Products Corporation, Staten Island, N. Y.: Engine order mechanical telegraph, no reply, engine room unit, drawing No. 67, alt. 0	x	x	x		12-21-44	Bulkhead type, key, 100 watts maximum, catalog No. 276G-K, drawing No. 2175, sub. 10-5-44	x	x	x		12-16-44
Engine order mechanical telegraph, no reply, engine room unit, drawing No. 67, alt. 0	x	x	x		1-13-45	Bulkhead type, 100 watts maximum, catalog No. 276G, drawing No. 2176, sub. 10-5-44	x	x	x		12-16-44
Edwards & Company, Inc., Norwalk, Conn.: Low oil level alarm annunciator, dripproof, 115 volts, 60 cycles, alternating current, catalog No. M. D. 2474, drawing No. 6914, alt. 2	x	x			12-29-44	Ceiling type, with reflector, 100 watts maximum, catalog Nos. 1246 and 2246, drawing Nos. 2202 and 2203, sub. 10-28-44, alt. 2	x	x	x		1-9-45
Horn, marine type, catalog No. 1774, drawing No. 6365GK, alt. 0	x	x	x		12-29-44	Ceiling type, 100 watts maximum, catalog No. 206G, drawing No. 2190, sub. 10-28-44	x	x	x		1-9-45
General Electric Co., Schenectady, N. Y.: Signaling Searchlight, 12 inches, drawing No. T-8475563, rev. 1	x	x	x		1-15-45	Bracket type, 100 watts maximum, catalog No. 216G, drawing No. 2214, sub. 10-28-44	x	x	x		1-9-45
Hammel-Dahl Co., Providence R. I.: liquid level indicating equipment: Typical deck type transmitter: No. 277 installation, drawings Nos. E-278, change 0, and E-333, change 0	x	x			1-8-45	Bracket type, key, 100 watts maximum, catalog No. 216G-K, drawing No. 2215, sub. 10-28-44	x	x	x		1-9-45
No. 279 installation, drawing No. E-390, change 0	x	x			1-8-45	Ceiling type, 100 watts maximum, catalog No. 246G, drawing No. 2174, sub. 10-5-44	x	x	x		1-9-45
Typical deep type transmitter: No. 290 installation, drawing No. E-290, change A	x	x			1-8-45	Ceiling type, key, 100 watts maximum, catalog No. 246G-K, drawing No. 2173, sub. 10-5-44	x	x	x		1-9-45
No. 494 installation, drawing No. E-495, change 0	x	x			1-8-45	Bracket type, key, 100 watts maximum, catalog No. 256G-K, drawing No. 2177, sub. 10-5-44, alt. 2	x	x	x		1-9-45
Deep type transmitter: Type 200, drawing E-200, change A	x	x			1-8-45	Bracket type, 100 watts maximum, catalog No. 276G, drawing No. 2176, sub. 10-5-44, alt. 2	x	x	x		1-9-45
Type 494, drawing E-494, change 0	x	x			1-8-45	Bracket type, key, 100 watts maximum, catalog No. 276G-K, drawing No. 2175, sub. 10-5-44, alt. 2	x	x	x		1-9-45
Typical indicator panel and box: Type 100, drawing No. E-528, change 0	x	x			1-8-45	Lighting fixtures, vaportight: Ceiling type, 2 lights, 60 watts each maximum, catalog No. 228, drawing No. 1469, alt. 4	x	x	x		12-30-44
Type 230, drawing No. E-529, change 0	x	x			1-8-45	Ceiling type, 40 watts maximum, catalog No. 226, drawing No. 1470, alt. 4	x	x	x		1-8-45
Deck type transmitter: Type No. 277, drawing No. E-277, change B	x	x			1-8-45	Lighting fixtures, nonwatertight: Chart table lamp, 15 watts maximum, catalog No. 700, drawing No. 2221, sub. 10-28-44	x				1-9-45
Type No. 279, drawing No. E-279, change B	x	x			1-8-45	Bracket fixture, 60 watts maximum, catalog No. 732, drawing No. 2194, sub. 10-28-44, alt. 2	x				1-9-45
Wiring diagram for typical level indicator; panel and box, type 100, drawing No. D-328-A, change A					1-8-45	Pipe clamp fixture, catalog No. 741, drawing No. 2194, sub. 10-28-44, alt. 2	x				1-9-45
Wiring diagram for typical level indicator panel and box, type 200, drawing No. D-329-A, change 0					1-8-45	Oneal Co., Jersey City, N. J.: Terminal tube, male, 3/8-inch to 3-inch sizes, drawing No. M-038-300, rev. 1	x	x	x		12-19-44
Henschel Corporation, Amesbury, Mass.: Transfer relay for engine order telegraph, watertight, 3-pole, double-throw, 60 cycles, 115 volts, drawing No. 60-177, alt. 0	x	x			1-5-45	Terminal tube, female, 3/8-inch to 2-inch sizes, drawing No. F-012-200, rev. 0	x	x	x		12-19-44
Murlin Manufacturing Co., Philadelphia, Pa.: lighting fixtures, nonwatertight: Chronometer light, 10 watts maximum, fixture No. 350	x				12-18-44	Paragon Electric Co., Chicago, Ill.: Connection box, watertight, drawing No. B-250, alt. 2	x	x	x		1-3-45
Bracket type, 40 watts maximum, fixture No. 311	x				12-18-44	Russell & Stoll Co., Inc., New York, N. Y.: Lighting fixture, pendant type, vaportight, 200 watts maximum, catalog No. 5001 MC, drawing No. F-9426, alt. 1	x	x	x		1-4-45
Ceiling type, 50 watts maximum, fixture No. 806, alt. 1	x				1-5-45	Lighting fixture, pendant type with reflector, vaportight, 200 watts maximum, catalog No. 6206 MC, drawing No. F-9425, alt. 1	x	x	x		1-4-45
Desk light, 40 watts maximum, fixture No. 316-1, alt. 2	x				1-5-45	Plug, watertight, 2-wire, 10 amperes, 125 volts, catalog No. 452, drawing No. F-9294, alt. 2	x	x	x		1-11-45
Mirror light, 40 watts maximum, fixture No. 316, alt. 2	x				1-5-45	Plug, watertight, 3-wire, 10 amperes, 125 volts, catalog No. 1453, drawing No. F-9294, alt. 3	x	x	x		1-11-45
Ceiling type, 40 watts maximum, fixture No. 327, alt. 1	x				1-5-45	Junction box, watertight, catalog No. 2102 MC, drawing No. F-9437, alt. 2	x	x	x		1-11-45
Desk light, 40 watts maximum, fixture No. 308-1, alt. 1	x				1-5-45	Switch and receptacle, interlocked safety, watertight, 2-wire, 2-pole, 10 amperes, 125 volts, catalog No. 548 MC, drawing No. B-5567, alt. 1	x	x	x		1-11-45
Ceiling type, 3 75-watt lamps maximum, fixture No. 442-1, alt. 1	x				1-5-45	Receptacle, watertight, 2-wire, 10 amperes, 125 volts, catalog No. 479 MC, drawing No. B-6345, alt. 1	x	x	x		1-11-45
Ceiling type, 40 watts maximum, fixture No. 907, alt. 1	x				1-5-45	Receptacle, watertight, 3-wire, 10 amperes, 125 volts, catalog No. 1479 MC, drawing No. B-6331, alt. 1	x	x	x		1-11-45
Bulkhead type, 2 25-watt lamps maximum, fixture No. 900	x				1-5-45	Receptacle, angle type, watertight, 15 amperes, 600 volts, alternating current, catalog No. 7304, drawing No. B-6307, alt. 2	x	x	x		1-12-45
Ceiling type, fluorescent, 2 20-watt lamps maximum, fixture No. 962	x				1-5-45	Receptacle plug, watertight, 3-wire, 4-pole, 15 amperes, 600 volts, alternating current, catalog No. 7308, drawing No. F-8672, alt. 5	x	x	x		1-12-45
Ceiling type, 2 25-watt lamps maximum, fixture No. 304-8", alt. 2	x				1-5-45	Service Electric Manufacturing Co., Boston, Mass.: Door switch, watertight, 15 amperes, 125 volts, drawing No. 108, alt. 9-29-44; Catalog No. 1033, single-pole and Catalog No. 1035, 2-circuit	x	x	x		12-22-44
Ceiling type, 50 watts maximum, fixture No. 315-1, alt. 1	x				1-5-45						
Ceiling type, 2 40-watt lamps maximum, fixture No. 304-10", alt. 2	x				1-5-45						
Exit light, 40 watts maximum, fixture No. 905, alt. 1	x				1-5-45						
Cabinet light, 40 watts maximum, fixture No. 906, alt. 4	x				1-5-45						

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

(Continued on p. 31)

Merchant Marine Personnel Statistics

MERCHANT MARINE LICENSES ISSUED DURING DECEMBER 1944

DECK OFFICERS

Region	Master										Chief mate										Second mate									
	Ocean		Coast-wise		Great Lakes		B. S. & L.		Rivers		Ocean		Coast-wise		Great Lakes		B. S. & L.		Rivers		Ocean		Coast-wise		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	81	51	1	9			6	27		1	116	7	1				3	2			206	7		2			1			
Gulf coast	24	11	4	4				3		1	15	2									50	1		1						
Great Lakes and rivers	1				4	25			9	6							1	4	3											
Pacific coast	31	56	1	1			1	8		2	59	11					2	5			105	7		1						
Total	137	118	6	14	5	26	7	38	9	10	190	20	1				5	8	6	3	361	15		4			1			

Region	Third mate										Pilots						Master mate				Total		
	Ocean		Coast-wise		Great Lakes		B. S. & L.		Rivers		Great Lakes		B. S. & L.		Rivers		Uninspected vessels, high seas				Original	Re-newal	Grand total
	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R			
Atlantic coast	355	13	1										31	74		1		1	1		803	195	998
Gulf coast	8	4											10	20	4						118	48	166
Great Lakes and rivers		1											29	35	23	7					70	78	148
Pacific coast	152	4											12	53		1		8	1		364	157	521
Total	515	22	1										82	182	27	9		9	2		1,355	478	1,833

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
	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R
Atlantic coast	77	96	3	28	113	27		2	236	36		3	436	12		
Gulf coast	10	21	3	6	29	6	1	5	38	7		1	14	7		
Great Lakes and rivers	4	17	5	30	3	13	4	9	2	3	2	4	13	1	1	1
Pacific coast	27	30	1	9	51	12		5	84	5			134	4		
Total	118	164	12	73	196	58	5	21	360	51	2	8	597	24	1	1

Region	Motor vessels								Uninspected vessels				Totals		
	Chief engineer		First assistant engineer		Second assistant engineer		Third assistant engineer		Chief engineer		Assistant engineer		Original	Re-newal	Grand total
	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	21	35	5	12	9	4	333	5					1,233	260	1,493
Gulf coast	3	8	1		2		4						105	61	166
Great Lakes and rivers	12	9	11	2			3						60	89	149
Pacific coast	5	28	6	4	10	2	110	2		6			428	107	535
Total	41	80	23	18	21	6	450	7		6			1,826	517	2,343

ELECTRICAL APPLIANCES—Continued

Manufacture and description of equipment	Location apparatus may be used				Date of action		Manufacture and description of equipment	Location apparatus may be used				Date of action	
	a	b	c	d				a	b	c	d		
The Simes Co., New York, N. Y.: Cargo light, 300 watts maximum, for use as a portable cargo light only and not to be used as an only source of illumination in a cargo space, drawing No. 42126, rev. 1-2-45.	x	x			1-12-45		The Vapor Recovery Systems Co., Compton, Calif.; Vaptec terminal tubes—Continued.						
The Vapor Recovery Systems Co., Compton, Calif.; Vaptec terminal tubes:							Male, Y type, 3/4 inch, figure No. 1001M, drawing No. B-1604, rev. A.	x	x	x		1-11-45	
Female, straight type, figure No. 1004, drawing No. B-1602, rev. A.	x	x	x		1-11-45		Male, 45° type, 3/4 inch, figure No. 1002, drawing No. B-1605, rev. A.	x	x	x		1-11-45	
Male, Y type, 3/4 inch, figure No. 1001, drawing No. B-1603, rev. A.	x	x	x		1-11-45		Male, 90° type, 3/4 inch, figure No. 1003, drawing No. B-1606, rev. A.	x	x	x		1-11-45	

ORIGINAL SEAMEN'S DOCUMENTS ISSUED, MONTH OF DECEMBER 1944

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 ¹	A. B., blue, 6 months emergency ¹	Life-boat, 12-24 months ¹	Life-boat, 6-12 months emergency ¹	Q.M.E.D., 6 months	Q.M.E.D., emergency	Radio operators	Certificate of service	Tanker man	Staff officer	Total
Atlantic coast.....	237	5,021	59	397	47	40	0	597	0	219	345	155	5,188	7	196	12,508
Gulf coast.....	59	1,229	9	70	10	0	2	979	0	54	85	6	846	19	14	3,382
Pacific coast.....	4	2,261	27	166	35	0	0	469	0	72	223	15	1,790	3	53	5,188
Great Lakes and rivers.....	89	146	18	19	17	12	0	43	0	34	72	2	549	1	1	1,003
Total.....	389	8,657	113	652	109	52	2	2,088	0	379	725	178	8,373	30	264	22,011

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.

⁵ 6 months deck or 12 months other departments.

NOTE.—There were 592 Panamanian Employment Cards issued.

WAIVERS OF MANNING REQUIREMENTS FROM 1 DECEMBER TO 31 DECEMBER 1944

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.....	606	332	412	42	1,107	74	212	42	47	2,268
Gulf coast.....	87	56	60	8	168	15	20	2	2	331
Pacific coast.....	308	87	118	15	618	45	175	2	8	1,068
Great Lakes.....	70	1	1	1	118	56	56	1	1	175
Total.....	1,071	475	591	65	2,011	134	463	46	57	3,842

CREW SHORTAGE REPORTS FROM 1 DECEMBER TO 31 DECEMBER 1944

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.....	19	1	2	1	2	20	3		4		1	16	6	56
Gulf coast.....	4		1			3	1				1	1		6
Pacific coast.....	23					50	11				2	29	3	95
Great Lakes.....	103	1	2			55	69		1			93	105	325
Total.....	149	2	5	1	2	128	84		5		3	139	114	483