

PROCEEDINGS OF THE MERCHANT MARINE COUNCIL UNITED STATES COAST GUARD



Vol. 2

August 1945

No. 8



MERCHANT MARINE COUNCIL

Published monthly at Coast Guard Headquarters, under the auspices of the Merchant Marine Council, in the interest of safety at sea and the prosecution of the war effort.

The Merchant Marine Council of the United States Coast Guard

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

Rear Admiral HARVEY F. JOHNSON,
U. S. C. G., *Chairman*
Engineer-in-Chief, U. S. C. G.

Rear Admiral F. J. GORMAN,
U. S. C. G., *Member*
Chief, Planning & Control Staff,
U. S. C. G.

Rear Admiral L. SPENCER
U. S. C. G., *Deputy Chairman*
Assistant Chief Operations Officer,
U. S. C. G.

Commodore NORMAN B. HALL,
U. S. C. G., *Member*
Chief, Merchant Marine Inspection
Division, U. S. C. G.

Commodore HALERT C. SHEPHERD,
U. S. C. G. R., *Vice Chairman*
Special Assistant to the Commandant

Captain KENNETH K. COWART,
U. S. C. G., *Member*
Chief, Merchant Marine Personnel
Division, U. S. C. G.

Captain ROBERT T. MERRILL,
U. S. C. G. R., *Member*
Special Assistant to the Assistant
Commandant

Captain ROBERT A. SMITH,
U. S. C. G. R., *Member*
Chief, Merchant Marine Technical
Division, U. S. C. G.

Captain KENNETH S. HARRISON,
U. S. C. G. R., *Legal Adviser*
Chief Counsel, U. S. C. G.

Lieutenant Commander THOMAS M.
TORREY,
U. S. C. G. R., *Secretary*

CONTENTS

| | Page |
|--|------|
| Council Activities..... | 114 |
| Rules for the Prevention of Collisions..... | 115 |
| Coast Guard Relationship With American Bureau of Shipping..... | 116 |
| Shepherd Appointed United States Delegate to I. L. O..... | 117 |
| Lessons From Casualties: | |
| Danger in Unventilated Tanks..... | 118 |
| Personal Injuries..... | 118 |
| Activities of the Research and Development Division..... | 119 |
| Relaxation of Wartime Safety Requirements..... | 121 |
| Portable Lights on Tank Vessels..... | 122 |
| Numbered and Undocumented Vessels..... | 122 |
| New Sulfa Dose..... | 123 |
| Hearing Units..... | 123 |
| Appendix: | |
| Amendments to Regulations..... | 123 |
| Equipment Approved by the Commandant..... | 124 |
| Merchant Marine Personnel Statistics..... | 126 |

The Cover: A Coast Guard Motor Surfboat With a Lifeboat in the Background.

COUNCIL ACTIVITIES

THE Merchant Marine Council during July completed its study of the elimination of Subchapter O requirements in waters now considered safe as the result of the termination of hostilities in Europe. Before taking final action, the Council's proposals are being discussed with industry and labor to secure their views. It is expected that amendments to Parts 152, 153, and 161 will be published in the Federal Register very shortly.

Subchapter F, Marine Engineering was amended to provide a new procedure for the approval of electrodes or welding rods. Heretofore electrodes have been tested by the National Bureau of Standards and approved for general use. The new arrangement provides that the electrodes will be tested by the Navy and approved by the Commandant as to type and characteristics, thereby eliminating use of an electrode designed for flat welding for welding high-pressure vessels, for example. The amendments, which are published in this issue, will bring into line the present requirements of the Navy, the American Bureau of Shipping, and the American Welding Society.

The Council took action to eliminate existing requirements for carrying storm oil aboard ocean, coastwise, and Great Lakes vessels. Under present conditions there are no vessels, even coal burners, that do not carry some form of oil in excess of the amounts now required by regulations. It was felt that the repeal of sections 59.66 and 60.59 of the Ocean and Coastwise Regulations and section 76.59 of the Great Lake Regulations could not affect the safety of a vessel, her cargo or crew.

There has been a growing tendency, with the gradual relaxation of wartime regulations, for owners and operators of small motorboats carrying passengers for hire to overload dangerously. Numerous incidences of this dangerous practice occurred a short time ago in the Third Naval District, which aroused considerable comment in the New York papers. Recently a motorboat foundered at Miami, the direct result of overloading. Under existing law the Coast Guard has no authority to inspect motor-propelled vessels 15 gross tons and less carrying passengers for hire. A program was instituted in the Third Naval District which has functioned with considerable success whereby owners and operators submitted their vessels to the Coast Guard inspectors, who indicated the number of passengers that could be carried safely. Compliance with the suggestions of the Coast Guard in this respect avoided the possibility of charges being preferred under the Motorboat Act for operation in a reckless or dangerous manner by reason of loading more passengers than could be safely carried. A letter has gone out to all DCGO's instituting a similar program of voluntary cooperation. If successful, the need for enabling legislation to correct a dangerous condition will be unnecessary.

The Port Security Division of the Coast Guard, working jointly with the Bureau of Ordnance and Office of the Chief of Naval Operations of the Navy and the Office of the Chief of Transportation, Safety and Security, and Ordnance of the Army, has prepared a revision of the explosive loading manual, which has been submitted to the Council for study and approval.

Rules For The Prevention Of Collisions

WHEN the International Convention for Safety of Life at Sea was held in London in 1929 a number of changes to the current international rules for the prevention of collisions were proposed as an Annex to the Safety Convention. Although the changes recommended were approved by the Bureau of Marine Inspection and Navigation, the Navy Department and various other interests, they were not adopted because the enabling legislation would have made them supersede the rules followed on inland waters, on the Great Lakes, and on the western rivers, where those rules were in conflict.

For the forthcoming Conference on Safety-at-Sea the International Rules are being re-examined, with the very definite understanding that any changes proposed shall not apply to any interior waters but shall be effective solely with respect to navigation on the high seas. A committee under the chairmanship of Capt. R. F. Farwell, USNR, is giving consideration to this problem and has distributed a questionnaire to shipmasters, pilots, admiralty lawyers, ship operators, and Navy and Coast Guard officers. The recommendations of the committee will be guided by the replies to this questionnaire. The changes recommended at the 1929 convention are summarized below:

Article 1, which prohibits the display of any lights which might be mistaken for the prescribed lights, was to be amended by insertion of the phrase "or impair their visibility." The optional after-range light was to be changed, for steam vessels 150 feet or more in length to a mandatory light. Special exemption was provided for Navy vessels of unusual construction (for example, submarines and aircraft carriers) in which it was not possible to comply fully with the prescribed positions of lights.

The minimum visibility of required lights for steamers under 40 tons and for pilot vessels was to be increased from 2 to 3 miles and that for fishing vessels from 1 to 2 miles. A fixed stern light, except for small vessels, was to be required, with a minimum visibility of 2 miles. The black anchor ball as a day signal for a vessel of more than 300 gross tons anchored in a fairway, and three black balls as a day signal for a vessel aground in or near a fairway, were to be mandatory. A black cone, point upwards, was to be used to indicate a vessel proceeding under sail and also under mechanical power.

For vessels of more than 350 feet in length at anchor in a fog, in addition to the prescribed bell signal in

the fore part of the vessel, there was to be sounded in the after part of the vessel a gong or other instrument the tone of which could not be confused with that of the bell. A mandatory signal for a vessel being towed or, in the case of more than one vessel, the last vessel of the tow, was proposed, consisting of one prolonged blast followed by three short blasts. A vessel aground in or near a fairway was to give three separate and distinct strokes on her bell just before and just after ringing her prescribed fog signal.

Article 12 was to be reworded so that, in order to attract attention, a vessel could use her whistle or any other efficient sound signal that could not be mistaken for a prescribed fog or distress signal. The present article 12 only permits a detonating sound signal. Adoption of this change would make permissive, but not mandatory, the four blast danger signal.

In addition to the foregoing proposals, which were recommended at the 1929 convention, Captain Farwell's committee is asking expressions of opinion on certain other provisions which are found in various rules covering interior waters but are not in the present International Rules. One of these is the rule which provides for a compulsory exchange of whistle signals regardless of change in course for vessels approaching within half a mile of each other.

Under the International Rules, on the high seas one and two short blasts are purely rudder signals to be given when a proper change of course is made with another vessel in sight. If a vessel changes course twice because the first change was insufficient, the whistle signal must be repeated. Conversely, there is no answering signal under International Rules. The second vessel whistles only when and if she likewise changes course.

Under the various inland and pilot rules, one and two blast signals are not rudder signals, but indicate, generally speaking, the manner in which vessels shall pass. They must be blown whether the course is changed or not if the vessels approach within half a mile. A collision is, of course, *prima facie* evidence that the vessels approached within half a mile.

Another provision is the so-called danger signal, four or more short blasts of the whistle where a vessel is uncertain of the course or intention of another vessel. A third is the provision of an amber light which is synchronized with the whistle so as to show while the whistle is blowing.

Certain provisions are found in the International Rules which are not

found in any of our interior rules and these provisions are being studied for retention. These include the breakdown lights in article 4, certain lights for fishing vessels in article 9, the lights for a vessel aground in a fairway, article 11, and the fog signal for a steam vessel underway without way upon her.

Several of the International Rules are ambiguously worded and many have had their meaning extensively modified by court interpretation particularly where the wording of the rules is not specific, such for example as "moderate speed," "special circumstances," "good seamanship," "immediate danger," and the like. Consideration is being given to possible improvement in such verbiage both for clarification and to carry out court interpretations of long standing.

Captain Farwell's questionnaire also provides for expressions of opinion as to the desirability of wider establishment, where practicable, of traffic lanes or steamship tracks along which steam vessels would proceed in a single direction as is now done in the North Atlantic. This matter is being also studied by other committees working in connection with the Safety-at-Sea Conference. The questionnaire also provides space for any recommended changes other than those specifically enumerated.

The questionnaire has been widely distributed but is referred to here as a matter of information and with the thought that if any persons interested who have not received a copy and who desire to comment upon the points raised will communicate with Coast Guard Headquarters they will be supplied with a copy.

All of the proposals recommended by Captain Farwell's committee will be circularized among the maritime industry for further comment if desired, and will be reviewed by the general committee, before being adopted as final proposals of the United States to the conference. It is believed that when so adopted they should represent the best judgment of those most familiar with the subject.

In addition to Captain Farwell, his committee includes the following: Chauncey I. Clark, vice chairman, Lawrence Bogle, Claude E. Wakefield, Capt. F. E. Cross, Capt. Logan Cresap, R. S. Erskine, Joseph Geary, Capt. G. G. McIntock, USMS, Commander A. F. Olivet, USNR, Capt. D. J. McKenzie, Col. L. C. Sabin, Capt. C. O. Rydholm, Rear Admiral L. Spencer, USCG, Lt. J. R. Monroe, USCGR, F. C. Theobald, V. A. Wallace, Capt. Donald T. Wright, and Paul E. Young.

Coast Guard Relationship With American Bureau of Shipping

IN the latter part of 1944, the Coast Guard instituted a study of the activities of its own inspectors and those of the American Bureau of Shipping in the field covered by a classification society. This study was made possible by the cooperation of the American Bureau, extended through its president, J. Lewis Luckenbach. Its purpose was to develop the extent to which the inspectional work of the two bodies overlapped and to devise methods for eliminating, insofar as practicable, duplication in matériel inspections.

The survey staff submitted a detailed report which contained specific recommendations based upon its findings. These recommendations were summarized in a statement of proposed policy which follows:

PROPOSED CHANGES IN POLICY REGARDING COAST GUARD RELATIONSHIPS WITH THE AMERICAN BUREAU OF SHIPPING WITH RESPECT TO VESSELS CLASSIFIED BY THE AMERICAN BUREAU

The findings of this survey indicated that there was substantial overlap between the Coast Guard and the American Bureau of Shipping and that some of this overlap could be eliminated without the need of special legislation. In the interests of the war effort, the saving of manpower and the reduction of duplicate inspections, the Coast Guard therefore is considering the following proposed changes in policy regarding Coast Guard relationships with the American Bureau of Shipping with respect to vessels classed by that Bureau:

The Coast Guard will accept American Bureau of Shipping approval of plans for new merchant vessels other than passenger vessels or for the conversion or major alteration of existing merchant vessels other than passenger vessels, except plans for (a) lifesaving and fire protection facilities, (b) required safety appliances, (c) boilers and pressure piping, and (d) arrangement of quarters.

In the case of new construction of merchant vessels other than passenger vessels, the Coast Guard will accept American Bureau of Shipping inspection of hull construction and of the installation of machinery and electrical systems.

The Coast Guard will accept American Bureau of Shipping mill inspection of all materials used in the construction of boilers for merchant vessels other than passenger vessels.

The Coast Guard will accept the American Bureau of Shipping inspection at the factory of propulsion and auxiliary machinery for merchant vessels other than passenger vessels.

Detailed plans for the activation of the foregoing policy will be worked out by a joint Coast Guard-ABS committee. This proposed policy, together with a copy of the complete report was submitted to the American Bureau of Shipping. The interchange of correspondence was as follows:

29 JUNE 1945.

Mr. J. LEWIS LUCKENBACH,
President, American Bureau of
Shipping,
47 Beaver Street,
New York 4, N. Y.

DEAR MR. LUCKENBACH: Some months ago, you very kindly agreed to cooperate actively in a study which I directed should be made of the relationship between the Coast Guard's marine inspection functions and the activities of the American Bureau of Shipping. I have felt for some time that there is unnecessary duplication in this field.

The survey report, a copy of which is attached, could obviously not have been prepared if the officers conducting the study had not been permitted by the Bureau to spend some time in its home office and also to observe first-hand the work of the Bureau's surveyors. Although the report is complete in itself, I have summarized its recommendations in a statement of proposed policy, the effectuation of which would, of course, require the approval not only of the Coast Guard but also of your organization. It seems to me that the report affords a sound basis for our discussing the possible development of a working relationship that would enable the Coast Guard to utilize more fully the Bureau's inspectional facilities.

If, after reading the attachments, you think that the proposed policy has some merit, may I suggest the designation of two or three representatives from your organization to meet with a similar group from the Coast Guard and go further into details? If you are agreeable to the designation of these representatives as I have suggested, it is the intention of the Coast Guard to advise the War Shipping Administration, the Maritime Commission, the Committee on Merchant Marine and Fisheries of the House of Representatives, and the Commerce Committee of the Senate as to these negotiations.

Yours very sincerely,

R. R. WAESCHE,
Admiral, USCG, Commandant.

AMERICAN BUREAU OF SHIPPING
47 Beaver Street
NEW YORK 4, N. Y.

6 JULY 1945.

Admiral R. R. WAESCHE, Commandant,
United States Coast Guard,
Washington 25, D. C.

MY DEAR ADMIRAL: I was interested to receive your letter of June 29, which by the way only reached this office yesterday, enclosing report of the Coast Guard officers whom you directed to study the relationship between the Coast Guard Marine Inspection functions and the activities of the American Bureau with a view to the elimination of unnecessary duplication in the carrying out of the work of our respective organizations.

The report is extremely fair and reasonable and the recommendations contained therein which you have summarized in a statement of proposed policy are constructive and will undoubtedly afford a sound basis for the discussion of a real working relationship between our two organizations which will be in the public interest and beneficial to the merchant marine industry. Your idea of having a small representative group from the Coast Guard meet with a similar group from this Bureau for the purpose of going further into the details of the proposed agreement is an excellent one and I would suggest that to begin with at least this Bureau be represented by Messrs. David Arnott and J. Lyell Wilson, our Chief and Assistant Chief Surveyors respectively.

Your suggestions that the Coast Guard be represented on the A. B. S. Technical Committee for the Great Lakes district is a good one and timely if only in view of the fact that we are at present revamping the personnel of this particular committee. Steps will also be taken to see that the Coast Guard is also represented on the welding subcommittee and I will be glad if you will let me know just which member of your staff you would like appointed to this committee. Your offer to appoint a representative of the Bureau on the Merchant Marine Council of the Coast Guard is appreciated if only in view of the fact that this will give an opportunity for the Bureau to participate in the consideration of future changes in the Coast Guard Marine Inspection Regulations.

I hope to have an opportunity of discussing the above matters with you in more detail in the near future.

Yours very sincerely,

J. LEWIS LUCKENBACH,
President.

13 JULY 1945.

Mr. J. LEWIS LUCKENBACH,
President, American Bureau
of Shipping,
47 Beaver Street,
New York 4, N. Y.

DEAR MR. LUCKENBACH: I am most appreciative not only of the promptness with which you answered my recent letter, but more particularly of the extremely cooperative attitude which is reflected throughout your reply. It seems to me that such interchanges of viewpoints and information between the American Bureau and the Coast Guard are bound to lead to a better working relationship.

I am gratified over the selection of Messrs. David Arnott and J. Lyell Wilson as your representatives in dealing with a similar group from the Coast Guard. In turn, I have designated Commodore Norman B. Hall, USCG, Chief, Merchant Marine Inspection Division, and Capt. Robert A. Smyth, USCGR, Chief, Merchant Marine Technical Division, as the Coast Guard representatives. I am sure that you will agree with me that our respective representatives should meet together as soon as possible and I am, therefore, instructing Commodore Hall to contact Mr. Arnott in order to fix a date for their meeting in New York. I had hoped to meet with you personally before these negotiations got under way but I will be out of the city the entire next week. I am planning, however, to arrange to come to New York during the week of July 23 at such time as is mutually convenient and will telephone you in order to fix a specific date.

I appreciate your willingness to have the Coast Guard represented on the ABS Technical Committee for the Great Lakes and I should like to have Capt. Earl B. Hull, USCGR, Marine Inspection officer of our Cleveland district office, and Commander Edwin J. Roland, USCG, who is also on duty in the Cleveland district, serve as our representatives on this committee. As to representation on the welding subcommittee, I should like to have Lt. Comdr. E. M. MacCutcheon, USCGR, of the Merchant Marine Technical Division serve as our representative. If you will indicate who you wish to have serve on the Merchant Marine Council as a representative of the American Bureau of Shipping, I will see that he is promptly designated and that arrangements are made to have him attend the Council meetings.

I am inclosing a copy of a letter that I have addressed to the War Shipping Administration, the Maritime Commission, and the appropriate congressional committees and to the Shipbuilders Council of America and the National Federation of American Shipping, Inc., with respect to

these negotiations. It seemed to me that it was highly appropriate that these agencies should be kept informed of these developments so as to facilitate winning their support for any plan that may be developed as a

result of the negotiations between the American Bureau and the Coast Guard.

Very sincerely yours,
R. R. WAESCHE,
Admiral, USCG Commandant.

Shepherd Appointed United States Delegate To I. L. O.

COMMODORE Halert C. Shephard, USCGR, Special Assistant to the Commandant and Vice Chairman of the Merchant Marine Council attended the session of the Maritime Division of the International Labor Organization held in London, on July 9, 1945. Commodore Shephard was designated by the State Department as the Government representative upon the United States delegation, whose other members were Capt. R. C. Lee, USNR and M. Weisberger. He attended the meetings in that status and not in his official capacity as an officer of the Coast Guard, since the agenda of the meeting chiefly covered

matters not within the purview of the Coast Guard's merchant marine responsibilities.

Commodore Shephard had been in London in connection with the forthcoming Safety-at-Sea Conference, but returned briefly to this country in advance of the I. L. O. meeting for instructions from the State Department. It is understood that the meeting concerned various proposals with regard to seamen, such as continuous employment, entry, training, and promotion and other matters embraced in the proposed International Seaman's Charter. Commodore Shephard was accompanied by Lt. J. R. Monroe, USCGR.



Commodore Halert C. Shephard, U. S. C. G. R.

LESSONS FROM CASUALTIES

Danger in Unventilated Tanks

From time to time articles have appeared in this and other publications, emphasizing with actual casualty cases, the risks involved in entering any tank or closed space on board ship which has not been opened for a long period without first taking the precaution of thoroughly ventilating it. This applies to void spaces, compartments used as chain lockers, paint lockers, ballast tanks, and also to cargo spaces which have contained such common materials as grain, potatoes, coal, etc. Many items of cargo, including the ones mentioned, are characterized by their ability to make unventilated spaces dangerous. This is done in either of two ways—by the generation of gases which will not support life, or by the absorption of the oxygen in the space.

Only recently the Coast Guard was advised of a casualty occurring on a British Sam ship, wherein an individual lost his life as a result of entering a space which had been closed for a considerable period of time. In way of explanation, a Sam ship is a British term applied to a Liberty type vessel either built by them or built by the United States and operated by the British. These Sam ships have a small after void tank in which is located the stuffing box for the rudder trunk. It was revealed in the investigation of this case that the tank had been painted a year previously and had not been opened up until the day of the casualty. On that day, the manhole cover of the after void tank was removed and, without waiting for the space to be ventilated, two men entered in order to inspect the stuffing box. Due to the presence of gases which would not support life, one man was asphyxiated.

In this casualty case, it was concluded that the after void tank offered a greater source of danger upon unsealing than most inclosed spaces because it was not fitted with air pipes. It was, therefore, recommended that such tanks should be fitted with two air pipes $2\frac{1}{2}$ to 3 inches in diameter, one of which should be carried down to within a short distance of the bottom. Although the installation of such pipes would help, sufficient ventilation by this method cannot be depended upon. This has been evidenced by casualty cases wherein men have been asphyxiated in tanks which have been fitted with air pipes.

Regardless of whether or not air pipes are installed in tanks, the space should be thoroughly ventilated by windsails, blowers, or other efficient means prior to entering. Each person entering such compartments should be secured to a life line, with a man stationed on deck at the manhole opening in order that he may watch the men below and summon aid if needed. In cases where immediate entry to a compartment is necessary and time cannot be taken for ventilating, the personnel entering should be equipped with either a fresh air mask or an oxygen mask. If the vessel is in a port where facilities are available for the testing of the atmosphere in a compartment, it is extremely advisable to have a sample of the air in the space analyzed in order to ascertain the actual condition of the atmosphere in the tank. The following of such a procedure in the case set forth above would have prevented the resultant loss of life.

Personal Injuries

Accidents to personnel on shipboard do not just happen—they are caused, in most cases, by thoughtlessness and failure of the human element. Accidents can be avoided by determined and positive action to prevent them. Be guided by the wisdom of the old Quaker whose grandson broke a window playing ball. The boy said he was sorry, that he hadn't meant to do it.

"Yes," said the Quaker, "but did thee mean *not* to do it?"

Every man on board ship has the moral obligation of preventing injuries from occurring, either to himself or to his shipmates. The master and his officers have a direct responsibility in that direction. Proper instruction and careful supervision are particularly important in the case of inexperienced men.

Many injuries to hands and head are due to the fall of an improperly suspended or latched cover. Potato bins, waste lockers, and similar containers fitted with hinged lids should always be rigged so that when in the lifted position they can be securely hooked or otherwise made impossible to fall shut. Port and deadlight covers, when fitted to hinge up, are in the same category and their chains and toggles should be adequate and in good condition. Never prop a cover with a stick which might be inadvertently knocked adrift. The general

principle holds true with doors when at sea. Any heavy door, such as a watertight steel door, or an icebox door should have substantial means of holding them open in a seaway.

Most lifeboats are equipped with releasing gear which will release both ends of the boat simultaneously and under tension. If the boat is rigged out while in port, be sure that no one works in it until the release gear is moused or lashed so that it cannot be tripped. A number of deaths have resulted from failure to observe this precaution.

Eyes are among man's most valuable possessions and they are particularly vulnerable to injuries. A proper set of goggles should always be worn while chipping or scaling, working at an emery wheel or while mixing caustics and acids. This should be a firm rule of the ship, enforced by the head of the department. Each department should have a sufficient number of goggles and they should be kept in good condition and available.

Most accidents due to slipping or tripping are traceable to improper footwear. Old and dilapidated shoes, slippers, and the like are particularly hazardous, both on oily floor plates and on wet decks. Other accidents due to improper clothing are caused by loose garments or sleeves and gauntlet-type gloves that catch in moving parts of the machinery.

All seagoing vessels are equipped with a proper medicine chest, which should be kept stocked at all times. Ships' officers are required to be familiar with first aid and, as a wartime measure, pharmacist's mates are carried. Medical treatment is therefore readily available and should be obtained without delay for all injuries. Many slight cuts or abrasions, not serious of themselves, become infected and may incapacitate the patient for an extended period of time, which prompt treatment would have prevented.

If the ship is to be fumigated in port, while any of her crew are still living on her, every care should be taken to see that all men are not only off the ship but are kept off until the fumigation is over and the ship has been thoroughly ventilated and declared safe by the fumigation authorities. Hydrocyanic gas is lethal in very small quantities and many fatalities have resulted from men who have reentered their ship before it was safe to do so.

Activities of The Research and Development Division

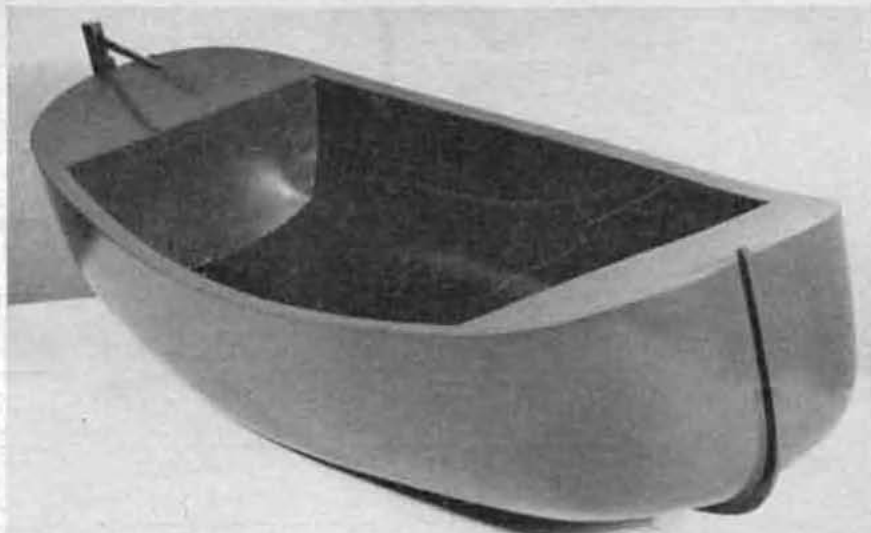
THE Research and Development Division of the Coast Guard, under the direction of Capt. Gaines A. Tyler, USCG, has been actively engaged in a number of projects which have to do with marine safety or efficiency. The Division works closely with the Coordinator of Research and Development, United States Navy, with the National Inventors Council and with various educational and scientific organizations maintaining laboratory and testing equipment.

Among current projects is one looking toward a substitute for cork or kapok as a buoyant material, particularly as a filler for life jackets. Among the substitutes tested is one which gives excellent promise, being fireproof, mildew-proof and with less absorption than kapok. It is equally flexible and can be made up in the Coombs-type jacket which is greatly superior to the old block-cork article. The tests include experimentation with various fabrics for the jacket itself, and different treatments for fireproofing it. The efficiency and ruggedness of life jackets are tested in a special tank giving each sample an accelerated-wear test.

Another project involves the development of a full-bodied lifeboat, designed to afford greater buoyancy and protection to its occupants than the conventional type. This development comes largely at the instance

of M. S. Chapin, of Providence, R. I., who first proposed to the Coast Guard such a boat and who had constructed, at his own expense, a full-sized model. The use of such a boat is predicated on the view that since rescue is practically certain within a limited period, seaworthiness and protection are more important than mobility.

In an allied direction tests are being made to secure a balloon that will carry aloft an antenna from a lifeboat radio set and will sustain it in a strong wind. Under present conditions a boat must carry a balloon for use in calms or light airs and a kite for use in a breeze. Solution of the problem will greatly facilitate the use of a small, hand-cranked radio transmitter, of long range, in lifeboats.



Model of full-bodied lifeboat.

An interesting—and difficult—task is to devise or improve automatic and unattended aids to navigation. Our project involves an acoustically controlled foghorn, that is, one which is activated by sound waves. Such a horn would not sound until a vessel's whistle was heard, but would then begin and would continue until the vessel was out of hearing. Paralleling this is a project for photoelectric control so that the signal will be activated under low visibility conditions (other than darkness) but will cut off when those conditions change. An unmanned and fully automatic lightship, remote-controlled as necessary, is being developed to save the expense of a crew and to avoid risk to such crews, due to storms or accident, where lightships must be moored in exposed positions.

Experiments are being conducted with a single unit range light which is visible in clear weather both day and night. Such a light is intended to indicate, with a reasonable degree of sensitivity, a vessel's lateral deviation from a desired course, by showing white while on the course and red or green when one side or the other of it. Such a light is for use where terrain conditions make the provision of two range lights difficult or impossible. A phosphorescent body is being tried out for use on rivers where lighted buoys are not practicable or justifiable.

The old-fashioned Lyle gun, while efficient for beach use, has limitations on board ship. Neither the shoulder gun nor the rocket pistol is a fully acceptable substitute. The Division is endeavoring to develop something modeled after the Army's bazooka, with a view to securing lightness, range, and absence of recoil.



Life-jacket testing machine.

American Merchant Marine casualties occurring on the high seas resulting in the abandonment of ship, 1929-39

| | (28) Ground- ings and strand- ings | Colli- sions (9) | Explo- sions (5) | Fire (2) | Foun- derings (5) | Barge lost from tow (1) | Total (30) | | (28) Ground- ings and strand- ings | Colli- sions (9) | Explo- sions (5) | Fire (2) | Foun- derings (5) | Barge lost from tow (1) | Total (30) |
|-----------------------------------|--|------------------------|------------------------|-------------|-------------------------|-------------------------------------|---------------|-------------------------------------|--|------------------------|------------------------|-------------|-------------------------|-------------------------------------|---------------|
| | | | | | | | | | | | | | | | |
| 1. Weather at time of casualty: | | | | | | | | | | | | | | | |
| Clear..... | 4 | 2 | 1 | 1 | 1 | | 9 | 5. Distance from shore: | 28 | 7 | 4 | 2 | 5 | 1 | 47 |
| Heavy snow, sleet or rain..... | 6 | 1 | | 1 | 2 | | 9 | Less than 50 miles..... | | 2 | | | | | 2 |
| Gale..... | 3 | | 2 | | | | 7 | 50 to 100 miles..... | | | 1 | | | | 1 |
| Hazy..... | 2 | | | | | | 2 | 100 to 200 miles..... | | | | | | | |
| Fog..... | 0 | 5 | | | | | 14 | 6. Lifeboats: | 19 | 7 | 2 | 2 | 2 | 1 | 33 |
| Hurricane..... | 3 | 1 | | | | 1 | 4 | Cases used..... | 79 | 17 | | | | | 112 |
| Not indicated..... | 1 | | 2 | | 1 | | 5 | Number lowered..... | 7 | | | | 1 | | 9 |
| 2. Condition of ship abandoned: | | | | | | | | Time in lifeboats: | | | | | | | |
| On fire..... | 2 | 1 | 3 | 1 | | | 7 | Less than 1 hour..... | 18 | 3 | 1 | 1 | 2 | 1 | 5 |
| Leaking, listing, sinking..... | 15 | 7 | | | 4 | 1 | 27 | 1 to 12 hours..... | 1 | 4 | | | | | 26 |
| Bottom damaged (grounded)..... | 4 | 1 | | | 1 | | 5 | Negligible..... | | | | | | | 1 |
| Not indicated..... | 7 | | 2 | 1 | 1 | | 11 | 12 to 24 hours..... | | | | | | | 10 |
| 3. Time between casualty and | | | | | | | | 8. How rescued: | | | | | | | |
| abandoning: | | | | | | | | Direct by another vessel..... | 6 | 1 | 2 | | 2 | | 11 |
| 1 hour or less..... | 6 | 7 | 4 | | 2 | | 19 | By lifeboats of another vessel..... | 2 | 1 | | | | | 4 |
| 1 to 12 hours..... | 10 | | | 1 | 1 | | 12 | By lifeboats to another vessel | 7 | 3 | 2 | 1 | 1 | | 14 |
| 12 to 24 hours..... | 4 | 4 | | 1 | 1 | | 6 | or to shore..... | | | | | | | |
| 2 to 6 days..... | 4 | | | | 1 | 1 | 6 | By Coast Guard cutter, life- | 8 | 4 | 1 | 2 | | | 18 |
| 6 days..... | 1 | | 1 | | | | 1 | boats, etc..... | 3 | | | | | | 3 |
| Not indicated..... | 3 | 1 | | | | | 5 | No details..... | | | | | | | |
| 4. Time between abandoning and | | | | | | | | Other vessels present but not | | | | | | | |
| rescue: | | | | | | | | needed in rescuing..... | 5 | 1 | 1 | 1 | | 1 | 9 |
| 1 hour or less..... | 15 | 6 | 4 | | 4 | 1 | 30 | 9. Radios: | | | | | | | |
| 1 to 12 hours..... | 3 | 1 | | | | | 4 | Lifeboats equipped..... | 2 | | | | | | 3 |
| 12 to 24 hours..... | 2 | | | 2 | 1 | | 5 | Lifeboat radios used..... | 13 | 3 | 1 | 1 | 1 | | 19 |
| 2 to 6 days..... | 2 | | | | | | 2 | Vessel radio equipped..... | | | | | | | |
| Not rescued..... | 1 | 1 | | | | | 2 | SOS sent and aid dispatched | 16 | 5 | 2 | 2 | 3 | | 28 |
| Not indicated..... | 5 | | 1 | | | | 6 | as result..... | | | | | | | |
| 10. Percent complement rescued of | | | | | | | | 10. Percent complement rescued of | | | | | | | |
| each ship abandoned: | | | | | | | | each ship abandoned | | | | | | | |
| 100 percent..... | 22 | 0 | 0 | 1 | 0 | 3 | 33 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 75 |
| 95 to 99 percent..... | 2 | 2 | 3 | 6 | 1 | | 6 | 0 | 1 | 34 | | | | | 34 |
| 90 percent..... | | | 1 | 6 | | | 1 | 0 | 1 | 34 | | | | | 33 |
| 60 to 89 percent..... | | | | | | | 4 | 0 | | | | | | | |
| | | | | | | | | Not indicated..... | | | | | | | |

* Number of lives lost not available.

Relaxation of Wartime Safety Requirements

THE recent announcement by the Navy Department of the termination of convoys sailing blacked-out, and the removal of gun crews, in the Atlantic Ocean, points up the study that is being made by the Merchant Marine Council of the emergency lifesaving equipment presently required by Subchapter O, and the work of the committee under the chairmanship of Commodore Norman B. Hall which is considering the subject of lifesaving equipment in preparation for the forthcoming International Conference on Safety-at-Sea.

After Pearl Harbor and the subsequent transfer of the functions of the former Bureau of Marine Inspection and Navigation to the Commandant of the Coast Guard, it was obvious that war conditions would necessitate amendments to existing regulations and many new regulations of a transitory nature. For this reason the emergency regulations were promulgated in a separate subchapter rather than incorporated in the subchapters used during peacetime. This policy served the dual purpose of centering all wartime requirements in one place, and providing a group of regulations which could be added to, rescinded, or amended as the need arose without complicating the normal peacetime regulations which remained in effect.

The termination of hostilities in Europe removes any fear of combat action in that area, but there remains a serious mine hazard. Both the British Admiralty and the United States Navy have indicated that this condition will continue for a considerable period. Indiscriminate sowing of mines by submarine and plane, vaster mine fields, and public reports of the development by the British of a mine that is practically impossible to sweep, lend every support to the beliefs expressed by the Navy.

As the maritime safety agency of the Government the Coast Guard cannot consider the noncombat area defined by the Navy as nonhazardous in the face of this evidence. But it is equally true that there are waters in the Western Hemisphere where the risk of mines is so remote as to be almost nonexistent. With the critical shortage of tonnage during this period of redeployment it is vital that every minute of shiptime be conserved. The more rapid the turn around, the more tonnage that is available. Maintenance and inspection of emergency equipment is as time-consuming as it is costly.

The Council has, therefore, considered that Subchapter O requirements should be eliminated as far as possible as respects vessels that trade continuously along the east coast of North America and Central America, along the continent of South America,

and among the West Indies. As conditions warrant, the area in which vessels are exempted from compliance with the emergency regulations will be extended. All proposals for specific exemptions, and for areas to which exemptions are to be extended will be laid before the representatives of maritime labor and industry before final adoption.

In the consideration of any relaxation of Subchapter O it is necessary to study each item of equipment, or specification with the view to retaining those items developed during the war that are marked improvements over the old or new devices that have proven their value and should be kept in peacetime. This particular phase of the problem is the province of Commodore Hall's Lifesaving Equipment Committee, but such relaxing of the wartime regulations as is possible should not await the final deliberations of either the committee members in this country or the International Convention itself. Informal discussions with other Government agencies, industry, and labor indicate the wisdom of such a decision.

The Lifesaving Equipment Committee, 1 of 14 preparing for the proposed International Safety-at-Sea Conference, has worked steadily for some 5 months in preparing its first tentative draft of the proposed convention chapter on lifesaving equipment. The membership of the committee includes men who have had long and outstanding experience as mariners. The committee approached its task with the end in view of raising the 1929 International Convention standards of safety to those which experience has taught us are desirable in peacetime practice.

Prior to considering substantive convention requirements the committee members determined that it was necessary to review their own immediate prewar experiences with merchant marine casualties and determine two matters. First, ascertain as nearly as possible the safety equipment providing the best chance of immediate rescue required by the expected merchant vessel casualties in future peacetime operations. Secondly, to state the committee's findings and conclusions in the terms of general lifesaving principles. These general principles, so deduced, were checked against the Government investigations of all casualties occurring to American ships during the years 1929-39, that required abandonment of the vessel. A total of 50 ships were involved. A 4 months' study was made of these 50 casualties by the Coast Guard, a summary of which appears on the opposite page.

Admiral R. R. Waesche, Commandant, in addressing the National

Maritime Union at its convention in New York City on July 3, 1945, stated his conclusions with respect to this casualty analysis:

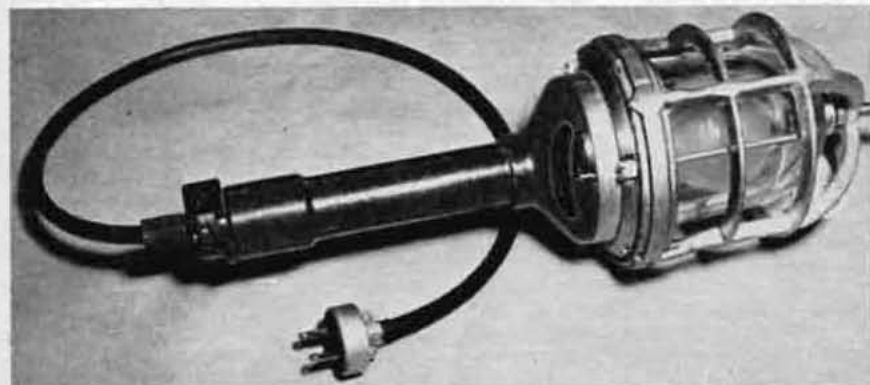
"In connection with the work on the International Conference, the Coast Guard has recently made a study of casualties involving American vessels in peacetime, for the International Convention, as you know, is intended for peacetime. We took as a test period the years 1929 through 1939, that is, 11 years. During that time, 52 American vessels were involved in casualties in which it was necessary to abandon ship. Thirty-one of these cases, or over 60 percent thereof, involved standings or groundings. In some of these cases, the vessel was grounded after some other initial casualty, but in about 50 percent of the cases the cause of the casualty was a grounding or stranding. I believe that the evidence adduced from this 11-year test period is a fair indication of the norm to be expected in the postwar period. And if that be true, the study has revealed some very significant factors which both you and the Coast Guard should keep in mind in thinking about safety-at-sea problems. Thus, the record would seem to indicate that it is highly desirable from the safety viewpoint to emphasize radar beacons, Loran stations, and other aids to navigation. It also indicates the necessity for facilities for rendering assistance from shore. In all cases (save that of the *Iowa*, which stranded in the Columbia River with the loss of all hands) rescue was immediate for all practical purposes.

"The other 21 cases included 4 cases where the casualty was due to fire, 5 due to explosion, 8 due to collision, and 4 due to foundering. In 5 cases there was extensive loss of life. It is interesting to note that contrary to the experience in wartime, in no case were crew members or passengers in lifeboats for any great length of time. Coast Guard records fail to reveal any case in which a lifeboat was at sea, during this 11-year period, for more than 24 hours. This indicates that, in peacetime, rescue vessels, either Coast Guard cutters or merchant ships, usually arrive at the scene of the casualty in a relatively short time. It is my belief that this situation will be improved in the postwar era because of at least 2 factors. First, there have been developed greatly improved air-sea rescue techniques and procedures. Second, the use of radar will greatly facilitate the quick location of lifeboats, while the portable lifeboat radio now required by the Coast Guard will permit the immediate sending of long-range signals after a ship is abandoned.

Portable Lights On Tank Vessels

IN the July 1945 issue of the Proceedings of the Merchant Marine Council, there appeared an article entitled "Portable Lights on Tank Vessels" which described and illustrated a defective extension cord and an unsatisfactory extension light which had been found in use on shipboard. This article also pointed out that portable lights are not always approved for all types of compartments and, therefore, it is essential that extreme care be exercised in the choice of a portable light to make certain

spring-loaded disk (A), which presses against a pin (B), when the globe is screwed down in place. When this pin is depressed, the circuit is closed and current will flow, the disk and pin being held down by means of the glass globe. When the globe breaks, the pressure on the disk is released and the effect is as shown in figure No. 2; i. e., the pin rises and the circuit is opened, thus stopping the flow of electricity and preventing the ignition of any gases present due to electric arc.

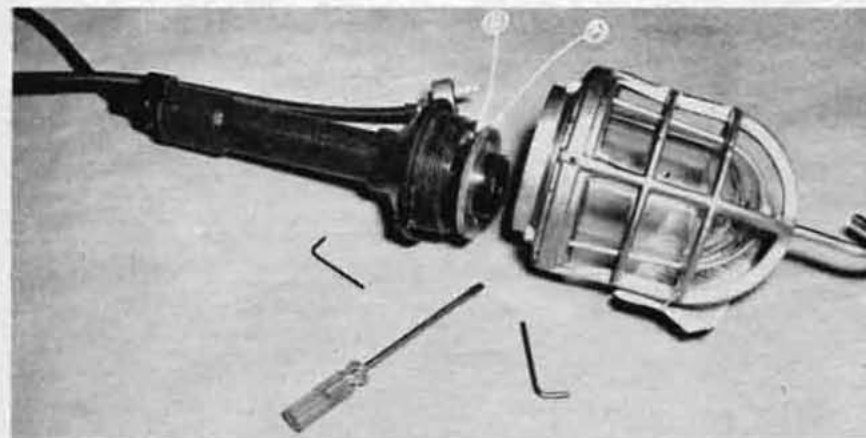


Picture No. 1. Explosion-proof portable light, assembled.

that the one selected is suitable for use in the location concerned.

One type of portable explosion-proof light that is approved for use in all locations, and which was described in some detail in the aforementioned article, is shown in picture No. 1. This light is featured by an automatic switch which stops the flow of current the instant the glass globe is broken. This is shown in further detail in picture No. 2. Above the threads on the handle, there is a

This is not the only type of portable light which is approved, but it is mentioned here due to the automatic switch feature. Any type of extension light can be used in a tank vessel compartment as long as it is approved for the location in which it is to be used, is fully equipped with glass globe and guard, and is in good mechanical and electrical condition. If these points are thoroughly checked before the light is plugged in, a greater degree of safety will be obtained.



Picture No. 2. Explosion-proof portable light, disassembled.

Numbered and Undocumented Vessels

THE table below gives the cumulative total of numbered but undocumented vessels in each Coast Guard district by customs ports for the month of June 1945. 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 | Customs port | Total |
|----------------------|--|---------|
| 1 (Boston) | (4) Boston 11,901 (1) Portland, Me. 9,081 (2) St. Albans 2,480 (5) Providence 3,195 | 26,747 |
| 3 (New York) | (10) New York 37,250 (6) Bridgeport 6,908 | 44,248 |
| 4 (Philadelphia) | (11) Philadelphia 18,046 | 18,046 |
| 5 (Norfolk) | (14) Norfolk 17,813 (13) Baltimore 18,833 | 36,646 |
| 6 (Charleston) | (16) Charleston 1,530 (15) Wilmington, N. C. 2,310 (17) Savannah 2,400 | 6,240 |
| 7 (Miami) | (18) Tampa (part) 15,515 | 15,515 |
| 8 (New Orleans) | (20) New Orleans 15,471 (18) Tampa (part) 925 (19) Mobile 5,586 (21) Port Arthur 3,380 (22) Galveston 8,121 (23) Laredo 1,603 (24) El Paso 5 (43) Memphis (part) 77 | 35,168 |
| 9 (Cleveland) | (41) Cleveland 13,066 (7) Ogdensburg 6,309 (8) Rochester 8,318 (9) Buffalo 8,003 (36) Duluth 3,749 (37) Milwaukee 12,228 (38) Detroit 24,909 (39) Chicago 7,265 | 83,847 |
| 9 (St. Louis) | (45) St. Louis 18,223 (12) Pittsburgh 3,752 (34) Pembina 114 (35) Minneapolis 8,350 (40) Indianapolis 4,997 (42) Louisville 3,548 (43) Memphis (part) 8,061 (44) Vacant (Des Moines) 198 (46) Omaha (part) 709 | 48,012 |
| 10 (San Juan) | (49) San Juan 236 (51) St. Thomas 65 | 301 |
| 11 (Long Beach) | (27) Los Angeles 6,010 (25) San Diego 1,176 (26) Nogales 50 | 7,236 |
| 12 (San Francisco) | (28) San Francisco 18,059 (47) Denver | 18,059 |
| 13 (Seattle) | (30) Seattle 20,785 (29) Portland, Oreg. 8,975 (33) Great Falls 776 (46) Omaha (part) 2 | 36,538 |
| 14 (Honolulu) | (32) Honolulu 1,687 | 1,687 |
| 17 (Ketchikan) | (31) Juneau 5,713 | 5,713 |
| Grand total | | 384,903 |

New Sulfa Dose

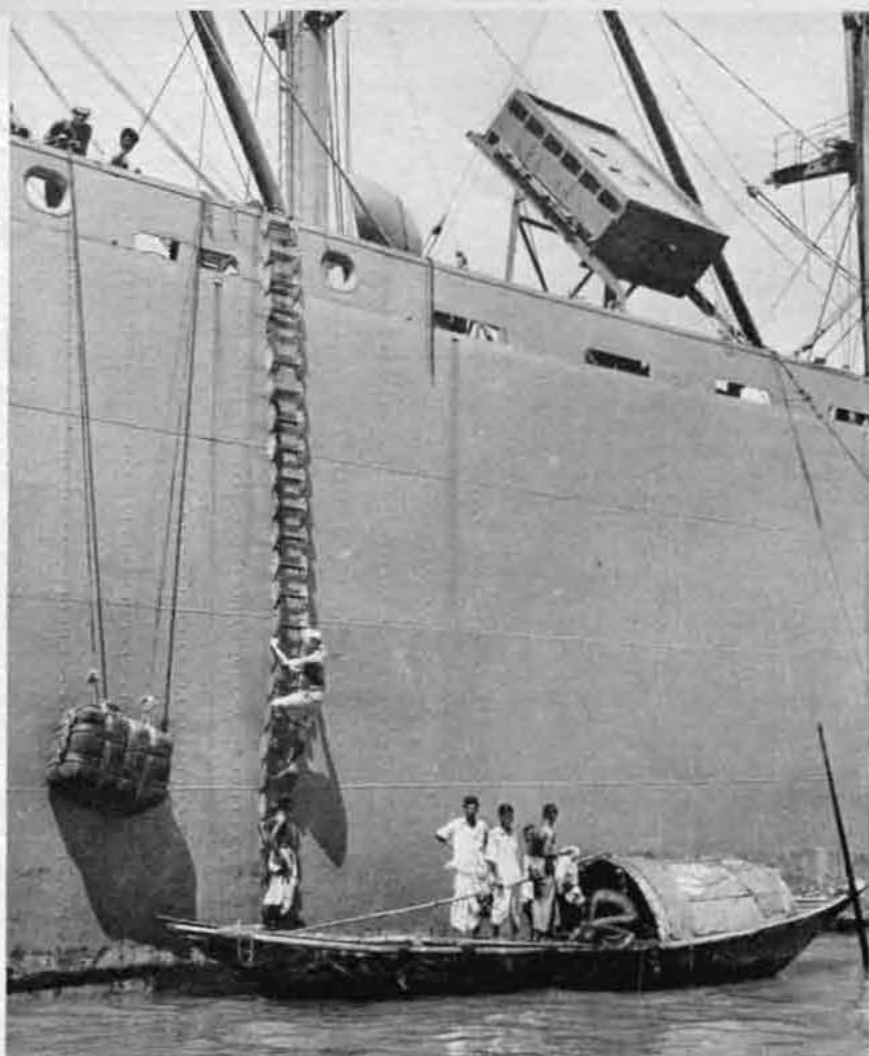
THE first-aid kit in lifeboats and life rafts on merchant vessels contains 48 1-gram tablets of sulfadiazine for treatment of burns or severe injuries. The directions now in the kit prescribing 2 tablets for the first dose and then 1 tablet every 4 hours for 7 days have been revised.

The new directions for taking the sulfa tablets in the first-aid kit are: For severe injury or burn, 4 tablets should be given as a single dose. No more sulfadiazine tablets should be given.

The change in the instructions for use of the sulfadiazine is recommended because, in view of the shortened time now elapsing before rescue and the curtailment of fluid intake that occurs if rescue is delayed, the single, 4-gram dose is the safest. This dose gives a large initial blood concentration while the injured person is well hydrated, and will remain effective over a 36-hour period.

Hearing Units

COAST GUARD Merchant Marine Hearing Units and Details investigated a total of 5,180 cases during the month of May 1945. From this number hearings resulted involving 133 officers and 1,214 unlicensed men. In the case of officers no license was revoked, 42 were suspended, 73 were suspended on probation, 31 were voluntarily surrendered, 3 hearings were closed with admonitions, and 15 cases were dismissed. Of the unlicensed personnel 28 certificates were revoked, 289 were suspended, 734 were suspended on probation, 426 were voluntarily surrendered, 19 hearings were closed with admonitions, and 116 cases were dismissed.



Hearing Unit Examining Officer Boarding a U. S. Merchant Vessel at Calcutta.

APPENDIX

Amendments To Regulations

TITLE 46—SHIPPING

Chapter I—Coast Guard: Inspection and Navigation

Subchapter F—Marine Engineering

PART 56—FUSION WELDING

Paragraphs (n) and (o) of § 56.20-3 Qualification tests for welders are deleted.

Part 56 is amended by adding a new § 56.20-3a to follow § 56.20-3, reading as follows:

§ 56.20-3a Approval of electrodes or welding rods. (a) Prior to using electrodes or welding rods in the fabrication of pressure containers, pipes,

fittings and appurtenances subject to inspection by the Coast Guard they shall be approved as to type and characteristics by the Commandant.

(b) Manufacturers desiring to secure approval of electrodes or welding rods shall make a formal request to the Commandant furnishing American Welding Society Classification Number, manufacturer's designation, current recommended, position for which recommended, spot or secondary color, and size for which approval is desired. Upon receipt of the foregoing information, the manufacturer will be advised of the procedure to follow in submitting the electrodes or welding rods. (10 F. R. 8751, 14 July 1945.)

Subchapter G—Ocean and Coastwise: General Rules and Regulations

PART 59—BOATS, RAFTS, BULKHEADS, AND LIFESAVING APPLIANCES (OCEAN)

Section 59.66 Storm oil is deleted.

PART 60—BOATS, RAFTS, BULKHEADS, AND LIFESAVING APPLIANCES (COASTWISE)

Section 60.59 Storm oil is deleted. (10 F. R. 8751, 14 July 1945.)

Subchapter H—Great Lakes: General Rules and Regulations

PART 76—BOATS, RAFTS, BULKHEADS, AND LIFESAVING APPLIANCES

Section 76.59 Storm oil is deleted. (10 F. R. 8751, 14 July 1945.)

"SAVINGS BANK" DEFINED

Under the authority vested in me by Executive Order 9083 (7 F. R. 1609) and section 10 (f) of the act of June 26, 1884, ch. 121, 23 Stat. 55, as amended (46 U. S. C. 599 (f)), § 132.1 of Subchapter K, 46 CFR, Chapter I, is amended by deleting the last sentence of paragraph (a) (9 F. R. 1729) and substituting the following sentence therefor: "The term 'savings bank' includes any Federal Credit Union organized in accordance with the provisions of the Federal Credit Union Act (act of June 26, 1934, ch. 750, 48 Stat. 1216, 12 U. S. C. 1751-1771), and any credit union organized under substantially similar laws of any state or the District of Columbia which is approved by the Commandant." (10 F. R. 9235, 25 July 1945.)

Waivers

TITLE 46—SHIPPING

Chapter I—Coast Guard: Inspection and Navigation

Appendix A—Waivers of Navigation and Vessel Inspection Laws

VESSELS ENGAGED IN BUSINESS CONNECTED WITH THE CONDUCT OF THE WAR

WAIVER OF COMPLIANCE

The Commandant, United States Coast Guard, having by order dated July 1, 1943 (8 F. R. 9164), amended by order dated January 12, 1945 (10 F. R. 582), pursuant to the authority of the order of the Acting Secretary of the Navy dated 1 October 1942 (7 F. R. 7979) found necessary in the conduct of the war waiver 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, as amended by said order dated 12 January 1945, be and it hereby is further amended in the following respects:

1. The third and fourth sentences of paragraph numbered "1" of said order dated 1 July 1943, as amended by said order dated 12 January 1945, are deleted and there is inserted in lieu thereof the following "The application shall be delivered to the District Coast Guard Officer or to his designated representative at the port or place where the vessel is located. In the case of vessels in any port or place of the Canal Zone or in any foreign port or place, the application shall be made to the designated representative of the Commandant at such port or place or if the Coast Guard has not established facilities in such port or

place to the nearest designated representative of the Commandant at a port or place where such facilities have been established."

Dated: July 3, 1945. (10 F. R. 8243, 4 July 1945.)

Equipment Approved by the Commandant

BUOYANT CUSHION FOR MOTORBOATS

15' x 15' x 2' Typha filled buoyant cushion, Approval No. B-269, manufactured by Wilber & Son, 116 New Montgomery Street, San Francisco, Calif. (10 F. R. 8331, 5 July 1945.)

DAVIT

Steward mechanical davit, size 2X-7-0 (General Arrangement Dwg. No. 200-D, dated 5 May, 1943) (Working load of 7,500 pounds per arm, 15,000 pounds per set), submitted by the Landley Co. Inc., 15 Park Row, New York, N. Y. (10 F. R. 8331, 5 July 1945.)

FIRING ATTACHMENT FOR LINE-THROWING GUN

Firing attachment for line-throwing gun, Model A (Dwg. No. F-101, dated 21 April 1945), submitted by Edward Samara Inc., 37 South Street, New York, N. Y. (10 F. R. 8331, 5 July 1945.)

FIRE-RETARDANT MATERIALS FOR VESSEL CONSTRUCTION; DECK COVERINGS FOR CLASS A-1 CONSTRUCTION

Kompolite Decking Type II and Kompodek Type CU Deck Covering, for use as a class A-1 deck covering, minimum thickness 1 3/4 inches, 7.9 pounds per square foot for 1-inch thickness, submitted by Kompolite Co., Inc., 111-115 Clay Street, Greenpoint, Brooklyn, N. Y. (10 F. R. 8331, 5 July 1945.)

LIFEBOATS

22' x 7'6" x 3'3" metallic oar-propelled lifeboat. Design K-109 (20-person wartime capacity, 31-person peacetime capacity) (General Arrangement Dwg. No. K-109-2, Alt. 1), submitted by Kargard Boat & Engine Co., Marinette, Wis. (10 F. R. 8331, 5 July 1945.)

12' x 4.5' x 1.92' metallic oar-propelled lifeboat (6-person capacity) for river service only (General Arrangement Dwg. No. G-211a, Rev. 25 May 1945), submitted by C. C. Galbraith & Son, Inc., 99 Park Place, New York, N. Y. (Supersedes approval 13 January 1943, 8 F. R. 501.)

22' x 7.5' x 3.25' metallic motor-propelled lifeboat, Design K-108, 251 cu. ft. capacity (25-person peacetime capacity, 16-person wartime capacity) (General Arrangement Dwg. No. K-108-2, Alt. 2), manufactured by Kargard Boat & Engine Co., Marinette, Wis.

16' x 5.71' x 2.29' metallic oar-propelled lifeboat (12-person peacetime capacity, 9-person wartime capacity) (General Arrangement Dwg. No. 2043, dated 8 June 1945), submitted by Imperial Lifeboat & Davit Co., Inc., Athens, N. Y. (10 F. R. 8922, 18 July 1945.)

24' x 8' x 3.73' metallic oar-propelled lifeboat (40-person peacetime capacity, 29-person wartime capacity) (General Arrangement Dwg. No. 2436, revised 4 April 1945), submitted by Lane Lifeboat and Davit Corporation, foot of 40th Road, Flushing, N. Y. (10 F. R. 9201, 24 July 1945.)

LIFE PRESERVER

Model No. 2 adult kapok life preserver (C. G. Dwg. No. F-49-6-1 and Specifications dated 10 June 1944), Approval No. B-268, manufactured by Waterhouse Co., Webster, Mass. (For general use.) (10 F. R. 8331, 5 July 1945.)

LIFE RAFT

20-person improved type life raft, Model No. FG-7, plywood construction filled with Foamglass (General Arrangement Dwg. No. 106, Alt. 2), submitted by Craftsman Equipment Co., 41-43 Utica Avenue, Brooklyn, N. Y. (10 F. R. 8331, 5 July 1945.)

LUMINOUS MARKING FOR INTERIOR ACCOMMODATIONS

Luminous marking, designated Type A, with adhesive attached, submitted by John Mackler & Co., Inc., Chicago Heights, Ill.

Luminous marking, designated Type CH-15, with adhesive attached, submitted by Charles F. Heaphy Co., 420 Lexington Avenue, New York 17, N. Y.

Luminous marking, designated Type CH-18, without adhesive, submitted by Charles F. Heaphy Co., 420 Lexington Avenue, New York 17, N. Y., attached with Mikah adhesive Q-2241, manufactured by National Starch Products Co., 270 Madison Avenue, New York 16, N. Y.

Luminous marking, designated Type CH-24, without adhesive, submitted by Charles F. Heaphy Co., 420 Lexington Avenue, New York 17, N. Y., attached with Mikah adhesive Q-2241, manufactured by National Starch Products Co., 270 Madison Avenue, New York 16, N. Y. (10 F. R. 8922, 18 July 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:

Alken Certified Even-Flo, Alken-Murray Corp., 1841 Broadway, New York 23, N. Y. Certification No. 184, 28 June 1945.

Hockwald's Insecticide Spray—DDT Residual Effect, Hockwald Chemical Co., 135 Mississippi Street, San Francisco, Calif. Certification No. 185, 6 July 1945.

AFFIDAVITS

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

Hammel-Dahl Co., 243 Richmond Street, Providence 3, R. I., fabricated valves.

Hyde Windlass Co., Bath, Maine, valves and fittings.

Lake Union Dry Dock & Machine Works, 1515 Fairview, North, Seattle, Wash., valves, fittings and flanges.

Magnetrol, Inc., 325 West Huron Street, Chicago 10, Ill., valves and fittings.

Because the materials used in the manufacture of brass stock type needle valves does not meet the requirements of section 51.15, the name of the Hackathorn Valve Co., 525 Roosevelt Building, Los Angeles, Calif., is to be removed from the approved list.

ITEMS SUITABLE FOR MERCHANT MARINE USE

ACCEPTABLE FUSIBLE PLUGS

The Marine Engineering Regulations require that fusible plug manu-

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

The Gibson and Kirk Co., Baltimore, Md., heat Nos. 10 to 15, inclusive.

The Lunkenheimer Co., Cincinnati 14, Ohio, heat No. 215.

ELECTRICAL APPLIANCES

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

| Manufacturer and description of equipment | Location apparatus may be used | | | | Date of action | Manufacturer and description of equipment | Location apparatus may be used | | | | Date of action |
|--|--------------------------------|---|---|---|----------------|--|--------------------------------|---|---|---|----------------|
| | a | b | c | d | | | a | b | c | d | |
| Bart Laboratories, Inc., Belleville, N. J.: Searchlight, type BPT-20, lever control and slip ring, 1,000 watts, catalog No. 20B1054-M, drawing No. M-44200, alteration 4. | x | x | x | | 6-21-45 | Mineral Electric Co., Chicago, Ill.: Cable hangers and clips, catalog Nos. 0, 1, 250, 375, 54, 54, 54, and 54 for single cables not larger than No. 10 Awg. twin conductor. | x | x | | | 6-28-45 |
| Condi-Lite Corp., New York, N. Y.: Deck lighting fixture, less guard, with reflector, waterproof, 100 watts maximum, catalog No. 7032, drawing No. E44-854-11, alteration 0. | x | | | | 6-25-45 | Murlin Manufacturing Co., Philadelphia, Pa.: Ceiling lighting fixture, with reflector, nonwatertight, 100 watts maximum, catalog No. 538, alteration 0. | x | | | | 6-26-45 |
| Deck lighting fixture, less guard, waterproof, 50 watts maximum, catalog No. 7000, drawing No. E44-854-7, alteration 0. | x | | | | 6-25-45 | The Oakford Co., New York, N. Y.: Gauge light, waterproof, 100 watts maximum, design No. 325, drawing No. 2236, alteration 1. | x | x | x | | 6-18-45 |
| Crouse-Hinds Co., Syracuse, N. Y.: Searchlight, high pedestal type with slip rings, nonmagnetic, pilot house control, type DCX-18, No. 43904, drawing No. 32KH2, alteration 0. | x | x | x | | 6-26-45 | Pilot Marine Corp., New York, N. Y.: Model PB-30-E marine amplifier for use with entertainment system, 50 watts, drawings Nos. PM-3000, PM-3001, PM-3002, and PM-3003 all alteration 0. | x | | | | 7-3-45 |
| Edwards & Co., Inc., Norwalk, Conn.: Bells, waterproof, 3", 4", 6" and 8", in sheet steel enclosure, 20 and 115 volts, direct current; 115 volts, alternating current; and magneto generator; catalog No. 17408T, drawing No. 5367-SE, alteration 3. | x | x | x | | 7-14-45 | Revere Electric Mfg. Co., Chicago, Ill.: Floodlight, 500 watts, drawing No. DT-5700-26, alteration 0. | x | x | x | | 6-27-45 |
| The Electric Heater Co., Bridgeport, Conn.: Salinity indicator system, drawings Nos. 1000, alteration 1; 1001A, alteration 3; and 5007, alteration 0. | x | x | | | 6-20-45 | Russell & Stoll Co., Inc., New York, N. Y.: Pilot light and switch combination, waterproof, 10 amperes, 250 volts, catalog No. 1124-R, drawing No. B-6333, alteration 5. | x | x | x | | 7-5-45 |
| Federal Electric Co., Inc., Chicago, Ill.: Horn, motor driven, U. S. Navy type H-8, waterproof, 115 volts, direct current, drawing No. H-6416, alteration 2. | x | x | x | | 6-30-45 | Lighting fixture, with guard, globe and reflector, waterproof, 200 watts maximum, catalog No. 6206-MC, drawing No. 9425, alteration 2. | x | x | x | | 7-5-45 |
| Horn, motor driven, U. S. Navy type H-9, waterproof, 115 volts, alternating current, drawing No. 6540, alteration 3. | x | x | x | | 6-30-45 | Receptacle, 3-gang, nonwatertight, 15 amperes, 125 volts, catalog No. 3167-F, drawing No. F-9639, alteration 0. | x | | | | 7-5-45 |
| Henschel Corp., Amesbury, Mass.: Transfer relay for engine order telegraph, 2-pole, double-throw, waterproof, drawing No. 60-168, alteration 2. | x | x | x | | 6-26-45 | Wagner Marine Electric Mfg. Co., Brooklyn, N. Y.: Ceiling lighting fixture, with reflector, nonwatertight, 4-inch, 50 watts maximum, catalog No. 2450, drawing No. W-2450, alteration 0. | x | | | | 6-20-45 |
| Rudder angle indicator, bulkhead mounting, 115 volts, 60 cycles, alternating current, drawing No. 10-1052-1, alteration 0. | x | x | | | 6-26-45 | Ceiling lighting fixture, with guard, nonwatertight, 4-inch, 50 watts maximum, catalog No. W-2506, drawing No. W-2506, alteration 0. | x | | | | 6-20-45 |
| Current failure alarm panel, drawing No. 40-033, revision 2-14-44. | x | x | | | 6-27-45 | Ceiling lighting fixture, nonwatertight, 4-inch, 50 watts maximum, catalog No. 2505, drawing No. W-2505, alteration 0. | x | | | | 6-20-45 |
| The Instrument Laboratory, Inc., Seattle, Wash.: Salinity indicator system, drawings Nos. 5028-5782, alteration 4; 5067-5782, alteration 3; 5068-5782, alteration 4. | x | x | | | 6-20-45 | Adapter plate, 8-inch diameter, for use with catalog Nos. 2450, W-2452 and W-2506 units, drawing No. W-2454, alteration 0. | | | | | 6-20-45 |
| | | | | | | Westinghouse Electric Corp., East Pittsburgh, Pa.: Searchlight, marine type, 18 inches, nonmagnetic, drawing No. 607820, sub 3. | x | x | x | | 7-5-45 |

a. Passenger and crew quarters and public spaces.
b. Machinery, cargo, and work spaces.

c. Open decks.
d. Pump rooms of tank vessels.

Merchant Marine Personnel Statistics

MERCHANT MARINE LICENSES ISSUED DURING JUNE 1945

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 | 25 | 106 | 4 | 35 | | 1 | 13 | 113 | 2 | 8 | 153 | 15 | | 3 | | | 3 | 8 | | | 270 | 16 | | 3 | | | | | | |
| Gulf coast | 10 | 14 | | | | | 1 | 1 | 6 | 21 | | 1 | | | | | 1 | 1 | 1 | | 58 | 1 | | | | | | | | |
| Great Lakes and rivers | 1 | 2 | | | 2 | 3 | | | 5 | 6 | | | | | | | | | 4 | 3 | | | | | | | | | | |
| Pacific coast | 27 | 41 | 2 | 4 | | | 2 | 13 | 1 | 1 | 66 | 10 | | 1 | | | 3 | 6 | 1 | 1 | 110 | 4 | | | | | | | | |
| Total | 63 | 163 | 6 | 39 | 2 | 4 | 15 | 127 | 9 | 21 | 240 | 25 | 2 | 3 | | | 7 | 15 | 6 | 4 | 438 | 22 | | 3 | | | | | | |

| 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 | Renewal | Grand total |
| | O | R | O | R | O | R | O | R | O | R | O | R | O | R | O | R | O | R | O | R | | | |
| Atlantic coast | 502 | 13 | | | | | | | | | 3 | | 27 | 262 | 5 | 3 | | | 1 | | 1,007 | 587 | 1,594 |
| Gulf coast | 23 | | | | | | | | | | | | 14 | 16 | 1 | 2 | | | | | 131 | 41 | 172 |
| Great Lakes and rivers | | | | | | | | | | | 3 | 6 | 1 | 5 | 22 | 14 | | | | | 38 | 40 | 78 |
| Pacific coast | 110 | 3 | | | | | | | | | | | 21 | 64 | 1 | | | | 2 | 1 | 346 | 150 | 496 |
| Total | 635 | 16 | | | | | | | | | 6 | 6 | 63 | 347 | 29 | 19 | | | 3 | 1 | 1,522 | 818 | 2,340 |

ENGINEER OFFICERS

| Region | Chief engineer, steam | | | | First assistant engineer, steam | | | | Second assistant engineer, steam | | | | Third assistant engineer, steam | | | |
|------------------------|-----------------------|-----|--------|-----|---------------------------------|----|--------|----|----------------------------------|----|--------|---|---------------------------------|----|--------|---|
| | Ocean | | Inland | | Ocean | | Inland | | Ocean | | Inland | | Ocean | | Inland | |
| | O | R | O | R | O | R | O | R | O | R | O | R | O | R | O | R |
| Atlantic coast | 83 | 107 | 8 | 56 | 128 | 25 | 1 | 10 | 347 | 42 | | 3 | 562 | 19 | | |
| Gulf coast | 26 | 25 | 1 | 7 | 24 | 9 | | 3 | 45 | 6 | 1 | | 15 | 3 | | |
| Great Lakes and rivers | 2 | 6 | 4 | 30 | | 3 | 4 | 6 | 5 | 1 | 3 | 4 | 7 | | 1 | |
| Pacific coast | 30 | 62 | | 8 | 59 | 8 | | 6 | 131 | 14 | | | 147 | 6 | | |
| Total | 141 | 200 | 13 | 101 | 211 | 45 | 5 | 25 | 528 | 63 | 4 | 7 | 731 | 25 | 1 | |

| Region | Motor vessels | | | | | | | | Uninspected vessels | | | | Totals | | |
|------------------------|----------------|----|--------------------------|----|---------------------------|----|--------------------------|----|---------------------|---|--------------------|---|----------|---------|-------------|
| | Chief engineer | | First assistant engineer | | Second assistant engineer | | Third assistant engineer | | Chief engineer | | Assistant engineer | | Original | Renewal | Grand total |
| | O | R | O | R | O | R | O | R | O | R | O | R | | | |
| Atlantic coast | 31 | 55 | 14 | 22 | 18 | 8 | 462 | 7 | | | 3 | | 1,654 | 357 | 2,011 |
| Gulf coast | 6 | 10 | 4 | 5 | 5 | 1 | 6 | 3 | | | | | 133 | 72 | 205 |
| Great Lakes and rivers | 2 | 8 | 4 | 3 | 1 | 2 | 2 | | | | | | 35 | 64 | 99 |
| Pacific coast | 7 | 25 | 7 | 5 | 7 | 4 | 118 | 1 | | | 2 | 1 | 507 | 142 | 649 |
| Total | 46 | 98 | 29 | 35 | 31 | 15 | 588 | 11 | | | 5 | 1 | 2,329 | 635 | 2,964 |

ORIGINAL SEAMEN'S DOCUMENTS ISSUED, MONTH OF JUNE 1945

| Region | Continuous discharge book | Certificate of identity | A. B., green, 3 years ¹ | A. B., green, 9 months emergency ¹ | A. B., blue, 18 months ¹ | A. B., blue, 6 months emergency ² | A. B., blue, 6 months emergency ³ | Life-boat, 12-24 months ⁴ | Life-boat 6-12 months emergency ⁵ | Q. M. E. D., 6 months | Q. M. E. D., emergency | Radio operators | Certificate of service | Tanker man | Staff officer | Total |
|------------------------|---------------------------|-------------------------|------------------------------------|---|-------------------------------------|--|--|--------------------------------------|--|-----------------------|------------------------|-----------------|------------------------|------------|---------------|--------|
| Atlantic coast | 261 | 7,279 | 44 | 659 | 44 | 29 | 0 | 1,753 | 0 | 289 | 1,012 | 274 | 6,635 | 25 | 126 | 18,430 |
| Gulf coast | 165 | 776 | 8 | 62 | 9 | 1 | 0 | 492 | 0 | 33 | 157 | 9 | 615 | 20 | 21 | 2,368 |
| Pacific coast | 7 | 2,940 | 20 | 161 | 72 | 0 | 0 | 494 | 0 | 123 | 332 | 51 | 2,363 | 4 | 60 | 6,627 |
| Great Lakes and rivers | 2,231 | 254 | 8 | 21 | 21 | 24 | 0 | 68 | 0 | 32 | 98 | 6 | 2,419 | 7 | 9 | 5,198 |
| Total | 2,664 | 11,249 | 80 | 903 | 146 | 54 | 0 | 2,807 | 0 | 477 | 1,599 | 340 | 12,632 | 56 | 216 | 32,623 |

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 225 Panamanian Employment Cards issued.

WAIVERS OF MANNING REQUIREMENTS FROM 1 JUNE TO 30 JUNE 1945

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

| Region | Number of vessels | Deck officers substituted for higher ratings | Engineer officers substituted for higher ratings | Able seamen substituted for deck officers | Ordinary seamen substituted for able seamen | Qualified members of engine department substituted for engineer officers | Wipers or coal passers substituted for qualified members of engine department | Wipers, coal passers or cadets substituted for engineer officers | Ordinary seamen or cadets substituted for deck officers | Total |
|----------------|-------------------|--|--|---|---|--|---|--|---|-------|
| Atlantic coast | 606 | 186 | 364 | 15 | 1,084 | 46 | 154 | 22 | 2 | 1,873 |
| Gulf coast | 143 | 59 | 67 | 14 | 223 | 6 | 22 | 5 | 6 | 402 |
| Pacific coast | 498 | 184 | 303 | 41 | 1,367 | 112 | 368 | 2 | 43 | 2,420 |
| Great Lakes | 220 | 3 | 8 | | 531 | | 127 | | | 669 |
| Total | 1,467 | 432 | 742 | 70 | 3,205 | 164 | 671 | 29 | 51 | 5,364 |

CREW SHORTAGE REPORTS FROM 1 JUNE TO 30 JUNE 1945

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

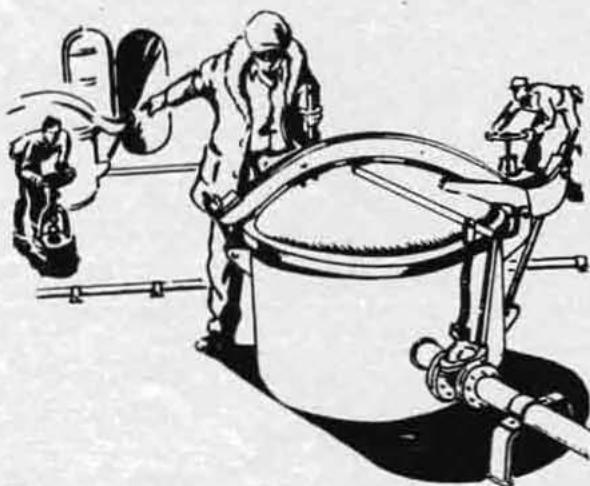
| Region | Number of vessels | Ratings in which shortages occurred | | | | | | | | | | | | Total |
|----------------|-------------------|-------------------------------------|-------------|------------|-------|-------------|-----------------|----------------|----------------|-----------------|----------------|------------------------------------|----------------------|-------|
| | | Chief mate | Second mate | Third mate | Radio | Able seamen | Ordinary seamen | Chief engineer | First engineer | Second engineer | Third engineer | Qualified member engine department | Wiper or coal passer | |
| Atlantic coast | 13 | | | 3 | | 9 | 5 | | | 2 | 1 | 1 | 3 | 24 |
| Gulf coast | 10 | | 1 | | 1 | 12 | 4 | | | | 1 | 4 | 3 | 26 |
| Pacific coast | 4 | 1 | | | | 2 | | | | 2 | | | 2 | 7 |
| Great Lakes | 126 | 3 | 2 | 3 | | 73 | 21 | 1 | 3 | 4 | 15 | 116 | 40 | 281 |
| Total | 153 | 4 | 3 | 6 | 1 | 96 | 30 | 1 | 3 | 8 | 17 | 121 | 48 | 338 |

COAST GUARD DISTRIBUTION:

A, B, C, D, E.

TIPS FOR TANKERS

4 When "topping off" cargo



A. Reduce the loading rate if necessary.

B. Remember that the closing off of one tank increases the rate of flow into other open tanks.

C. Remember that as the ship "goes by the stern" the rate of flow increases into after tanks which are open.

D. Remember that when ship is "by the stern" or, when ship has considerable "sheer," forward loaded tanks put a head on after partly loaded tanks.

E. When closing valves, seat the valve hard, then open it a turn or two to wash away any scale which may be under the gate, then close the valve hard again.

F. Remember that the rate of flow into any tank which is nearly full can be quickly reduced by opening forward and after tanks held until last for trimming, or, opening a midship tank which may be held until last for this purpose.

G. Remember that the most experienced man should be regulating the loading rate and that he should not go on the dock to read the draft or permit his attention to be diverted from loading for other reasons. Send another man to read the draft. Postpone if possible other less important duties.

H. After tank valves have been closed check frequently the liquid level in the tank to be sure it is not rising due to a leaking valve, etc.

I. When shutting down the loading of the ship, try to give the dock man a ten minute "stand by."