PROCEEDINGS OF THE
MERCHANT MARINE COUNCIL
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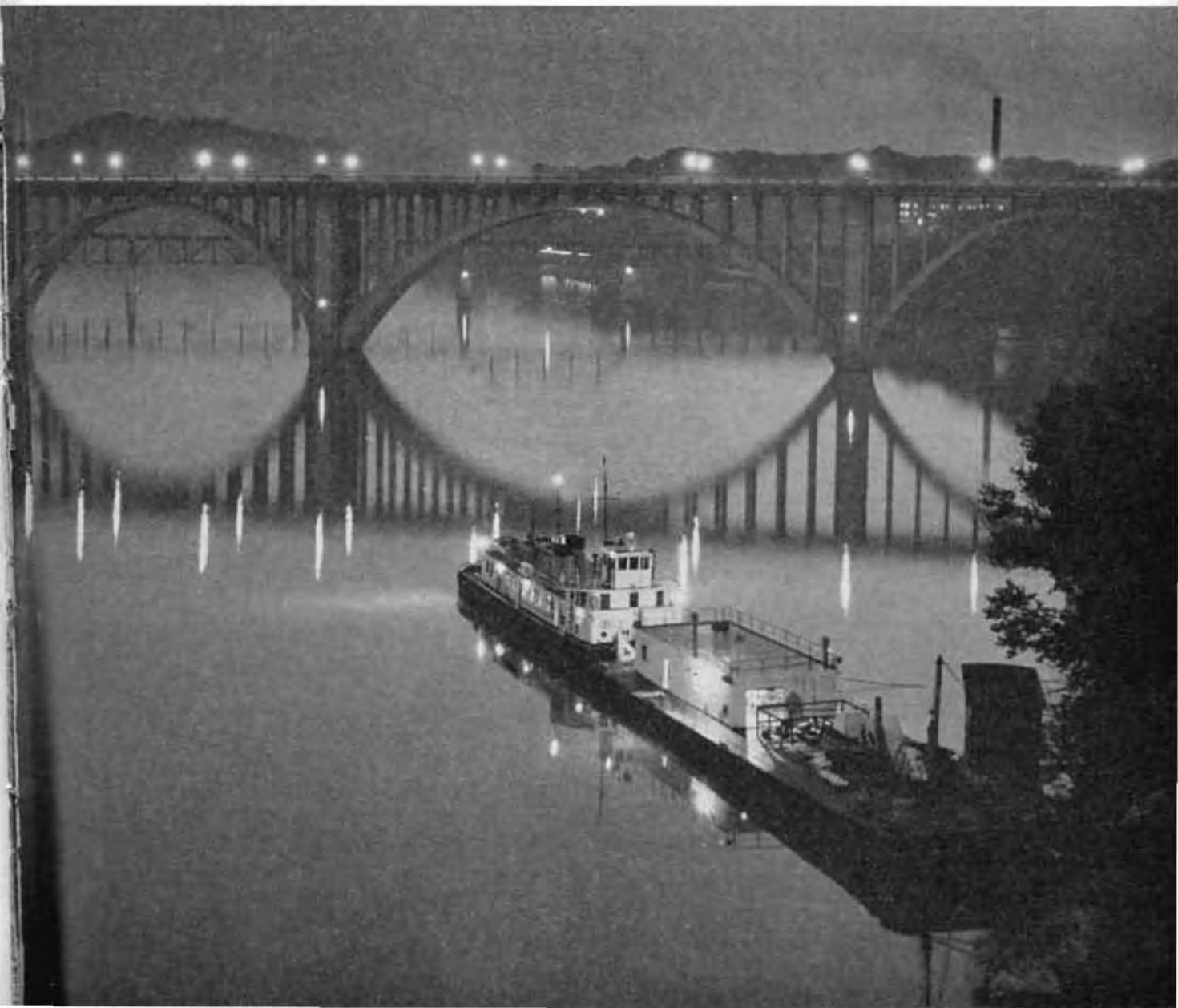

Proceedings of the

MERCHANT MARINE COUNCIL

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CONTENTS

	Page
Council Activities	66
Waivers	67
Hints for Proper Operation of Merchant Marine Radar	67
Coast Guard Assistance Operations	69
The "Fern"	69
Hearing Units	69
The Seagoing Duck	70
Sound-Operating Fog Signal	70
Rules of the Road:	
Important Points of Similarity in the Rules	71
Important Points of Difference in the Rules	71
Lessons From Casualties:	
Lubrication Prevents Casualties	73
Slants on safety	73
Appendix:	
Proposed Rule Making	74
Amendments to Regulations	74
Equipment Approved by the Commandant	75
Pictures:	
Front cover—Coast Guard Cutter Fern, courtesy Mr. W. M. Glenn.	
Back cover—Sketch by Mr. J. Berryman, Washington Star Newspaper Co.	

COUNCIL ACTIVITIES

The Merchant Marine Council concluded its first semiannual meeting for 1947 on March 28, 1947, after holding a public hearing to receive comments and suggestions on proposed changes in regulations, which were described in the January and February issues of the Proceedings. Many comments and suggestions were received from representatives of the many organizations interested in or affected by the proposed modifications, revisions and clarifications of the regulations. Where possible and practicable, the comments and suggestions will be incorporated into the revised regulations.

The changes in the marine engineering regulations and material specifications are quite detailed and will considerably improve and bring up to date the present requirements. It is contemplated that all the references to the proposed regulations will be editorially corrected. To improve the manner of numbering the regulations it is proposed to revise the numbering system to agree with the system used in Subchapter Q—Specifications, Subchapter A—Procedures Applicable to the Public, and Subchapter B—Merchant Marine Officers and Seamen, in Chapter I of Title 46—Shipping, of the Code of Federal regulations.

The proposed Specifications for welding electrodes were also considered with the marine engineering regulations.

The proposed regulations for casualty and accident investigations and suspension and revocation proceedings received considerable discussion at the hearing held March 27. In connection with accidents and casualties the comments and discussions centered mainly around the problem for freer access by interested parties to the reports of pertinent factual information ascertained by Coast Guard representatives in marine casualty and accident investigations. The Administrative Procedure Act, dated June 11, 1946, modified the statutory provisions of R. S. 4450, as amended, 46 U. S. C. 239.

The representatives of the various organizations on the Great Lakes affected by the Great Lakes Pilot Rules submitted written and oral comments. The proposed amendments which could not be promulgated by the Commandant at this time under present statutory authority were tabled. The other changes were favorably received.

The proposed amendment to 33 CFR, 6.25, of the Port Security Regulations regarding carriage of explosives was tabled. The regulations in 46 CFR Part 146 were favorably acted upon.

The termination of approval of equipment for the York-Shipley Boilers was recommended with the proviso that those boilers now in service may be continued in use so long as in good and serviceable condition.

The use of liquefied petroleum gases on vessels other than passenger ves-

sels for cooking and heating purposes was favorably acted upon. Few comments were received on this subject since it had been thoroughly studied before presentation by the industry and Coast Guard.

The recommendations of the Council will be forwarded to the Commandant for approval in the near future, and will appear in future issues of the Proceedings where possible.

WAIVERS

By Public Law No. 27, approved March 31, 1947, the Commandant of the Coast Guard was given authority to suspend compliance with the navigation and vessel inspection laws administered by the Coast Guard to the extent and in such manner and upon such terms as may be deemed necessary by him in the orderly reconversion of the merchant marine from wartime to peacetime operations. The authority in section 501 of the Second War Powers Act, which expired on March 31, 1947, gave the heads of the various departments and agencies the authority to waive navigation and vessel inspection laws administered by them. The Secretary of the Treasury in a general waiver of all such laws delegated to the Commandant the right to make certain findings and to make the waiver effective.

In order to have a continuation of all currently effective waivers, including regulations and instructions relating thereto, the Commandant on April 1, 1947, issued the following order continuing waivers now in effect:

"Pursuant to the authority vested in the Commandant, United States Coast Guard, by the Act of March 31, 1947 (Public Law No. 27, 80th Cong.), I hereby find that the continuation of all currently effective waiver orders, including regulations and instructions relating thereto, which were issued pursuant to Title V, Second War Powers Act (50 U. S. C. 635), as amended and extended, effecting laws and regulations relating to navigation and vessel inspection administered by the Coast Guard, is presently necessary in the orderly reconversion of the merchant marine from a wartime to a normal peacetime basis. Accordingly, all such orders, regulations, and instructions are hereby ratified, affirmed and continued in force until modified, superseded or rescinded."

The outstanding orders waiving compliance with navigation and vessel inspection laws and regulations will be reviewed and where required will be rewritten to comply with the terms of the new law.

Public Law No. 27 was known as H. J. RES. 76 and is limited in scope and intent when compared with the previous authority given by Congress to waive navigation and vessel inspection laws. The Joint Resolution, which became Public Law No. 27, reads as follows:

"Effective April 1, 1947, the Commandant, United States Coast Guard, is authorized to waive compliance with the navigation and vessel inspection laws administered by the Coast Guard to the extent and in such manner and upon such terms as may be deemed necessary by him in the orderly reconversion of the merchant marine from wartime to peacetime operations.

"The authority granted by this resolution shall remain in force only until April 1, 1948: *Provided*, That after June 1, 1947, the Commandant shall not waive compliance with those sections of the navigation and vessel inspection laws requiring the employment of American citizens as officers and crew members and limiting the employment of aliens except insofar as such employment shall be in the steward's department of vessels authorized to carry in excess of 12 passengers."

HINTS FOR PROPER OPERATION OF MERCHANT MARINE RADAR

Investigation of a recent minor casualty brought out that the ship's officers did not know how to operate the radar which was installed. Had they been familiar with its operation the grounding which occurred might not have happened. In another casualty the investigation revealed that the third mate did not know how to operate the fathometer. Here again a grounding could have been avoided if use had been made of a modern electrical device. In each case all that was necessary for placing the radar or fathometer in operation was to turn on the power switch. True there are additional knobs to be turned and which should be manipulated to get maximum performance.

It is to acquaint officers, who have not been shipmates with radar, with the different controls which might be found on a radar set that this article has been written. On each ship that is equipped with radar there should be an instruction book issued by the manufacturer, which will contain instructions for placing the set in operation and in addition will describe the purposes of the various controls. The Master should require that his officers become familiar with the operation of radar by studying these operating instructions.

A radar set on a ship performs much the same function as the headlights on an automobile. It enables the user to detect objects and land masses during periods of fog and darkness. In addition, radar very accurately gives the distance and bearing of the "targets" which it detects. The operation of radar is comparatively simple and can be learned readily by anyone who has even a mild interest in learning. The navigating personnel of a radar-equipped vessel who fail to use the radar or who are ignorant of the basic fundamentals of its capabilities and limitations are in much the same position as the automobile operator who fails to use his headlights at night.

Operation is simple. Click on a switch. Wait about three minutes until the radar has warmed up and objects begin to appear on the screen. If it is necessary, adjust intensity and focus by turning the proper knob until the radar picture is the most clear.

Following are the controls which are usually found on commercial types of radar. (A detailed explanation of their uses will be found following the list):

(*a*) On-off switch.
(*b*) Bearing cursor control.
(*c*) Range marker control.
(*d*) Gain control.
(*e*) Intensity control.
(*f*) Sea suppressor.
(*g*) Lighting control.
(*h*) Range selector.
(*i*) True-relative bearing switch.

The on-off switch is the switch which energizes the various circuits. It is normally a three-position switch with "Off," "Stand-by" and "On" or "Operate" positions. Nothing further should be done for a period of 3 minutes after the switch has been turned from "Off" to either of the other positions. Most equipments contain a time delay relay which will not allow operation of the equipment until the 3-minute period has elapsed. The equipment may be operated at any time after the switch has been in the "stand-by" or "operate" position for the required period.

The bearing cursor control causes a pointer or hairline to rotate across the face of the PPI tube. When this "cursor" bisects any target, its bearing may be read from the azimuth circle around the face of the tube at the point indicated by the cursor.

The range marker control causes the electrically generated range rings, which can be caused to appear on the face of the PPI, to be brightened or

dimmed as desired. The range rings in the radar system are used to determine the distance from the ship to any targets appearing on the PPI. Distance is determined by interpolation between the rings whose separation represents a fixed distance which will be indicated in the instruction book accompanying the equipment. For example, three range rings on a 1.5-mile scale will usually represent one-half mile between rings; five rings on a 5-mile scale will have 1 mile represented between rings. Some radars are equipped with a movable electronic dot (variable range marker) which may be cranked out to coincide with the target. When so equipped, the range in yards or miles and tenths of miles may be read from a mechanical counter inset in a small window on the front of the radar.

The gain control performs much the same functions as a radio receiver volume control. Through its use the strength of signals presented on the PPI scope may be varied. The use of the gain control is of primary importance and must be learned thoroughly if maximum benefit of the radar is to be obtained. If the gain control is advanced too far, the receiver noise will show on the scope very brightly, causing loss of contrast between targets and background. It is possible to miss large targets because of this lack of contrast. On the other hand, if the gain setting is too low, weak or small targets will not appear at all. The best setting for general search is one which just gives a light sprinkling of bright spots over the face of the PPI. When bringing in distant or weak targets it may be necessary to advance the gain to give a better picture. When navigating in constricted waters it will be necessary to alternately advance the gain in order to distinguish small buoys or small craft and retard it in order that shore outlines will be more sharply defined and in order to separate adjacent targets such as ships and nearby land masses. During periods of heavy sea return (which causes a large area of brightness for a considerable distance around the ship) it is advisable to reduce the gain control occasionally to ascertain if any targets are concealed by the bright area. Intelligent use of the gain control requires a great deal of practice. Its operation should be thoroughly understood by anyone operating the radar.

The intensity control, to the novice, apparently performs the same functions as the gain control. This assumption, however, is not only erroneous but can prove to be dangerous! The intensity control only brightens or dims the picture on the scope and does not have any affect on the strength of the received signal. Its primary purpose is to enable the operator to adjust the brightness of presentation as he desires. During daylight it will be found necessary to brighten the presentation to where it may be seen easily and during darkness to dim it to where glare will not be objectionable or cause night blindness to the operator.

The sea suppressor is a device which enables the radar to discern targets through interference caused by sea return, rain, snow or other factors which cause large bright areas to appear on the scope. Its degree of setting will depend upon the amount of interference and upon the distance of the target from the vessel. Care must be exercised in turning the sea suppressor control off in good weather or when its use is not required as its effect is to reduce, somewhat, the normal performance of the set.

The lighting control is simply a device to brighten or dim the auxiliary lighting on the radar.

The range selector determines the coverage of the radar. For open-sea navigation it is usually desirable to have it set to the maximum range available. For navigating in restricted waters or when searching for small targets close aboard, it is preferable to use the shortest range scale in order to obtain the largest, most clearly defined picture possible. It is well to change from a long to a short range, or vice versa, occasionally to make certain that no targets are being missed due to being beyond a short range or due to being small enough to go unnoticed on a long range.

True-relative bearing switch is used to control the method of presentation. In other words, to give a presentation on which all bearings are "true" (north up) or one on which the bearings are all relative to the ship's head. True bearing presentation is only possible when the equipment is tied into the ship's master gyro. The true bearing method has several advantages and is normally preferred by navigators. One marked advantage is that the picture always remains the same on the scope and does not veer and smear with yawing of the vessel or with turns.

Following are a number of items which will be of interest to the operators of radar. They have been learned as a result of years of operation of radar equipment.

Probably the best teacher is experience. The ability of an officer to interpret the PPI display is almost directly proportional to the amount of practice he has had. It is best to use the radar for practice during periods of good visibility when the targets shown may be verified by visual observation and the officer can get the "feel" of the radar and thus learn what dependence can be placed on it.

With practice, it becomes possible to identify targets with a fair degree of certainty. Small variations in the presentation give clues to the experienced eye which are missed by the novice. The range of the radar set is somewhat greater than that of the eye. In other words the radar can see further over the horizon than a man can see if he were standing at the same height as the antenna. Inasmuch as the size of the echo on the scope depends, roughly, on the size of the target observed, it follows that a target observed at the extreme range of the radar is either the first indication of a landfall or is a sizable vessel.

Targets which are unobserved until within comparatively close range are probably buoys or small vessels. Echoes from land are normally quite steady while those from large vessels will probably fade and brighten slowly. Echoes from small craft or buoys at long ranges will usually disappear and reappear quite rapidly until the range is closed. Identification may also be determined by observing whether or not the target is moving and at what speed. The speed of a vessel may be determined readily by plotting. A maneuvering board is most useful for this purpose. REMEMBER, a target whose range closes but whose bearing does not change is on a collision course with you!

The shape and large size of a target and its fuzzy appearance may readily identify it as a rain cloud or a storm front. In attempting to identify targets from the size of the spot on the PPI, it is well to remember that the same target will appear smaller when close to the ship than when at a distance. This is due to the wedge shape of the antenna beam. In other words, the arc of a 2° beam width is longer at 20 miles than it is at 2 miles. The width of the antenna beam also determines, to a large extent, definition with which the radar will show targets. For example, two ships near one another, at the same range, will appear as a single target if the antenna beam touches both simultaneously. A ship near land will either merge with the land on the scope or will appear as an extension of the land. Pulse length of the equipment determines the definition in depth as the beam width does in azimuth.

The beam emitted by the antenna is analogous to the beam sent out from a searchlight. The reflections, which are the signals seen on the

scope, follow the same general rules as does the light from the search light. A low, smooth beach or spit will appear very weakly on the PPI. It is easy to confuse the return from dunes or hills back of the beach with the shore line. Being similar to light, large, tall objects, such as mountains or high shore lines cast "shadows" behind them and targets cannot be detected in areas so obscured.

The following is a list of targets which furnish good navigational fixes:

(1) Islands and rocks.
(2) Lighthouses, towers, or rather tall structures.
(3) Broken shore lines.
(4) Bridges.
(5) Buoys.
(6) Piers and jetties.
(7) High sharp headlands.
(8) Bay entrances or spits.

The following is a list of targets which present difficult or uncertain fixes.

(A) Low sand spits or beaches.
(B) Mud flats.
(C) Gently sloping ground.
(D) Straight shore lines.
(E) Reefs and shoals. (In this connection, surf breaking on a reef may appear on the scope as a district shore line.)
(F) A long, high, but unbroken shore line.

The following is a list of deceptive targets:

(a) High land back of a low beach. (This may appear as the shore line.)
(b) Surf. (This may appear as a shore line.)
(c) Wakes. (Wakes give quite good return under certain sea and wind conditions. In the case of another vessel on a parallel course, the point at which the wakes intercept will appear as a strong signal apparently a third vessel on another parallel course.)
(d) False echoes. (These are caused by side lobes from the main antenna beam. Although weak, they may cause one or more additional targets to appear on the PPI if the true target is close aboard. False echoes may be identified, usually, by the fact that they appear at the same range as the true echo and will remain at that range regardless of maneuvering.)

Navigational fixes may be obtained readily with radar, the process being much the same as that used with an ordinary pelorus with the added advantage that range is also given. However, the possibilities for error should be known and accounted for. Either cross or tangent bearings may be obtained, depending on the size and general characteristics of the target on which bearings are being taken.

Radar fixes are subject to the following errors:

I. The possibility that the point of land or object ranged upon is incorrectly identified.
II. That a shore line as seen on the PPI may not be the actual shore line seen on the chart (see above).
III. Errors in the gyro system, if used.
IV. Equipment error due to misalignment of the system.

A little ingenuity on the part of the user will develop short cuts in obtaining and maintaining radar positions which will be of great assistance to the navigator.

One of the major dangers of the use of radar aboard ship is that it may engender a false confidence in its abilities. The limitations as well as the capabilities should be investigated thoroughly. Under no circumstances should such items as direction finders, sextants, fathometers, pelorus, lead lines, etc., be abandoned because of a radar installation. The radar should be considered as supplemental to other navigational devices. It does have the advantage that it will operate in fog and darkness and that it is generally more accurate than other methods. Intelligent use of radar will make it a great boon to shipping in the saving of life and property and will obviate many transit delays. However, it may be well to keep in mind that the use of radar does not eliminate the necessity for compliance with the rules of the road and observation of all normal precautions required by the circumstances.

COAST GUARD ASSISTANCE OPERATIONS

During the fiscal year 1946, the Coast Guard in its never-ending struggle against the hazards of the sea, assisted more than 6,815 ships either in distress or in need of help. Passengers and crew members on board those vessels assisted numbered 19,411 persons who were potentially in peril. The total value of ships assisted was $76,351,838 and the value of the cargo in the holds of those ships was well over $3,000,000. A total of 5,753 lives were saved from miscellaneous sources, such as small boats overturning, ocean beaches, etc. There were also 3,002 instances of minor assistance where the loss of life or property was not involved.

In addition to the saving of life and property at sea, the Coast Guard, among its many other duties, enforces the law which requires licensing and documentation of certain vessels whether they are operated for business or pleasure. In the enforcement of this law, during the fiscal year 1946, 195,174 vessels were boarded and their papers examined. As a result of these boardings and examinations, 247 vessels were cited for violations and of those cited and convicted, fines amounting to $2,830 were assessed.

THE "FERN"

The Coast Guard Cutter *Fern*, a tender class cutter which services buoys and other aids to navigation on the Western Rivers, pictured as she lay with the bow of her work barge against the bank of the Tennessee River at Knoxville.

The *Fern* was built in 1942 for the purpose of maintaining aids to navigation and is one of eight similar vessels of the same class. She is 114 feet long, 31-foot beam, and displaces 350 tons. Her patrol area extends from Quincy to St. Louis, Mo., and from St. Louis up the Illinois River to Beardstown, Ill., both areas representing a patrol area of 225 miles. Within the limits of this patrol area, 653 unlighted aids are attended, 17 lighted buoys are serviced, 16 bridge lights and a great variety of other important aids to navigation are supervised. These aids to navigation are described in the 1947 edition of the Light List for the Mississippi and Ohio Rivers.

The *Fern* is provided with an ice plow, in the form of a weighted, wedge-shaped auxiliary bow, that can be attached for use in breaking ice during the winter season.

HEARING UNITS

Coast Guard Merchant Marine Hearing Units and Merchant Marine Details investigated a total of 1,176 cases during the month of January 1947. From this number hearings resulted involving 41 officers and 169 unlicensed men. In the case of officers 5 licenses were ordered revoked, 21 were suspended, 8 were suspended on probation, none was voluntarily surrendered, 1 was closed with admonition and 5 cases were dismissed. Of the unlicensed personnel 10 certificates were revoked, 91 were suspended, 63 were suspended on probation, 17 were voluntarily surrendered, 2 were closed with admonition and 10 were dismissed after hearing.

Better Ask Than Go Astray

THE SEAGOING DUCK

Testing in heavy surf of a war-born DUKW, Model 353 Modified, has been carried on by the Coast Guard Testing and Development Division, Office of Engineering, at a point about one mile north of the Ocean City Lifeboat Station, Md. Tests were conducted on 20–21 February in heavy weather, in fact so heavy that the force of the seas coming over the bow stove in the safety glass windshield and dished the metal cab. The DUKW contributed materially in the landings, loading and unloading of ships in practically every theater of war. It was because of this excellent past record and rugged construction that modifications, including a light metal cabin, self-bailing cockpit and towing bitts, were made, and further tests conducted to determine its adaptability to the many and varied purposes to which it could be used in the Coast Guard, especially at lifeboat stations.

During these tests, eight sorties were made from the beach, through heavy surf, with swells running between 15 and 20 feet high and about 50 feet apart, to and beyond a bar about 100 yards off shore. A strong current, parallel to the beach and estimated at about 3 knots, prevailed at this time and caused some broaching during the time required to change over from wheel to propeller drive. During these tests, two well-experienced lifeboatmen who were present estimated that a conventional self-bailing lifeboat would have been flooded and that the following seas encountered on the return trip to the beach would have broached the boat, resulting in its capsizing and spilling the passengers.

Special attention was paid at all times to the engine, bilge pump, and other mechanical items and it was reported that they all functioned satisfactorily.

All sorties were conducted from a gradually sloping and sandy beach. Tires were deflated to 10 pounds each in order that sinking in the dry sand would be kept to a minimum. From the tests it would appear that construction improvements are necessary if the DUKW is to be used in similar weather, but its possibilities look good especially where close inshore work is necessary.

SOUND-OPERATED FOG SIGNAL

Another forward step in aids to navigation was announced in the March 8, 1947, Notices to Mariners. The Hudson River fog signal West Point Light, is now operated by a sound operated fog signal controller. The bell is actuated only by the sound emanating from the whistle of a passing vessel. Vessels desiring the bell to operate will sound their whistles. The bell will then operate at its advertised characteristic for a period of 8 minues. After 8 minutes the bell will stop until it is again actuated by the sound controller. This is one of two units delivered to the Coast Guard by the Radio Corporation of America 3 or 4 years ago, however, due to the war, projects of this type were temporarily interrupted.

The development of devices for controlling the operation of fog signals by sound from the whistle of an approaching or passing vessel has been under study for many years. The earliest models of this equipment were tested at Back Creek No. 2 station in the Chesapeake and Delaware Canal about 1938. An improved model was used at Hog Island No. 12 Light and Sound Signal at the west entrance to the Cape Cod Canal. Based on the experience gained from the operation of those units a much improved model was completed in about 1943.

The fog signal controller responds to sounds in the frequency range from 200 to 1000 cycles. It is relatively unaffected by wind noises which lie in frequence ranges above 1000 and below 200 cycles. It may be adjusted to start the fog signal when actuated by a sound having a signal strength of 50 decibels if it is sustained for a period of a second or more.

The sound level in a quiet room is generally of the order of 40 or more decibels making it apparent that a sound level of 50 decibels is comparatively weak. In fact, the unit will respond to a blast from a fish horn at a distance of one-quarter mile even though the wind is making more noise at the time. The mechanism is adjustable and may be set to actuate the signal for a single blast in response to a ship's whistle or it may be adjusted to sound the fog signal for a period of 8 minutes of continuous operation.

IMPORTANT POINTS OF SIMILARITY IN THE RULES

A careful reading of the rules to prevent collisions on the high seas, coastal inland waters, the Great Lakes, and Western Rivers, reveals a surprising degree of uniformity in principle, despite numerous differences in detail.

It is no doubt this uniformity which is the strength of the rules, just as the differences may be said to constitute their chief weakness. With the large and increasing volume of traffic moving from one jurisdiction to another, it is more than ever unfortunate that uniform rules satisfactory to all regions have not been developed. However, the following points may be regarded as already uniform:

1. Approaching steam vessels in good visibility are classified into three situations: meeting, overtaking, and crossing.

2. Approaching sailing vessels are classified and required to pass one another in accordance with their courses in respect to the direction of the wind which propels them both.

3. Two steam vessels are said to be meeting if their courses are substantially, or within a point or two of, opposite, or if, as in the case of a winding river, they will become opposite at the point where they meet, even though they may first sight each other at right angles. In open water, under all the rules alike, meeting vessels are required to pass port to port, unless they are already so far to the starboard of each other that they will clear on that side a safe distance without changing course. In order that they may pass safely port to port, a sufficient change of course to the right is required of both vessels, not in the jaws of collision, but at such a safe distance apart and a sufficient number of degrees to avoid even getting into dangerous proximity.

4. An overtaking vessel is one going in the same direction, or within six points of the same direction, as a slower vessel ahead. The rules are uniform in recognizing that the leading vessel was there first, and that the overtaking vessel must take positive action to keep clear of her as long as risk of collision remains. It is *par excellence* a situation of privilege and burden, with the accompanying obligations of the privileged vessel to keep course and speed, and of the burdened vessel to take all the positive action necessary to keep clear. This principle of privilege and burden is common to all sets of rules, not only in the overtaking situation but when two steam vessels are crossing, when a steam vessel meets a sailing vessel, when a sailing vessel approaches a sailing fishing vessel, and when one ordinary sailing vessel approaches another.

5. Two steam vessels are said to be crossing when one approaches the other on either side in the arc between meeting and overtaking, i. e., from a point or two on the bow to two points abaft the beam. In all four jurisdictions the rules require the privileged crossing steam vessel, i. e., the one having the other on her port hand, to keep course; and, in three of them to keep her speed, until definite remedial action becomes necessary; and the burdened steam vessel to keep clear, to avoid crossing ahead, and if necessary, to slacken speed, or stop, or reverse. When the two steam vessels arrive in dangerous proximity both are required, under the rules, to take positive action to avert collision. In other words the rules are unanimous in providing that no vessel has the right of way *through* another vessel.

6. In thick weather, there are numerous differences in prescribed sound signals, but the rules in fog are uniform in the following important respects: (a) All vessels are required to give notice of their approach by signals on the whistle, siren or fog horn, and these signals must be given at frequent intervals. (b) Vessels in fog must go at moderate speed, which has been defined by the Supreme Court as bare steerageway, or at such speed as will enable the vessel to come to a standstill in half the distance of visibility. The theory of preventing collisions in fog is the same in all jurisdictions. Collision is to be prevented, *not by dodging, but by stopping.* The International, Inland, Great Lakes, and Western River Rules are common in providing that whenever a fog signal is heard in a specified arc ahead, speed shall be reduced.

7. The rules are alike in recognizing that situations may arise where specific rules will not work, and where departure from these rules is accordingly necessary. Such departure to avoid immediate danger is authorized in every case by the so-called Rule of Special Circumstances.

The rules are similar in authorizing departure from the rules *for this purpose only*, and *only to the extent that such departure is necessary.* In the International and Inland Rules, the exact language of the Rule of Special Circumstance is as follows: "In obeying and construing these rules due regard shall be had to all dangers of navigation and collision, and to any special circumstances which may render a departure from the above rules necessary in order to avoid immediate danger." (Art. 27.)

8. Finally, the provision is made in each set of statutory rules for *the observance, in all weathers and situations, of good seamanship*, which is defined as "any precaution which may be required by the ordinary practice of seamen." This rule, referred to as the general precautionary rule, or the rule of good seamanship, reads in full as follows: "Nothing in these rules shall exonerate any vessel, or the owner or master or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper lookout, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case."

IMPORTANT POINTS OF DIFFERENCE IN THE RULES

Unfortunately, there are numerous important points of difference in the several sets of rules, and a primary purpose of this booklet is to set forth these differences in such a manner that they may be easily understood and readily referred to by the mariner. The most important differences are found in the use of whistle signals, both in clear weather and in fog, and in running and anchor lights and day signals required for various types of vessels in different jurisdictions. As long as these differences are allowed to persist, it is the mariner's duty to be thoroughly familiar with them unless he is operating exclusively within one jurisdiction. Seagoing vessels invariably operate on the high seas and in inland waters, and an accurate knowledge of the International, Inland and Pilot Rules should be minimum equipment for officers of such vessels. An additional study of Great Lakes Rules or Western Rivers Rules, each with the accompanying set of pilot rules, becomes necessary when vessels are about to enter the waters which the respective rules cover.

APPLICATION OF THE RULES

International

* * * the following regulations for preventing collisions at sea shall be followed by all public and private vessels of the United States upon the high seas and in all waters connected therewith, navigable by

seagoing vessels. (Enacting clause.)

Nothing in these rules shall interfere with the operation of a special rule, duly made by local authority, relative to the navigation of any harbor, river, or inland waters. (Art. 30.)

Inland

* * * the following regulations for preventing collisions shall be followed by all vessels navigating all harbors, rivers, and inland waters of the United States, except the Great Lakes and their connecting and tributary waters as far east as Montreal and the Red River of the North and rivers emptying into the Gulf of Mexico and their tributaries, and are hereby declared special rules duly made by local authority. (Enacting clause.)

The regulations in this part govern pilots of vessels propelled by steam, gas, fluid, naphtha, or electric motors, and of other vessels propelled by machinery navigating harbors, rivers, and inland waters of the United States, except the Great Lakes and their connecting and tributary waters as far east as Montreal and the Red River of the North and rivers emptying into the Gulf of Mexico and their tributaries. * * * (§ 312.01.)

Great Lakes

* * * the following rules for preventing collisions shall be followed in the navigation of all public and private vessels of the United States upon the Great Lakes and their connecting and tributary waters as far east as Montreal. (Enacting clause.)

The regulations in this part govern pilots of vessels propelled by steam, gas, fluid, naphtha, or electric motors, and of other vessels propelled by machinery, navigating the Great Lakes and their connecting and tributary waters as far east as Montreal. (§ 322.01.)

Western Rivers

The following rules for preventing collisions on the water shall be followed in the navigation of vessels of the Navy and of the mercantile marine of the United States. (Preliminary.)

The regulations in this part govern the pilots of vessels propelled by steam, gas, fluid, naphtha, or electric motors and of other vessels propelled by machinery, navigating the Red River of the North, the Mississippi River, and other rivers emptying into the Gulf of Mexico and their tributaries. (§ 332.01.)

DEFINITIONS

International

The word "vessel" includes every description of water craft or other artificial contrivance used, or capable of being used, as a means of transportation on water or on water and in air. (Act Sept. 21, 1922 C. 356 (19 USCA S231).)

In the following rules every steam vessel which is under sail and not under steam is to be considered a sailing vessel, and every vessel under steam, whether under sail or not, is to be considered a steam vessel.

The words "steam vessel" shall include any vessel propelled by machinery.

A vessel is "under way," within the meaning of these rules, when she is not at anchor, or made fast to the shore, or aground.

The word "visible" in these rules when applied to lights shall mean visible on a dark night with a clear atmosphere. (Preliminary.)

The words "short blast" used in this article shall mean a blast of about one second's duration. (Art. 28.)

The words "prolonged blast" used in this article shall mean a blast of from four to six seconds' duration. (Art. 15.)

Inland

Same as International. (Preliminary (articles 28, 15, § 312.02, 312.03).)

Great Lakes

Every steam vessel which is under sail and not under steam, shall be considered a sail vessel; and every steam vessel which is under steam, whether under sail or not, shall be considered a steam vessel. The words "steam vessel" shall include any vessel propelled by machinery. A vessel is under way within the meaning of these rules when she is not at anchor or made fast to the shore or aground. (Rule 1, § 322.02.)

Western Rivers

Rule 1. Every steam vessel which is under sail and not under steam shall be considered a sail vessel; and every steam vessel which is under steam, whether under sail or not, shall be considered a steam vessel. The words "steam vessel" shall include any vessel propelled by machinery. (Rule 1, § 332.02.)

WHISTLE EQUIPMENT

International

All signals prescribed by this article for vessels under way shall be given:

First—By steam vessels on the whistle or siren.

Second—By sailing vessels and vessels towed on the foghorn. (Art. 15.)

Inland

All signals prescribed by this article for vessels under way shall be given:

1. By steam vessels on the whistle or siren.

2. By sailing vessels and vessels towed on the foghorn. (Art. 15, § 312.03.)

Great Lakes

A steam vessel shall be provided with an efficient whistle, sounded by steam or by some substitute for steam, placed before the funnel not less than 8 feet from the deck, or in such other place as Officers in Charge, Marine Inspection, shall determine, and of such character as to be heard in ordinary weather at a distance of at least two miles, and with an efficient bell, and it is hereby made the duty of Officers in Charge, Marine Inspection, of steam vessels, when inspecting the same to require each steamer to be furnished with such whistle and bell. A sailing vessel shall be provided with an efficient foghorn and with an efficient bell. (Rule 14.)

Western Rivers

(Fog signals) * * * Steam vessels under way shall sound a steam whistle placed before the funnel, not less than eight feet from the deck. (Rule 15.)

Visual Signal

All whistle signals shall be further indicated by a visual signal consisting of an amber colored light so located as to be visible all around the horizon for a distance of not less than one mile. This light shall be so devised that it will operate simultaneously and in conjunction with the whistle sounding mechanism, and remain ignited or visible during the same period as the sound signal: *Provided*, That the installation, use, or employment of the amber visual signal required by this section shall be optional in the case of (a) vessels operating upon the Gulf Intracoastal Waterway; (b) vessels operating on the Mississippi River below mile 237 AHP (Belmont Landing) as set forth in map No. 40, "Maps of the Mississippi River, Cairo, Ill., to the Gulf of Mexico, La. (1944 ed.)," published by the Mississippi River Commission; (c) newly constructed vessels while enroute from point of construction to a point in waters where the aforementioned amber visual signal is not required; (d) motorboats of class A and class 1; and (e) motorboats of class 2 and class 3 not engaged in trade or commerce. (§ 332.10 (a) As amended Mar. 13, 1945.)

You never have the right-of-way through another vessel

LESSONS FROM CASUALTIES

LUBRICATION PREVENTS CASUALTIES

In recent months a number of reports relative to failures of the releasing mechanism in certain "Rottmer type" releasing gear installations have been received. These failures have occurred during shipboard tests where the usual procedure is to load the boat with sandbags or other material and lower the boat so that the keel is within a few inches of the water. The boat is then released by means of a lever and in the case of the failures referred to, either or both ends of the boat did not release because of the sheering of the lugs in the center piece of the universal joints. This condition is not particularly dangerous when testing lifeboats in port. However, under actual abandon ship conditions with a fully loaded lifeboat, the release of one end, particularly the forward end, might result in swamping or capsizing the boat and possible loss of life.

It has been determined that these failures are generally due to lack of lubrication in the upper and lower guide bearings of the releasing gear and sometimes to defects in the castings. Necessary steps have been taken to increase the strength of the center pieces of the universal joints installed in all new construction and is in the process of taking the necessary steps to insure adequate lubrication in the upper and lower guide bearings of the releasing gear installed in all new construction.

For those units already aboard ship it is vital that the upper and lower guide bearings of the releasing gear be adequately lubricated to insure satisfactory operation (see sketch). The universal joints should be carefully examined after testing to insure that no defects are present.

SLANTS ON SAFETY

It has been suggested that the most successful way to convert a person to your point of view is first to get him to agree on some minor points, some incontrovertible truths pertaining to the subject at hand, and once you have him saying "Yes" he is less likely to say "No" when you come to the crux of the matter. Although proved effective, the use of this device is unnecessary in these articles directed to you men who are so experienced in maritime matters and is used only to assist in spotlighting in as graphic a manner as possible, the thoughtlessness which results in such a high number of marine casualties.

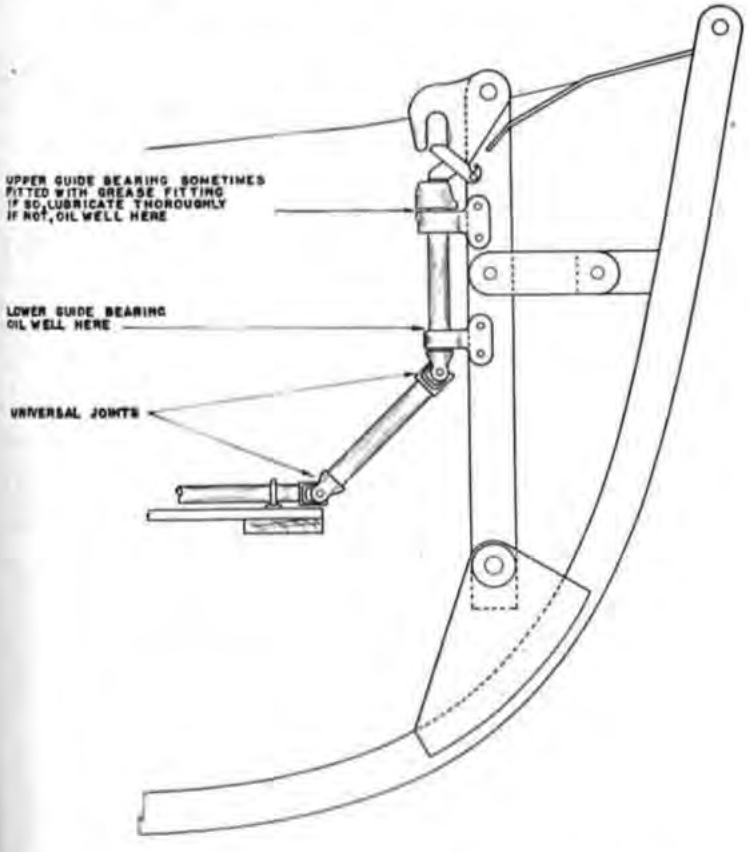
Proceeding on this basis then, will you agree that an oiler sould stand on the grating above the engine room floor plates and adjacent to the cross head in "feeling it over"? Will you agree that standing on the No. 5 journal to do so would be a most precarious position for him to assume and that the probable presence of oil underfoot would make it even less safe?

Any engine-room man worth his "salt" must, therefore, agree that going about oiling the main engine in such a way was tempting fate. Recently, an oiler failed to realize this. His foot slipped inside the guard where the crank caught his leg and pulled it to the base causing a compound fracture of the leg.

The oiler who suffered this injury had been shipping almost continuously for the past 9 years; broke in as a coal passer on Great Lakes steamers, and later shipped as oiler or F/WT on ocean or coastwise steamers. He was a sober and dependable worker; and was never involved in any disciplinary actions. In all, he was the kind of crewman any engineer would like to have on his watch.

Here is a man then who knew his job and yet was careless enough to put himself in a dangerous position. Perhaps he had placed himself in such a position before and nothing had happened—but that does not prove anything. You could put yourself in line of fire of a poor marksman and he could miss you many times, but you couldn't depend on his missing you every time. Sooner or later, depending on the degree of hazard involved in the position or on the skill of the marksman, you will have "had it," for mister, the dangerous position or the well aimed bullet will eventually collect its toll.

We have stressed the necessity in other articles to "Stay Alert—Don't Get Hurt." Being alert means not only being extremely attentive when



ROTTMER TYPE RELEASING GEAR

of necessity you are faced with a hazardous job; but means, too, the awareness of other ways, safer ways, of doing a job, even though it may take a little more time. Stay away from the dangerous shortcuts such as standing on journals or crossing a target area. The time spent in performing your duties the safe way is all a part of the job. What was the oiler going to do with the minute he saved by not going up on the grating? He'll have a couple of months in the hospital to think it over.

In another case a first assistant carelessly started a lathe with a chuck wrench in the jaw screw. The wrench jammed against the bed and he tried to remove it without turning off the current! As the result of this thoughtless act he had two fingers crushed and another badly broken. What would he have said about any man on his watch doing the same thing? Would he have instructed anyone to remove a chuck wrench in such a manner? Why did he do it himself? The answer to the first question would involve the use of language prohibited in this publication, and you'd certainly get a belligerent answer to the second question from any first assistant were you to intimate that he was that thoughtless of the safety of the men on his watch. The only answer to the last question is that he wanted to save a few paltry seconds at the risk of personal injury. Take the time to do your duties in a safe way—it's all a part of your job.

Then there's the report involving the seaman on a tanker who didn't take the time to attach a snubbing line to an 8-inch cargo hose in order to prevent it from dropping to the deck when the connecting bolts were removed. When the bolts were removed, the hose, as such heavy hoses have the strange habit of doing, fell with a thud. Perhaps the seaman never heard of the law of gravitation or thought that it had been repealed or else he would not have stood in such a position as to let the flange fall on his foot. For a while the thought entered our minds that he was trying to cushion its fall with his foot so as not to damage the hose; however, with due consideration we put that thought aside. A poor attempt at humor you'll agree, but we're trying to relieve the seriousness of our subject for just a moment while telling you of this casualty. Some of these incidents could be called ridiculous were it not for their serious results. For instance in the next case—but wait, the seaman we've been talking about was, at the last report, in his thirty-second day of hospitalization for foot injuries. He didn't take time to do his work safely when it was all a part of the job.

In this case to which we previously referred—a crewman attempted to clean paint off a live circuit breaker with a steel scraper. Any comment would be superfluous.

As the last illustration in this article emphasizing the desirability of taking the time to be safe, we cite the case of a crew member who was engaged in painting a deckhouse. He had been very definitely instructed to secure the ladder he was using. The exact circumstances of the accident will never be known—the only evidence was the mute testimony offered of the ladder resting on the ship's bulwark, with no lines attached, and a spray gun hanging over the side. Those few moments spent in securing the ladder to the top boat deck rail might have saved this man's life.

"Take time to be safe"—this single bit of advice, well applied, will cut down the now high rate of injuries suffered by merchant seamen. Last year 1,824 cases were reported to the Coast Guard of injuries incapacitating seamen for at least 3 days. That means that for every day of the year in five out of six watches stood by American seamen, one of your shipmates somewhere was hurt on the job. Take those few extra moments to do your job in a safe way—it's all a part of the job and those dangerous shortcuts don't end the watch any earlier or bring coffee time around any sooner. Those safety precautions are all a part of your job—take them and help cut down this high injury rate at sea.

APPENDIX

Proposed Rule Making

[33 CFR, Part 402]

MOORING BUOYS

A public hearing will be held on May 7, 1947, in Room 8205, United States Coast Guard Headquarters, 1300 E Street, NW, Washington, D. C., at 9:30 a. m., to consider all the comments, data and views of persons having an interest in the proposed regulations. All persons who desire to submit written comments, data and views prior to the hearing for consideration in connection with the proposed regulations shall file the same in duplicate with the Chief, Aids to Navigation Division, United States Coast Guard Headquarters, 1300 E Street, NW, Washington, D. C., not later than May 6, 1947. All matters presented orally or in writing will be given due consideration.

The proposed regulations are as follows:

Part 402 is amended by the addition of two new sections, reading as follows:

§ 402.01 *Basis and purpose.* Pursuant to the authority in the act of June 17, 1910, as amended (33 U. S. C. 713, 759) the regulations in this part are prescribed to provide a standard by which devices relating to the general safety of navigation are established and maintained, also to provide an efficient, uniform and economic administration of this service.

§ 402.17 *Mooring buoys; lights, signals and colors.* The approval of lights, signals and colors for properly authorized mooring buoys (33 U. S. C. 403) Must be obtained, prior to establishment, from the District Commander of the Coast Guard district in which the structure will be situated. Applications for such approval shall be submitted on Coast Guard Form 2554 in accordance with the procedures set forth in § 402.4, insofar as they are applicable to this particular case.

Dated: April 4, 1947.

E. H. FOLEY, Jr.,
Acting Secretary of the Treasury.

[F. R. Doc. 47-3521; Filed, Apr. 11, 1947; 8:52 a. m.; 12 F. R. 2410; April 12, 1947]

Amendments to Regulations

TITLE 46—SHIPPING

Chapter I—Coast Guard: Inspection and Navigation

Subchapter B—Merchant Marine Officers and Seamen

A notice regarding the proposed changes in the regulations pertaining

to licensing and certificating of merchant marine personnel was published in the Federal Register, dated September 27, 1946 (11 F. R. 11014), and a public hearing was held by the Merchant Marine Council on October 22, 1946, at Washington, D. C. All the written and oral comments and suggestions submitted were considered by the Merchant Marine Council and, where practicable, were incorporated into the amendments to the regulations.

The rules and regulations covering licensing and certificating of merchant marine personnel have been heretofore published in 46 CFR, Parts 25, 36, 62, 78, 96, 115, 138, and 155. The Coast Guard published these regulations in one pamphlet entitled, "Rules and Regulations for Licensing and Certificating of Merchant Marine Personnel." Since the publication of this pamphlet in February 1945, it has been found that the administration of rules and regulations pertaining to licensing and certificating of officers and seamen has been more uniform than when these requirements were published in various pamphlets containing the general rules and regulations for vessel inspection. The Administrative Procedure Act (Pub. Law 404, 79th Cong., 60 Stat. 238) also intended that procedural rules should be separated from the substantive rules. Because of this and since it has become necessary to revise the rules and regulations pertaining to licensing and certificating merchant marine personnel to meet peacetime operating conditions, all the existing rules and regulations have been studied and where necessary they have been altered, reworded, or changed editorially so that they could all be restated in Subchapter B—Merchant Marine Officers and Seamen and the rules and regulations in 46 CFR, Parts 25, 36, 62, 78, 96, 115, 138, and 155 could be cancelled. Wherever possible, procedural rules have been separated from substantive rules. The changes made in substantive rules and regulations previously published were in accordance with the recommendations of the Merchant Marine Council made after considering the comments and suggestions at the public hearing held October 22, 1946, and no changes have been made in substantive requirements which were not considered then.

As the regulations as revised and placed in subchapter B are too many to be reprinted in the Proceedings, they will be printed in pamphlet form and distributed. This pamphlet will be available in approximately 4 months. The regulations were published in the Federal Register dated March 7, 1947, pages 1549 to 1573, inclusive, which may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for 15 cents while extra copies are available.

Until further notice of subchapter B being made effective is published in the Federal Register, the present wartime rules for licensing merchant marine officers and certificating merchant marine seamen will remain in effect. The probable effective date for subchapter B will be May 1, 1947, and provision will be made that those who are eligible on that date under wartime rules will remain so eligible until July 1, 1947.

Equipment Approved by the Commandant

By virtue of the authority vested in me by R. S. 4405, 4417a, 4426, 4482, 4488, 4491, as amended, 49 Stat. 1544, 54 Stat. 163–167, sec. 5 (e), 55 Stat. 244 (46 U. S. C. 367, 375, 391a, 404, 475, 481, 489, 526–526t, 50 U. S. C. 1275), and sec. 101, Reorganization Plan No. 3 of 1946 (11 F. R. 7875), the following approvals of equipment are prescribed:

BUOYANT APPARATUS

Buoyant apparatus, 20-person capacity, 6' x 4' x 8" pine decking with copper tanks, Dwg. No. G–305–S, dated January 2, 1947, manufactured by C. C. Galbraith & Son, Inc., 99 Park Place, New York 7, N. Y. This approval supersedes the approval by the former Bureau of Marine Inspection and Navigation published in Bureau of Marine Inspection and Navigation Bulletin No. 243, dated January 2, 1936, for 18-person buoyant apparatus, Dwg. No. G–305, dated November 27, 1935, which is hereby terminated (12 F. R. 1817, March 18, 1947.)

Buoyant apparatus, 5-person capacity, 5'2" x 2'8" elliptical shape, 0'7" diameter hollow aluminum, flush net platform, Dwg. No. 3135, dated September 30, 1946, Alt. February 4, 1947, manufactured by Welin Davit & Boat Division of the Robinson Foundation, Inc., Perth Amboy, N. J. (12 F. R. 1817, March 18, 1947.)

BUOYANT CUSHIONS FOR MOTORBOATS

Approval No. A–325, standard kapok buoyant cushion, for use on motorboats of Classes A, 1, and 2, not carrying passengers for hire, manufactured by Evr-Klean Manufacturing Company, 2301 Madison Ave., St. Louis 6, Mo. (12 F. R. 1466, March 4, 1947.)

Approval No. B–366, 13" x 17" x 2" rectangular buoyant cushion, 24 ounces kapok, Dwg. No. L–204, dated January 18, 1947, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, manufactured by Necessities Limited, P. O. Box 2148, Greenville, S. C. (12 F. R. 1466, March 4, 1947.)

Approval No. A–326, standard kapok buoyant cushion, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, manufactured by Trojan Marine Manufacturing Co., Inc., 273–81 State Street, Brooklyn 2, N. Y. (12 F. R. 1817, March 18, 1947.)

Approval No. A–327, standard kapok buoyant cushion, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, submitted by The Firestone Tire and Rubber Co., Akron 17, Ohio, manufactured by The American Pad and Textile Co., Greenfield, Ohio. (12 F. R. 1817, March 18, 1947.)

Approval No. A–328, standard kapok buoyant cushion, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, manufactured by Canvas Products Co., 622–24 Prospect Avenue, Kansas City 1, Mo. (12 F. R. 1817, March 18, 1947.)

Approval No. B–370, 13" x 18" x 2", rectangular kapok buoyant cushion, 20 ounces kapok, Dwg. No. 1–113, dated February 6, 1947, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, manufactured by Fairfield Textile Works, Fairfield, Calif. (12 F. R. 1817, March 18, 1947.)

Approval No. A–329, standard kapok buoyant cushion, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, manufactured by J. P. McNally Co., 22 Commercial Wharf (North), Boston, Mass. (12 F. R. 2133, April 1, 1947.)

Approval No. A–330, standard kapok buoyant cushion, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, manufactured by Merit Manufacturing Corp., 225–27 Powell St., Brooklyn 12, N. Y. (12 F. R. 2133, April 1, 1947.)

Approval No. A–331, standard kapok buoyant cushion, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, manufactured by Armond's, 3709–11 Winchester Ave., Atlantic City, N. J. (12 F. R. 2133, April 1, 1947.)

Approval No. A–332, standard kapok buoyant cushion, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, manufactured by Colonial Mercantile & Mfg. Co., 1715 Mansfield Road, Toledo 12, Ohio. (12 F. R. 2133, April 1, 1947.)

Approval No. B–367, 14'' x 14'' x 2'' seat, 18 ounces kapok, 14'' x 14'' x 2'' back, 18 ounces kapok, double kapok buoyant cushion, Dwg. Nos. 4007, dated February 7, 1947, and 4006, dated February 9, 1947; Approval No. B–368, 14'' x 18'' x 2'' rectangular kapok buoyant cushion, 22 ounces kapok, Dwg. No. 5051, dated February 8, 1947; Approval No. B–369, 12'' x 48'' x 2'' rectangular kapok buoyant cushion; 51 ounces kapok, Dwg. No. 5052, dated February 8, 1947, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire; manufactured by Trojan Marine Manufacturing Co., Inc., 273–81 State Street, Brooklyn 2, N. Y. (12 F. R. 1466, March 4, 1947.)

FIRE INDICATING AND ALARM SYSTEM

Improved fire detector thermostat, marine type, 135° F. rating, open-circuit type, Dwg. No. M–2001, Alt. O, submitted by Improved Fire Detector Corp., 2023 West Lexington Street, Baltimore 23, Md. This approval supplements the approval published in the FEDERAL REGISTER November 1, 1944 (9 F. R. 13018). The references to "Alt. C" in the approval published in the FEDERAL REGISTER of November 1, 1944, is an error and should be "Alt. O.". (12 F. R. 1466, March 4, 1947.)

GAS MASKS AND BREATHING APPARATUS

Willson Type WUG–N1 universal gas mask, Bureau of Mines Approval No. BM–1432, consisting of BM–1432 canister, BM–1432 timer, BM–1432 harness, and BM–1423 facepiece, Willson Cat. P. 35, dated April 15, 1943, manufactured by Willson Products, Inc., Reading, Pa. (12 F. R. 1466, March 4, 1947.)

Willson Type WUG–N2 universal gas mask, Bureau of Mines Approval No. BM–1433, consisting of BM–1433 canister, BM–1432 timer, BM–1432 harness, and BM–1423 facepiece, Willson Cat. P. 35, dated April 15, 1943, manufactured by Willson Products, Inc., Reading, Pa. (12 F. R. 1466, March 4, 1947.)

Willson Type WIG–C1 ammonia gas mask, Bureau of Mines Approval No. BM–1425, consisting of BM–1425 canister, BM–1423 facepiece, and BM–1423 canister harness, Willson Cat. P. 36, dated April 15, 1943, manufactured by Willson Products, Inc., Reading, Pa. (12 F. R. 1466, March 4, 1947.)

Chemox Oxygen Breathing Apparatus, 45 minutes, M. S. A. Assembly Dwg. A 1212–1 and A 1212–2, Bureau of Mines Approval No. BM–1307, manufactured by Mine Safety Appliances Co., Braddock, Thomas and Meade Streets, Pittsburgh 8, Pa. (12 F. R. 1466, March 4, 1947.)

LIFEBOAT

16' x 5' x 2.1' Steel oar-propelled lifeboat, 10-person capacity, for service other than Ocean and Coastwise, general arrangement and construction Dwg. No. 1614, dated December 5, 1946, submitted by the Lane Lifeboat and Davit Corp., Flushing, N. Y. (12 F. R. 2133, April 1, 1947.)

28' x 10' x 4' steel hand-propelled lifeboat, 67-person capacity, general arrangement Dwg. No. G–246–D, dated May 1, 1946, and revised August 13, 1946, submitted by C. C. Galbraith & Son, Inc., New York, N. Y. (12 F. R. 1466, March 4, 1947.)

LIFEBOAT COMPASS

Eriksen Stellar compensating compass (modified), Model 1A (wood box), and Model 2A (bakelite box), Assembly Dwg. No. G–113–7, dated October 24, 1946, submitted by Stellar Products, Inc., 71 Murray Street, New York, 7, N. Y. (12 F. R. 1466, March 4, 1947.)

LIFE PRESERVERS

Approval No. B–371, Model 2, adult kapok life preserver, Coast Guard Specification 160.002, manufactured by Fairfield Textile Works, Fairfield, Calif.

Approval No. B–372, Model 6, child kapok life preserver, Coast Guard Specification 160.002, manufactured by Fairfield Textile Works, Fairfield, Calif. (12 F. R. 1817, March 18, 1947.)

WINCHES

Landley Type WH–5 electric boat winch for use with mechanical davits fitted with wire rope not greater than ½ inch in diameter, working load 6000 pounds at the drums (3000 pounds per fall) with not more than 5 wraps of the falls on the drum, general arrangement Dwg. No. 1029–D, dated May 1, 1942, as revised June 16, 1942, submitted by the Landley Company, Inc., New York, N. Y. (12 F. R. 1466, March 4, 1947.)

Welin type HD dual aluminum lifeboat winch, working load 3,400 pounds per drum, General Arrangement Dwg. No. 3087, dated March 11, 1946, revised April 26, 1946, submitted by Welin Davit and Boat Division of the Robinson Foundation, Inc., Perth Amboy, N. J. (12 F. R. 1817, March 18, 1947.)

CONDITIONS OF APPROVAL AND TERMINATION OF APPROVAL

The above approvals shall be effective upon the date of publication of this document in the FEDERAL REGISTER.

The termination of approval made by this document shall be made effective upon the thirty-first day after the date of publication of this document in the FEDERAL REGISTER. Notwithstanding this termination of approval on any item of equipment, such equipment made before the effective date of termination of approval may be used so long as it is in good and serviceable condition.

ELECTRICAL APPLIANCES

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

Manufacturer and description of equipment	Location apparatus may be used				Date of action
	Passenger and crew quarters and public spaces	Machinery cargo and work spaces	Open decks	Pump rooms of tank vessels	
Dayton Manufacturing Co., The, Dayton, Ohio:					
Cove light, fixture No. B–10001, nonwatertight, 25-watt lamps maximum, drawing No. X461638, alt. C	X				2/18/47
Table lamp, detachable, fixture No. L–16001, nonwatertight, drawing No. NY46D33, Alt. A	X				2/21/47
Cove light, fixture No. XC–10009, nonwatertight, 50-watt lamps maximum, drawing No. 946–G–56, sheets 1 to 6, inclusive, alt. O	X				3/5/47
Spot light, fixture No. C–10025, nonwatertight, 1 75-watt lamp maximum, drawing No. 947–B–1, alt. O	X				3/6/47
Table lamp, fixtures Nos. L–15223 and L–15223A, nonwatertight, 2 40-watt and 1 25-watt lamps maximum, drawing No. 946–G–89, alt. O	X				3/6/47
Table lamp, fixture Nos. L–15224, L–15224A, and L–15224B, nonwatertight, 1 40-watt lumiline lamp maximum, drawing No. 946–G–91, alt. B	X				3/6/47

Manufacturer and description of equipment	Location apparatus may be used				Date of action
	Passenger and crew quarters and public spaces	Machinery cargo and work spaces	Open decks	Pump rooms of tank vessels	
Dayton Manufacturing Co., The, Dayton, Ohio—Con.					
Cove light, fixture No. C-10916, nonwatertight, 30-watt lumiline lamps maximum, drawing No. 946-F-92, alt. B	X				3/6/47
Trough light, fixture No. C-10917, nonwatertight, 60-watt lumiline lamps maximum, drawing No. 946-J-93, alt. B	X				3/6/47
Wall bracket light, fixtures Nos. B-5571 through B-5571-R, nonwatertight, 1 40-watt lamp maximum, drawing No. 946-G-94, alt. B	X				3/6/47
Cove light, fixture No. C-10918, nonwatertight, 60-watt lumiline lamps maximum, drawing No. 946-J-95, alt. B	X				3/6/47
Cove light, fixture No. C-10919, nonwatertight, 60-watt lumiline lamps maximum, drawing No. 946-J-96, alt. B	X				3/6/47
Table lamp, fixture No. L-15226, nonwatertight, 2 50-watt lamps maximum, drawing No. 946-G-97, alt. A	X				3/6/47
Table lamp, fixture No. L-15227, nonwatertight, 2 50-watt lamps maximum, drawing No. 946-G-98, alt. A	X				3/6/47
Table lamp, fixture No. L-15228, nonwatertight, 2 50-watt lamps maximum, drawing No. 946-G-99, alt. A	X				3/6/47
Table lamp, fixture No. L-15229 through L-15229D, nonwatertight, 2 50-watt lamps maximum, drawing No. 946-G-100, alt. O	X				3/6/47
Table lamp, fixture No. L-15230, nonwatertight, 1 75- and 2 40-watt lamps maximum, drawing No. 946-G-101, alt. A	X				3/6/47
Ceiling lamp, recessed, fixture No. C-10920, nonwatertight 2 25-watt lamps maximum, drawing No. 946-F-102 alt. B	X				3/6/47
	X				3/6/47
Trough light, fixtures Nos. C-10921 through C-10921D, nonwatertight, 40-watt lumiline lamps maximum, drawing No. 946-F-103, alt. B	X				3/6/47
Chandelier, fixture No. C-19022, nonwatertight, 8 50-watt lamps maximum, drawing No. 946-J-104, alt. A	X				3/6/47
Wall bracket light, fixture No. B-5572, nonwatertight, 3 40-watt lamps maximum, drawing No. 946-G-105, alt. B	X				3/6/47
Column light, fixture No. B-5573, nonwatertight, 1 40-watt lumiline lamp maximum, drawing No. 946-E-106, alt. B	X				3/6/47
Trough light, fixture No. C-10923, nonwatertight, 40-watt lumiline lamps maximum, drawing No. 946-D-107, alt. B	X				3/6/47
Trough light, fixture No. C-10924, nonwatertight, 40-watt lumiline lamps maximum, drawing No. 946-G-108, alt. B	X				3/6/47
Spandrell light, fixture No. B-5574, nonwatertight, 2 40-watt lumiline lamps maximum, drawing No. 946-G-109, alt. A	X				3/6/47
Berth light, fixture No. B-6019, nonwatertight, 1 50-watt lamp maximum, drawing No. NY461931, alt. E	X				3/12/47
Edwards & Co., Norwalk, Conn.:					
Lamp annunciator, Cat. No. M. D. 3053, drawing No. 7239B, alt. O	X	X			3/7/47
Push button units, interior communication, Cat. No. M. D. 3064, 3064-1, 3065, and 3065-1, contacts normally open, less mounting box, drawing No. 7233, alt. O	X				3/7/47
Outlet, convenience and polarized, Cat. No. M. D. 3060, less mounting box, drawing No. 7234, alt. O	X				3/7/47
Lamp annunciator, without relays, Cat. No. M. D. 3062, drawing No. 7239A, alt. O	X	X			3/7/47
Push-button unit, interior communication, pendant type, normally open, Cat. No. M. D. 3038, drawing No. 7238, alt. 1	X				3/7/47
Lamp annunciator, without relays, Cat. No. M. D. 3061 and 421, drawing No. 7239, alt. O	X	X			3/7/47
Push-button unit, interior communication, normally open, Cat. No. 1831, drawing No. 7241, alt. O	X				3/7/47
Annunciator, call bell, Cat. No. 1780, drawing No. 5190-8078I, alt. S	X	X			3/7/47
Push button unit, interior communication, less mounting box, Cat. Nos. M. D. 3056, M. D. 3057, and M. D. 3063, drawing No. 7239, alt. 1	X				3/7/47
Sterling Bronze Co., Inc., Long Island City, N. Y.:					
Ceiling fixture, nonwatertight, 1 50-watt lamp maximum, drawing No. 68156-A, alt. O	X				2/17/47
Ceiling fixture, nonwatertight, 3 25-watt lamps maximum, drawing No. 67815-A, alt. O	X				2/17/47
Desk light, nonwatertight, 1 25-watt lamp maximum, drawing No. 67877-A, alt. O	X				3/14/47
Table light, nonwatertight, 3 40-watt lamps maximum drawing No. 67878-A, alt. O	X				3/14/47
Table light, nonwatertight, 2 40-watt lamps maximum, drawing No. 67879-A, alt. O	X				3/14/47

ITEMS SUITABLE FOR MERCHANT MARINE USE

ACCEPTABLE FUSIBLE PLUGS

The Marine Engineering Regulations require that manufacturers who desire to have their products approved for marine service shall submit samples for testing from each heat to the Commandant. If the sample fusible plugs pass the test satisfactorily, the manufacturer is notified and then the plugs may be used on vessels subject to inspection by the Coast Guard. For the information of all parties concerned, a list of approved heats which have been tested and found acceptable during the period from January 15, 1947, to March 15, 1947, is as follows:

The H. B. Sherman Manufacturing Co., Battle Creek, Mich., Heat Nos. 594 to 607, inclusive.

CERTIFICATION OF ARTICLES OF SHIP'S STORES AND SUPPLIES

Articles of ship's stores and supplies certificated from February 25, 1947, to March 25, 1947, inclusive, 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, is as follows:

Dominion Chemical Co., Inc., 11 W. 42d St., New York 18, N. Y. No-Sludge (X) fuel oil treatment, Certification No. 214, March 12, 1947.

Oxi Corp., 600 W. Ninth Ave., Gary, Ind. Oxi, Certification No. 215, March 19, 1947.

Lure Products, 979 W. W. Sixth St., Miami 36, Fla. Shynol, Certification No. 216, March 24, 1947.

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. The following affidavits were received and accepted during the period from February 15, 1947, to March 15, 1947:

Cunningham Manufacturing Co., 4200 W. Marginal Way, Seattle 6, Wash. Valves and fittings.

Taco Heaters, Inc., 137 South St., Providence, R. I. Fittings.

A Job Worth Doing Is Worth Doing Well

Merchant Marine Personnel Statistics

MERCHANT MARINE LICENSES ISSUED DURING FEBRUARY 1947

DECK OFFICERS

REGION	Master										Chief mate										Second mate									
	Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers		Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers		Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers	
	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R
Atlantic coast	44	58	----	19	----	3	5	39	----	7	45	13	----	6	----	----	----	4	----	----	48	8	----	----	----	----	----	----	----	----
Gulf coast	4	7	----	1	----	----	2	1	----	8	10	1	----	----	----	----	----	----	----	----	26	2	----	----	----	----	----	----	----	----
Great Lakes and rivers	1	1	----	1	16	60	----	----	3	14	1	----	1	----	----	----	----	----	3	10	----	2	----	----	----	----	----	----	----	----
Pacific coast	16	43	----	2	----	----	5	7	----	2	23	3	1	----	----	----	----	----	3	2	22	1	----	----	----	----	----	----	----	----
Total	65	109	----	23	16	63	12	47	3	31	79	17	2	6	----	----	----	4	6	12	96	13	----	----	----	----	----	----	----	----

REGION	Third mate										Pilots						Master mate				Total		
	Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers		Great Lakes		B. S. & L.		Rivers		Uninspected vessels, high seas				Original	Renewal	Grand total
	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R			
Atlantic coast	83	11	----	----	----	----	----	----	----	----	1	3	31	112	9	12	----	----	----	----	266	295	561
Gulf coast	14	----	----	----	----	----	----	----	----	----	1	----	8	7	6	13	----	----	----	----	71	40	111
Great Lakes and rivers	----	1	----	----	----	----	----	----	----	----	32	93	1	----	14	15	----	----	----	----	72	197	269
Pacific coast	27	1	----	----	----	----	----	----	----	----	----	6	24	36	----	1	2	3	3	1	126	108	234
Total	124	13	----	----	----	----	----	----	----	----	34	102	64	155	29	41	2	3	3	1	535	640	1,175

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	45	116	8	18	57	31	1	3	74	27	----	4	81	20	----	1
Gulf coast	8	17	1	6	12	3	1	1	15	9	----	1	15	2	----	----
Great Lakes and rivers	1	5	18	46	2	2	35	29	5	2	21	16	6	1	11	2
Pacific coast	21	30	1	6	17	11	1	5	18	8	----	1	35	9	----	----
Total	75	168	28	76	88	47	38	38	112	46	21	22	137	32	11	3

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	32	48	14	15	14	7	108	9	----	----	----	1	434	300	734
Gulf coast	3	10	1	3	2	4	16	----	----	----	----	----	74	56	130
Great Lakes and rivers	7	10	6	4	2	2	----	----	----	----	----	----	114	119	233
Pacific coast	11	31	7	9	11	5	7	6	1	----	1	----	131	121	252
Total	53	99	28	31	29	18	131	15	1	----	1	1	753	596	1,349

ORIGINAL SEAMEN'S DOCUMENTS ISSUED DURING FEBRUARY 1947

REGION	Continuous discharge book	Certificate of identity	A. B., green, 3 years [1]	A. B., green, 9 months emergency [1]	A. B., blue, 18 months, 12 months [1]	A. B., blue, 6 months emergency [2]	A. B., blue, 6 months emergency [3]	Lifeboat, 12-24 months [4]	United States Merchant Marine documents	Q. M. E. D., 6 months	Q. M. E. D., emergency	Radio operators	Certificate of service	Tanker man	Staff officer	Total
Atlantic coast	2	.....	61	88	125	.....	.....	385	1,367	264	68	8	993	11	91	3,463
Gulf coast	12	.....	10	33	26	.....	.....	61	522	102	105	6	406	12	17	1,312
Pacific coast	2	2	33	42	77	2	.....	153	613	140	50	.....	427	4	36	1,581
Great Lakes and rivers	8	.....	10	5	43	.....	.....	39	365	115	28	1	306	18	4	942
Total	24	2	114	168	271	2	.....	638	2,867	621	251	15	2,132	45	148	7,298

[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.

NOTE.—There were no Panamanian Employment Cards issued.

CREW SHORTAGE REPORTS FROM FEBRUARY 1 TO FEBRUARY 28, 1947

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

REGION	Number of vessels	Ratings in which shortages occurred												Total
		Chief mate	Second mate	Third mate	Radio	Able seamen	Ordinary seamen	Chief engineer	First engineer	Second engineer	Third engineer	Qualified member engine department	Wiper or coal passer	
Atlantic coast	13	1	.....	1	.....	8	3	.....	.....	.....	.....	9	.....	22
Gulf coast	16	.....	3	2	1	13	6	.....	3	3	2	18	6	57
Pacific coast	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	2
Great Lakes	8	.....	.....	2	.....	2	1	.....	.....	.....	1	2	3	11
Total	39	1	3	5	1	23	10	.....	3	4	3	29	10	92

WAIVERS OF MANNING REQUIREMENTS FROM FEBRUARY 1 TO FEBRUARY 28, 1947

Authority for These Waivers Contained in Navigation and Vessel Inspection Circular No. 31, Dated March 13, 1943 and Navigotion and Vessel Inspection Circular No. 37, Dated July 6, 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	276	31	21	1	504	10	75	3	.....	645
Gulf coast	174	22	28	2	355	8	33	2	2	452
Pacific coast	75	3	5	.....	105	6	16	1	.....	136
Great Lakes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	525	56	54	3	964	24	124	6	2	1,233

NO SHIPS HERE—KEEP IT THAT WAY

U. S. GOVERNMENT PRINTING OFFICE: 1947