

**PROCEEDINGS OF THE  
MERCHANT MARINE COUNCIL  
UNITED STATES COAST GUARD**



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# MERCHANT MARINE COUNCIL

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For each meeting two District Commanders and three Marine Inspection Officers are designated as members by the Commandant.

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### Use of Shore-Based Radar for Harbor Control

Presented by Captain D. E. McKay, Chief, Communications Division, U. S. Coast Guard, before the American Merchant Marine Conference, New York, October 14, 1948.

The use of ground radar installations for landing planes during periods when the ceiling and visibility are below minimum has been in actual practice for some time. The so-called GCA—ground control approach system—is highly successful and is used regularly at airports, where available, to "talk down pilots" to safe landings during periods of adverse weather. The use of shore-based radar for harbor control is a comparatively new field. At the first IMMRAN—International Meeting on Marine Radio Aids to Navigation—held in London in May 1946, a paper was submitted by the United Kingdom on the subject, "Shore Radar Stations for Port and Harbour Supervision." The following is quoted<sup>1</sup> from the documents of that meeting:

The object of the facilities at present provided by Port and Harbour Authorities is to afford a safe and easy entrance or exit, and a safe anchorage or berth, under all conditions of weather. It is obvious that radar can supplement these facilities very valuably by providing virtually instantaneous information of movements in the port area.

A constant anxiety of Port Authorities in bad conditions is to know that the channel buoys or lightships have not moved from their charted position, or if they have moved to know what their exact position is.

It is also of great value to the Port Authority to know when a ship is about

to enter a channel, and to be well informed of the movements of all ships in the port area, in order that appropriate action may be taken, by for instance ensuring that a pilot reaches an incoming vessel, or sending a tug to a ship in difficulties.

A United Kingdom paper (IMMRAN Doc. No. 52) submitted at the Second IMMRAN held in New York in May 1947 added little to the previous paper except general information on an installation which was planned for the port of Liverpool.

The Mersey Docks and Harbour Board, after detailed discussions between the Harbour Board, the Admiralty and engineers from the Sperry Gyroscope Company Limited, contracted with the latter to design and install a Harbour Radar installation at Liverpool. The following extract from an explanatory booklet compiled by the Harbour Board and Sperry Company gives the operational considerations leading to the design and installation of the Liverpool radar station.

A vessel fitted with reliable Radar, bound for Liverpool in foggy conditions, would have no hesitation in proceeding as far as the Bar Light Vessel but at this point her Master would be faced with the alternatives of anchoring or proceeding up the narrow channel to Liverpool. In weighing up these two alternatives the Master would have in mind the fact that a large vessel, once in the channel, must go through since there would not be sufficient room either to turn or to anchor with safety. He would know that he could take his vessel through with the aid of the Radar so long as the channel was clear of shipping, but since his own Radar could not show him much of what lay at the far end of the channel and nothing of what lay within the river mouth, he would probably feel unjustified in attempting the channel and would either anchor or ask the Shore Authorities

<sup>1</sup> Reproduced from "International Meeting on Radio Aids to Marine Navigation, May 1946, Volume II" by permission of the Controller of His Majesty's Stationery Office.

by radio telephone for a report on the state of the shipping in the channel beyond his range. It is here that the Shore Authorities would meet a difficulty. Without shore-based Radar they could not know the situation of shipping in the channel and river during fog. With shore-based Radar the situation would be clearly indicated and the Port Authority enabled to supply the necessary information. Now that a large number of major vessels are beginning to fit navigational Radar, it is easy to foresee that such requests for information will soon be forthcoming, and with increasing frequency as more ships carry Radar.

Used in conjunction with a good communication system, shore-based Radar would enable incoming vessels to berth, when otherwise they would be compelled to anchor and perhaps miss several tides.

In the case of a vessel at a major port such as Liverpool, being ready to undock and preparing to leave the port in fog using her Radar, the Master would be faced with the same problem of being committed to the channel after leaving the dock; consequently, he would be loath to leave unless he knew that the channel beyond his own Radar range was clear of shipping. In the dock his own Radar would be of little use to him since the view of the channel would be masked by cranes, buildings and other vessels, etc. The shore-based Radar with its greater aerial height and favourable site would provide the information the Master required, and so prevent serious delay to the sailing of the vessel.

In conditions of light fog or mist a vessel not fitted with Radar might well be prepared to enter the channel or leave her berth, provided that her master knew exactly what was the state of the channel. Shore-based Radar would be then not only the complement of shipborne Radar but could also provide a useful service to non-Radar-fitted vessels.

In the event of the channel becoming blocked, this fact could be observed immediately by shore-based Radar, and in consequence shipping about to enter the channel could be warned without loss of time. The shore-based Radar would also reveal any stranding of vessels within the port and save valuable time in locating the casualty, and might result in the saving of a vessel which might otherwise have been lost.

Harbour Radar could also be of assistance to pilot boats not equipped with Radar in enabling the Pilot to find and rendezvous with a ship approaching the port in fog.

Harbour Radar would enable a Port Authority at all times to observe and check the positions of navigational sea marks within the port area and approaches. If such navigational marks were out of position, this fact would be disclosed by shore-based Radar, and the Port Authority would be enabled to warn shipping and to replace the marks on station without delay.

In addition, the Port Health Officer, Customs and Immigration Officials could be better informed as to the movements of all incoming vessels, and much time would be saved by this definite information.

The operational considerations and the advantages foreseen as a result of the use of the Liverpool installation are more or less applicable to any other port or harbor.

The latest information indicates that the Liverpool installation was formally placed in service on July 30 of this year and it appears to be the second of such installations. The March 11, 1948 issue of *Fairplay* gives brief mention of the placing into operation of the "first radar-controlled harbour in the world" at Douglas, Isle of Man, on 27 February, 1948. No operational data are available on this installation.

In the United States the use of radar for Harbor Control has proceeded very little beyond the discussion stage. Early in 1946 the Coast Guard set up an installation at Cape Henlopen, Delaware, and conducted tests for a period of several weeks to determine the feasibility of using shore-based radar in the control of traffic at harbor entrances. The tests were limited to tracking vessels and checking the accuracy of the radar information. No actual control or advisory service was included in the tests. The conclusions based on these limited tests indicated that control of shipping at harbor entrances and in channels was feasible with a shore radar installation supplemented with an efficient communication system.

In December 1947, the Board of Harbor Commissioners, Long Beach, Calif., submitted an application to the Federal Communications Commission for authority to operate a shore-based radar installation and necessary radio communication facilities. In their application they pointed out that a radar station as proposed would provide instantaneous information concerning the relative position of small boats, ships, airplanes, breakwaters, channel buoys, piers, and landfill in the harbor area, as well as detect the presence of ships at sea two or three hours prior to their arrival at the entrance of the Outer Harbor. It was their desire to maintain harbor ship and boat traffic even through periods of zero visibility. No details were given of the facilities or extent of control visualized by them.

As a result of this application and at the request of the Federal Communications Commission the RTCM (Radio Technical Commission for Marine Services), a Government-Industry Committee, undertook a study of the subject with a view to coordinating the government and industry views on the matter. A subcommittee was set up and has submitted a report which was approved by the executive committee of RTCM at its meeting in September.

During the early phases of study, certain basic facts or principles were evident. The first of these was that it was not feasible, at least at this time, to "control harbor traffic" in the

navigational sense. At a controlled street intersection positive control is exercised over vehicular and pedestrian traffic by means of lights, traffic officers and signs. On the other hand a plane may be "talked down" to a landing by GCA, but at no time does the man in the control tower actually take control of the movements of the plane. He gives the pilot of the plane advisory information and the pilot at all times is free to use or disregard the information and may pull up at any time. As in the case of the plane pilot, the master of a vessel is always in sole navigational control of his ship. The harbor or river pilot with the advantage of his local knowledge may con the ship and the port authorities by means of a harbor radar installation may offer advisory information, but at no time does this relieve the master of his responsibility for the safe navigation of his vessel. Considering the laws and regulations pertaining to "burdened vessel" and the legal responsibility that would of necessity be assumed by any agency which undertook positive control of harbor traffic, such control is not visualized at this time. It is recognized that certain authorities have "operative control" in cases where a serious obstruction occurs in channels constituting a danger to shipping and in such event may limit or prohibit all traffic through the danger area. The committee, therefore, used the term "harbor control" in the sense of operative control or advisory service or both as distinct from "navigational control" which remains at all times with the master.

A second important consideration was the communication system necessary. The communications between a vessel and the harbor control station must be in part by radio. This may be by means of regular commercial harbor radiotelephone facilities, private communication facilities furnishing service under contract, or a radio communication system operated by the same agency which operates the radar station. No positive control could be exercised unless the control authority had instantaneous communication with all vessels large and small within the harbor area as well as with any seaplanes that might desire to taxi or alight on waters of the harbor. Similarly an advisory service would be available only to those vessels equipped to communicate with the harbor control station.

Present radio frequency allocation plans do not contemplate the extensive communication network that would be required in conjunction with the use of a harbor radar station for positive control of all harbor traffic. However, the International Radio Conference meeting in Atlan-

tic City, May to October 1947, recognized the need for use of radiotelephony for harbor control purposes and designated 156.8 Mc for world-wide use for safety, calling, and intership and harbor control communications in the maritime mobile service. An attempt was made by the United States at that conference to have additional specific very high frequencies assigned to the maritime mobile service on a world-wide basis. Technical considerations prevented this. The United States and United Kingdom are continuing discussions on this subject informally from time to time having in mind the need for additional common frequencies as the use of harbor control radar expands. The proposed Long Beach installation contemplates use of small portable radio equipments carried by pilots when boarding a vessel. Radio communication thus will be established directly between the pilot and the harbor control station. To make use of the advisory service, those vessels whose masters are qualified pilots, and do not pick up a pilot and portable radio at the harbor entrance, would be required to have on board a portable or other radio equipment operating on the harbor control station frequency for direct communications or would use the regular harbor radiotelephone facilities. To provide the necessary priority of service over the latter system, additional communication channels probably would be required.

Another important consideration is the matter of identification of vessels observed on the radar screen at the central control. Positive identification of all moving vessels is necessary for a controlling system. For an advisory service the matter of identification of other than the vessels requesting advice is of less importance. Successful identification will depend to a great extent on an efficient communication system.

The committee concluded that the use of shore-based radar by port authorities should be limited to an advisory service at least for the present. The information available through this service would be in addition to the normal aids to navigation such as shore lights, buoys, fog signals, and radiobeacons. The information would be used by pilots and masters to contribute to the safety of navigation and to avoid, if possible, those delays caused by adverse weather conditions in the harbor area.

Under the terms of Public Law 786, 80th Congress, "An Act to Authorize the Coast Guard to Establish, Maintain, and Operate Aids to Navigation, the Coast Guard \* \* \* in order to aid navigation and to prevent \* \* \* collisions \* \* \* is authorized to

establish, maintain, and operate aids to maritime navigation required to serve the needs of the armed forces or of the commerce of the United States \* \* \*." It is, accordingly, considered that any shore-based radar installation intended as an aid to marine navigation could be installed and operated by the Coast Guard. However, in order to secure appropriations from Congress to provide and operate such radar installations sufficient justification must first be established. There is no indication that it can be justified at this time.

Aside from the safety of navigation feature there are the economic advantages in the use of such a system. The ship operators, harbor authorities and other shipping interests are well aware of the fact that periods of low visibility in harbor areas cause delays at the sea buoy in contacting pilots, force ships to anchor to await better weather, cause difficulties in arranging for tugs, all resulting in delay in undocking schedules. Similarly undocking and departure may be delayed. These delays increase turnaround time, upset prearranged schedules and are costly to both ship owner and the agency operating the port facilities. In addition, much inconvenience is caused to passengers and shippers which indirectly may reflect on profits. It is recognized that some delays will be incurred even with the most elaborate system visualized today. However, it is believed that the savings now possible make it economically advantageous for the port authorities to install and operate a harbor radar installation. A harbor so equipped could well attract shipping from other ports not so fitted. The installation, and operation of shore based radar installations for harbor control purposes would be accomplished by municipal authorities, or private enterprise.

No detailed regulation by the government of such installations was contemplated during the committee discussions on the subject other than the authorization and licensing as required under the Communications Act. In order to insure some uniformity of procedures and methods of operation of the installations of several ports, it was believed that such a service should be under the coordinating supervision of the Coast Guard. This might be accomplished by direct contact in an advisory capacity between the Coast Guard and the interested port authority or other agency which contemplates operation of such an installation or an indirect approach through an organization such as the American Association of Port Authorities. This supervision by the Coast Guard in addition will insure coordination of such service with any military requirements

and thus make it readily adaptable to use during time of war or national emergency should a requirement for such arise.

In conclusion I quote<sup>2</sup> the following from the first IMRAN Documents:

It appears that in the future—possibly the very remote future—the control of the final stages of navigating a vessel into harbor may be operated from shore just as in the air the landing of an aircraft is largely in the hands of the airfield controller. By the combined use of shore-based radar and highly accurate navigational systems providing pilotage facilities, it is not difficult to conceive of arrangements by which a harbor control officer could supervise shipping in the harbor and its approaches in all weathers, directing each vessel as to its proper course, assembling them and passing them in turn along to the proper harbor entrance channel so that the movements of shipping might go on unimpeded in all weathers. There is no doubt something far-fetched in this idea, at least to the mariner, accustomed to regard the master as solely and supremely responsible for the safety and conduct of his ship. Nevertheless, when one considers the time lost in foggy weather due to the standstill of shipping, it is at least justifiable to devote a little time to speculating whether radio and radar together might not one day prove of great value in this particular problem. Circumstances have forced air transport to accept and even demand ground control of the landing and taking off of aircraft. It is for the world of shipping to take note that none of the lessons thereby learned are being ignored. It is significant that some harbor authorities are already eager to experiment with radar as a means of generally supervising their area of control and this may well lead to the developments foreshadowed above.

## AIDS TO NAVIGATION

Among the many duties that the Coast Guard is called upon to perform from day to day, one of the more important is establishing and maintaining the various aids to navigation. These aids are maintained along the entire coast line of the United States, the Great Lakes and navigable rivers as well as special aids for regattas, etc. The following table gives a summary of aids to navigation and changes during the fiscal year 1948. However, some of the changes shown have been made over a period of time since the end of the last war.

The explanatory text sets forth some of the more technical aspects of aids to navigation and indicate that improvements are constantly being studied.

Most of the changes in United States aids to navigation were minor and consisted of establishing, moving, and discontinuing buoys, daybeacons

<sup>2</sup> Reproduced from "International Meeting on Radio Aids to Marine Navigation, May 1946 Volume II" by permission of the Controller of His Majesty's Stationery Office.

and minor lights to mark newly dredged channels and changes in channel conditions.

Major changes and progress in new designs of aids to navigation consisted of the following:

(a) *Light stations changed to "unwatched".*—Eighteen major lights previously attended to by continuous watches of Coast Guard personnel and considered as "watched" lights were made "unwatched." These lights previously using incandescent oil vapor or mantle as illuminant were changed to electric (battery operated). These stations now require servicing only every 30 days to 1 year depending on the locality, and the intensity and characteristic of the light.

(b) *Establishment of airway beacon type lantern.*—South Pass Light, located on the Gulf coast of the United States at the entrance to the Mississippi River was changed to an airway beacon type lantern. The light now shows flashing white every 5 seconds, flash 1 second, eclipse 4 seconds of 120,000 candlepower. The light beam is elevated  $1\frac{1}{4}^{\circ}$  above the horizon to also benefit air navigation.

(c) *Establishment of new light station.*—Round Island Passage Light Station located in 26 feet of water off Mackinac Island in the Straits of Mackinac on the Great Lakes was placed in commission April 15, 1948. The light apparatus is a solid bank of sealed beam lamps giving an intensity of 3,000 candlepower and showing an occulting green light every 10 seconds, light 5 seconds, eclipse 5 seconds, 71 feet above water. The fog signal is an air diaphragm horn sounding one blast every 30 seconds, blast 3 seconds, eclipse 27 seconds. The radiobeacon is class B, transmits on 302 kilocycles and is synchronized with the fog signal for distance finding. These signals are remotely controlled by cable from a watch house on shore at Mackinac Island about 1,000 feet from the light station.

(d) *Lightships.*—A replacement program was initiated to replace two of the overage lightships annually. Of the 37 lightships now in service (28 on station and 9 reliefs), 1 is 56 years old and 14 are 40 or more years old.

(e) *Radiobeacons changed to continuous carrier operation.*—The program of placing certain radiobeacons on continuous carrier operation to make them more useful to ships and aircraft equipped with the automatic type of radio direction finders was continued.

During the fiscal year 1948, 6 additional radiobeacons were changed to continuous carrier operation, making a total of 15 now operating on continuous carrier.

## Summary of Aids to Navigation and Changes During the Fiscal Year 1948

Class	Established	Discontinued	Increase	Decrease	Total to June 30, 1947-48	
<b>Lighted aids:</b>						
Lights, 200 candlepower and above	107	71	36		2,235	2,271
Lights, below 200 candlepower	204	251		47	7,440	7,393
Lightship stations <sup>1</sup>					28	28
Lighted buoys (including float lights)	144	139	5		1,792	1,797
Lighted horn buoys					9	9
Lighted whistle buoys	12	9	3		233	236
Lighted bell buoys	27	24	3		624	627
Lighted gong buoys	3	2	1		64	65
Total lighted aids	497	496	1		12,397	12,398
<b>Fog signals:</b>						
Radiobeacons <sup>2</sup>	3	1	2		182	184
Sound fog signals	20	25		5	592	587
Lighted buoys with whistles, bells, gongs, or horns <sup>3</sup>	38	31	7		930	937
Unlighted buoys with bells, whistles, or gongs	13	22		9	372	363
Total fog signals	74	79		5	2,076	2,071
<b>Unlighted aids:</b>						
Buoys	1,023	1,195		172	17,766	17,594
Day beacons	104	192	2		5,156	5,158
Total silent and unlighted aids	1,217	1,387		170	22,922	22,752
Grand total	1,790	1,931		181	36,405	36,284

<sup>1</sup> Lightship stations not counted in totals.

<sup>2</sup> Includes auxiliary warning radiobeacon on Nantuxet Shoals Lightship.

<sup>3</sup> Lighted sound buoys counted only once in grand total.

These radiobeacons are modified to transmit a continuous carrier signal during the entire operating minute with keyed modulation to provide the station identification characteristic. The schedules of these radiobeacons were changed to continuous, in sequence (1 minute on, 2 minutes off) operation 24 hours daily.

(f) *Minor lights changed from 360° uniform candlepower lights to directional lights.*—Twenty-eight minor lights have been changed from the conventional 360° drum lens or range lantern to a new type pressed glass 200-millimeter directional drum lens. This lens projects a high candlepower beam in one direction while distributing a reduced amount of light around the remainder of the horizon.

This new lens is being installed as a front range light where increased intensity is required on the range line with reduced candlepower around the remainder of the horizon to serve as a lateral aid. It is also being installed at minor lights to serve as a leading light where the main channel or principal approach is from one direction.

(g) *Establishment of single station range light.*—To meet requirements for a range indication where it is impracticable to establish the conventional two structure range lights, a single station range light has been developed and is now undergoing tests at five locations.

This unit consists of a conventional range lantern modified to project a polychrome beam of green, white, and

red. When a vessel is on the center line of the channel a white beam of light will be seen; when on the right side of the white center beam of the channel entering from seaward a red light will be seen and when on the left side of the white center beam a green light will be seen.

A further development of a single station range light is under test. This light displays a fixed beam of light on the range with changes to an occulting or a flashing light for deviations off the center line of the channel.

(h) *Fog signal operated by sound controller.*—The fog signal at West Point Light 19 on the Hudson River, N. Y., has been changed to operate automatically by the sounding of the whistle of an approaching vessel. The fog signal, which is a bell, is set in operation by the sound emanating from the whistle of a passing vessel. A vessel desiring the bell to operate, sounds its whistle to place the fog signal in operation on its assigned characteristic for a period of 8 minutes. After 8 minutes the bell will stop until it is again placed in operation by the sound of the ship's whistle. The control apparatus which responds to sounds in the frequency range from 200 to 1,000 cycles, is relatively unaffected by wind noises in frequency ranges above 1,000 and below 200 cycles. The control apparatus will start the fog signal in operation when actuated by a sound as low as 50 decibels signal strength sustained for a period of 1 second or more. Stronger signals for a lesser period of time will place the fog bell in operation.

(i) *Radio remote control of aids to navigation.*—As a result of experience gained during the war with radio equipment used in connection with remote control of aids to navigation, a program was instituted at the end of the war to install this improved equipment to control the operation of fog signals and lights where savings could be anticipated in manpower and the use of batteries, etc.; radio remote control of aids to navigation is effective for a distance of from 7 to 10 miles of a light station or other Coast Guard unit having operating personnel attached. At the present time 10 fog signals and 1 light are remotely controlled by radio. This system consists of a control station transmitting coded signals to special type receivers at the remotely controlled aids to navigation.

### APPLICATIONS PRELIMINARY TO THE LICENSING OF RADIO OFFICERS BEING ACCEPTED

Public Law 525 approved May 12, 1948, requires that the Coast Guard issue licenses to radiotelegraph operators and that on and after April 1, 1949, such licenses shall be required as a precedent to employment on merchant vessels. The licenses issued by the Coast Guard are not a certification of competence and there is no change in the requirement that radio operators must possess either a valid first-class or second-class radiotelegraph operator license issued by the Federal Communications Commission to be eligible for a Coast Guard license. Public Law 525 requires the Coast Guard to be satisfied that the applicant's character, habits of life, and physical condition are such as to authorize the belief that he is a suitable and safe person to be entrusted with the powers and duties of a radio operator aboard ship and if so to issue a license authorizing him to be employed in such duties for a term of five years, *provided* the applicant continues to hold a valid first- or second-class radiotelegraph operator license issued by the Federal Communications Commission.

Regulations to carry out the intent and purpose of Public Law 525 have been promulgated and will be published at an early date in the Federal Register. These regulations will be a new Subpart 10.13 to the present Rules and Regulations for Licensing and Certifying of Merchant Marine Personnel (subchapter B). These regulations require among other things that every application for an original license as radio officer (the first license issued by the Coast Guard

to a radio operator) shall be approved by the Commandant and that no license shall be issued or temporary permit granted pending the Commandant's authorization.

In the interest of expediting the issuance of licenses to radio operators presently actively engaged in going to sea and to avoid a last-minute rush before the dead line of April 1, 1949, it is desired that applications be accepted at the earliest possible date. The following procedures are now being followed in all Marine Inspection Offices.

(a) License Application Form CG-866 (Rev. 5-48) shall be used. This revised form contains information specifically required of applicants for licenses as radio officer.

(1) Form CG-866 (Rev. 5-48) must be submitted in duplicate.

(2) The form must be completely filled out and all questions answered. Incomplete or improperly prepared forms will be returned for correction thus causing unnecessary delay.

(3) In addition to a currently valid FCC license an applicant must present either a currently valid certificate of service as radio operator or a Merchant Mariner's Document endorsed as radio operator; or, one or more certificates of discharge showing service as a radio operator on a merchant vessel or U. S. Government vessel or on a foreign vessel; or, he must present a letter of commitment of employment the same as now required for other entry ratings.

(4) Applicants must be citizens of the United States and furnish documentary evidence of such citizenship at the time of making application (acceptable evidence of citizenship is the same as described in Section 10.02-5 of Subchapter B).

(5) The FCC license data must be entered on the application in the space provided for "license record," and the OCMI shall verify this information.

(6) The applicant shall furnish two unmounted dull finish photographs, 2 inches by 1½ inches, of passport type taken within a year of the date of application. The photograph shall show the full face at least 1 inch in height with the head uncovered and shall be a satisfactory likeness of the applicant. One photograph shall be affixed to each of the applications and the official Coast Guard seal impressed partly over the photograph after the application has been signed.

(7) The applicant shall place his left thumbprint on each of the applications in the space provided. If the applicant has no left thumb then his right thumbprint shall be made

and this fact noted on each of the application forms.

(8) The applicant shall be required to sign the forms and to subscribe to the oath or affirmation on the application form.

(9) The applicant shall be required to have the written indorsements of a master of a vessel on which he has served together with those of two other licensed officers; or, upon a showing that the written indorsements required above cannot be obtained without undue delay or hardship, the Officer in Charge, Marine Inspection, may accept in lieu of these indorsements those from officials of the steamship company or other employers of the applicant. Letters of recommendation attesting to the applicant's character, etc., from former employers of the applicant may be accepted in lieu of these documents but such letters must be attached to the original application.

(b) Fingerprint records on each applicant shall be taken on Form NAVCG-2515-B at the time application for license is made. The name of the applicant and the fact that he is applying for a license as radio officer shall be indicated on this form.

(c) Both copies of the application for license and the applicant's fingerprint record on Form NAVCG-2515-B shall be forwarded to the Commandant (MVP). These documents should be securely stapled together before being mailed. After a background check is made by Headquarters the original of the application form will be returned to the forwarding office and will be stamped either "Approved" for character or "Disapproved" for character.

A local file number shall be assigned to each applicant for a license as radio officer and this number placed in the proper place in the box on the upper right-hand corner of the front of Form CG-866 (Rev. 5-48). File numbers assigned locally to applicants for a radio officer's license shall be prefixed by the letter "R" to distinguish them from the "L" for other licensed officers.

A form letter identical to that shown below shall be executed and delivered to each applicant for a radio officer's license after the application form has been completed in all detail as indicated above. The applicant should be advised that this letter when later presented to any Officer in Charge, Marine Inspection, will expedite the actual issuance of his license. The applicant's attention should be drawn to the information given in the letter concerning the additional requirements that must be met before he is eligible to receive his license.

At the present time it is expected that it will take approximately two months from the date of filing application to complete the check and authorize the issuance of the actual license itself. Applicants should be advised of this fact.

All applicants for a license as radio officer will have to obtain a First Aid Certificate the same as for original licenses as deck and engineer officer, and those applicants desiring to take the examination should be given the necessary forms, etc.

#### SAMPLE FORM

#### UNITED STATES COAST GUARD

(Port)  
1. This is to certify that (Name) filed application of applicant) for a license as Radio Officer on and has been as- (Date) signed file No. R-

2. The following evidence of citizenship was presented:

3. Evidence of former sea service—commitment of employment—Certificate of Service or Merchant Mariner's Document as radio operator—was presented. (Strike out part not pertinent).

4. Federal Communications Commission License No. \_\_\_\_\_, dated \_\_\_\_\_, was presented and returned to the applicant.

(OFFICIAL SEAL)

(Signature)

By direction of the  
Officer in Charge, Marine  
Inspection.

#### INFORMATION TO APPLICANTS

1. This letter should be presented at any Coast Guard Marine Inspection Office when inquiry is made concerning your application for license. Action on your application will be expedited as much as possible but it is estimated that approximately 60 days will be required to complete this action.

2. Prior to the issuance of the license applied for it will be necessary that you obtain from the U. S. Public Health Service a First Aid Certificate stating that you have passed a satisfactory examination based on the contents of "The Ship's Medicine Chest and First Aid at Sea," or other manual arranged for the purpose and having approval of the Public Health Service.

3. You will be required by the Coast Guard Officer in Charge, Marine In-

spection, of the office where your license is to be issued to: (a) Pass a physical examination; (b) present your currently valid Federal Communications Commission first- or second-class radiotelegraph operator's

license; and (c) surrender your certificate of service as radio operator or Merchant Mariner's Document indorsed as radio operator. A new Merchant Mariner's Document appropriately indorsed will be issued to you.

#### 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 quarter ending September 30, 1948. Generally speaking, undocumented vessels are those machinery-propelled vessels of less than 5 net tons engaged in trade which by reason of tonnage are exempt from documentation, and those motorboats or motor vessels of less than 16 gross tons which are not subject to documentation as yachts, together with motorboats and motor vessels used exclusively for pleasure purposes which are 16 gross tons or over and not so documented. 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	14,726	32,079
	(1) Portland, Maine	10,507	
	(2) St. Albans	2,781	
	(5) Providence	4,065	
2 (St. Louis)	(45) St. Louis	17,196	43,772
	(12) Pittsburgh	2,646	
	(34) Pembina	76	
	(35) Minneapolis	7,119	
	(40) Indianapolis	4,102	
	(42) Louisville	3,891	
	(43) Memphis (part)	8,154	
	(44) Vacant (Des Moines)	108	
	(46) Omaha (part)	480	
3 (New York)	(10) New York	46,228	75,794
	(6) Bridgeport	8,456	
	(11) Philadelphia	21,110	
5 (Norfolk)	(14) Norfolk	15,374	45,329
	(13) Baltimore	21,831	
	(15) Wilmington, N. C.	8,124	
7 (Miami)	(18) Tampa (part)	21,580	26,975
	(16) Charleston	1,783	
	(17) Savannah	3,159	
	(49) San Juan	378	
	(51) St. Thomas	69	
8 (New Orleans)	(20) New Orleans	18,750	42,870
	(18) Tampa (part)	832	
	(19) Mobile	7,511	
	(21) Port Arthur	3,842	
	(22) Galveston	9,962	
	(23) Laredo	1,891	
	(24) El Paso	6	
	(43) Memphis (part)	76	
9 (Cleveland)	(41) Cleveland	13,907	89,604
	(7) Ogdensburg	6,558	
	(8) Rochester	8,550	
	(9) Buffalo	8,080	
	(36) Duluth	4,055	
	(37) Milwaukee	12,361	
	(38) Detroit	28,210	
	(39) Chicago	7,883	
11 (Long Beach)	(27) Los Angeles	8,317	10,058
	(25) San Diego	1,665	
	(26) Nogales	76	
12 (San Francisco)	(28) San Francisco	19,784	19,784
	(47) Denver		
13 (Seattle)	(30) Seattle	31,660	48,641
	(29) Portland, Oreg.	9,447	
	(31) Juneau	6,511	
	(33) Great Falls	1,023	
	(46) Omaha (part)		
14 (Honolulu)	(32) Honolulu	4,030	4,030
Grand total			438,936

Actions—Speak Louder Than Words

## FIRE-FIGHTING SCHOOLS

The U. S. Navy is conducting courses in fire-fighting at two of its fire-fighting schools at which merchant marine personnel may be trained. These schools are located at the Naval Damage Control Training Centers, San Francisco, Calif., and Philadelphia, Pa. There are two courses available at each of these schools, one a 2-day course and one a 5-day course. In these courses the students participate in practical demonstrations of extinguishing various types of fires with modern fire-fighting equipment. During the month of August 1948, 51

men from four different shipping companies received training at the school in Philadelphia.

Individuals or shipping companies who desire to take advantage of the opportunity afforded by the Navy should make application to the Chief of Naval Personnel, Attention Pers 423, Navy Department, Washington, D. C. That Office will issue instructions as to the manner in which applicants may contact the schools. Quotas for merchant marine personnel are made only if the training of such individuals will not interfere with the training of regular Naval

personnel, and with the understanding that there will be no cost to the Navy for subsistence of personnel.

**A fire today—no job tomorrow**

## INVESTIGATING UNITS

Coast Guard Merchant Marine investigating units and merchant marine details investigated a total of 590 cases during the month of August 1948. Of this number charges were preferred involving 19 licensed and 53 unlicensed men. No hearings were held because examiners were not available.

# LESSONS FROM CASUALTIES

## MISSISSIPPI RIVER DISASTER— DOUBLE TRIPPING

Every once in a while, customary local practices performed on well-known waters lead imperceptibly and suddenly to unforeseen disaster and death. This was the fate of a towing steamer on the night of March 4, 1948, when she collided with the Greenville-Lake Village bridge, overturned and sank, causing the drowning of 13 members of her crew.

Thirteen other members of the crew survived, as well as the three oil-laden barges that she was double-tripping (pushing half of her tow at a time, thus making a double trip for complete passage) against the boils and eddies of the mighty Mississippi.

Investigation of this casualty revealed nothing particularly unusual about the operational procedure prior to the actual disaster. The vessel had tied-off the port half of her tow to some willow trees about 2 miles below the bridge on the Arkansas side, and had proceeded with the other half along the Mississippi slack, east or ascending side of the river, thus avoiding going under the bridge at the center span where the head current was 8 to 9 statute miles per hour. At about the same time, two other steamers were preparing to do the same thing with their tows, but hung back awaiting the progress of the first one to cast off, since she was the first to get into position for running the bridge and the bend in the channel.

The vessel with three barges passed under the bridge without incident and when the towboat's stern was abreast of pier No. 11 (the piers are numbered 10, 11, 12, and 13, respectively, beginning from the Mississippi side, 11 and 12 being the center of channel span) the master swung easy to the left to bring the tow back into the main channel so as to avoid a reef

that had built up on the Mississippi side just above the bridge. As soon as the lead barge (the barges were secured in tandem to the bow by couplings, ratchets, and cross links, making a more or less rigid unit) entered the current, it began to swing the entire tow sharply to the left. Immediate reversal of both engines full speed down-stream succeeded in straightening up the tow as she backed through the bridge span. In position again, the engines were put in emergency full ahead with bypasses open, and she proceeded upstream for a second attempt to get through.

The master was in the pilothouse alone, engaged in the manifold duties of piloting, steering, handling the engine telegraphs, blowing whistle signals, adjusting the searchlights, and keeping an eye on the tow. The mate, although near the pilothouse, was engaged in deck work on the boat and tow. Most of the crew off watch had retired or were preparing to do so as it was about 2030 (c. s. t.). The engines, steering gear, and all other equipment were operating effectively. When the vessel and tow again cleared the bridge (pier No. 11) by some 35 feet, the lead barge began to swing to the left as previously, but this movement was uninterrupted and accentuated. The entire tow flanked the current and was set downstream diagonally, and with slight headway across the river.

Up to this point, no one viewed the situation with alarm, as the procedure was in accord with practice and expectation in these waters. To exemplify the unconcern, one crewman (who was later drowned) directed attention to the situation by calling to his shipmates, "Watch the boat hit the bridge! Come here, boys, watch it hit!" He and the other crew members who were awake just stood in the galley doorway watching it hit twice,

as they had watched before when other boats they were on hit bridges and similar objects. "Well, she missed that one by a whisker," gesticulated the junior engineer as he ambled below to check the auxiliaries. To one crewman who had just showered and retired, "It felt like hitting a sand boil—boom, boom," and he thought nothing more of it.

But beyond this point, the incident becomes an outstanding example in the annals of inland river casualties. It vividly illustrates the consequences of endeavoring to exceed human limitations.

The shock from the two blows against the pier ruptured the port coupling between the lead and second barges, creating a jack-knife action which pivoted the tow around the towing vessel. This caused the vessel to again strike pier No. 12 and this time remain against it, being jammed thereon by the swift current. She instantly began listing increasingly to starboard until water came over her deck and poured into the engine-room and fireroom spaces through door and window openings in the deck house. Her port side began to rise against the bridge pier, at the same time tipping the face barge (the one immediately ahead and against the bow) so that the water poured over it and looked like a dam with water streaming over it. The vessel then began to settle, turned bottom side up, and sank bow first in 90 feet of water. There was no explosion, although some steam was heard escaping, presumably from a broken line.

By the time of the third contact with the bridge, disaster was imminent. Everyone awake ran up and down the decks shouting and arousing those who were asleep and in the engine room. Some began passing out life jackets; some grabbed their own. An attempt was made to launch the

lifeboat aft, but fouled lines and sliding boxes and barrels rendered the attempt hopeless. Those that could, took to the 40° F. water by devious methods. A few, however, could not do so. The survivors were rescued by various means from the vessel and some swam to the bank.

Very little is known about the master of the vessel; what he thought or what he did. But it is known that he went down with his ship. While under the bridge going upstream the second time, the mate sent the galley watchman up to the captain with a cup of coffee. After the mate finished his own cup of coffee, he reported to the master that all was clear back at pier No. 11; at about the same time the captain readjusted the searchlight to shine on the pier. Seconds later, the entire tow was dropping towards pier No. 12. The captain revealed to the mate that the head was going out faster than he expected and that he was going to have trouble getting straightened up again. The mate then reported, "Captain, you are coming in fast towards that pier." When last seen or heard, the master was looking aft through the pilot-house door.

Whatever was the real cause of this catastrophe, no one will ever definitely know. According to the Marine Casualty Investigating Board, " \* \* \* There is no question or doubt in the Board's opinion that the master acted in absolute good faith without the trace of any dereliction to his duties. \* \* \*

(He) was encumbered with manifold duties too numerous and varied to perform with maximum efficiency at substantially one time. \* \* \* However reluctant this Board may be in criticizing the actions of a person who is no longer able to defend himself, it cannot set aside the fact that \* \* \* (he) realized or should have realized on his first attempt to get through the bridge, and beyond, that conditions were extremely adverse, more specifically, that bringing the tow from slack water into the current was a very dangerous operation in this instance, \* \* \* The master's failure to properly appraise the situation can be laid to the human factor involved."

The fact remains that the master—the only officer in the pilothouse, was attempting, consciously or not, to coordinate all at one time the activities of piloting, steering, handling telegraphs, blowing signals, adjusting searchlights, and watching his tow, not to mention the cup of coffee and limited conversation with the mate.

" \* \* \* It does not appear unreasonable to expect the master and pilot (the same man) to require a mate to assist him \* \* \* when it

is deemed necessary." It should always be necessary to require the assistance of a second man as soon as one man reaches the point where he cannot properly and efficiently perform his duty. This would allow a reserve element—a safety factor—in human coordination sufficient to take care of unexpected emergencies.

The master should not hesitate to call the other officers to assist him, and all hands, if necessary, when in a position in which he cannot handle the vessel alone.

It is to be regretted that this vessel met with disaster, but if other mariners would take heed and profit by this sad experience, such an incident should not happen again.

## RED LABEL CARGO

Most of the serious fires that occur on board cargo ships involve articles of dangerous cargo. Anyone reading the records of investigation of such fires must conclude that the officers and the crews of vessels deserve a great measure of praise for their handling of the situations that arise, especially when a cargo vessel at sea finds itself with a fire in the cargo in one or more holds. Without minimizing to any degree the credit that is due to the officers and crews of vessels, it is believed that more attention to the handling and stowage of dangerous cargo at the time of loading, will result in less fires and will also be of assistance when the vessel becomes involved with a fire in its cargo.

The title of this article is a misnomer. There are red, yellow, green, and white colored labels for dangerous cargo. Time after time in the testimony of investigations of fires, it is noted that the officers and crews will refer to "red label" cargo. The "red label" is principally applied to containers of inflammable liquids and inflammable compressed gases. Two other red labels are authorized. One is used for sample shipments of explosives which will very rarely appear in vessel transportation, and the other is used for shipments of fireworks. The "yellow label" is applied to containers of inflammable solids or oxidizing materials. The "white acid label" is applied to containers of acids or corrosive liquids. In addition to the inflammable compressed gas red label, there is also a noninflammable compressed gas green label which is applied to containers of noninflammable compressed gases. The "poison gas label" is a white label bearing a skull and cross bones and is applied to containers of poison gas. The "poison label" is a white label bearing a skull and cross bones and is applied to containers of Class B poisons which

may be liquids or solids. The "tear gas label" is a white label applied to containers of tear gas. There is also a white label with nothing appearing thereon except the word, "empty" for use in designating empty containers that formerly were filled with a dangerous substance.

From the above, it will be noted that a vessel could have "labelled dangerous cargo" carrying red, yellow, green, or white labels. When stevedores, longshoremen, masters, officers, or crew of a vessel state that the cargo was "red label cargo," they are not correctly describing the cargo unless the cargo consisted only of inflammable liquids, inflammable compressed gases, samples of explosives, or fireworks.

A case in point is a recent investigation of a fire on board a ship at sea. The master testified as follows:

Question. "Do you have any reason to believe that any of the cargo taken aboard the vessel was classified as dangerous cargo?"

Answer. "Red label cargo is always loaded above decks and any red label cargo that would be loaded below decks would be noticed by the officer in charge who is on deck."

Question. "Did you carry any red label cargo on the vessel?"

Answer. "Red label on deck."

Question. "What was the nature of the cargo; of this red label cargo?"

Answer. "Sodium compound and phosphoric acid was another."

It is appreciated that Americans have a tendency to develop common terms and slang expressions to convey their meanings which are generally understood. It is also appreciated that lacking specific knowledge or information, some persons will resort to generalities to cover up their lack of knowledge. In this particular instance, neither the master nor the questioner indicated an exact knowledge of the requirements of the regulations. The master stated, "Red label cargo is always loaded above deck \* \* \*." This is incorrect. Many items of red label cargo are permitted to be stowed below decks. When asked what was the nature of this red label cargo, the master replied, "Sodium compound and phosphoric acid was another." There is no such permitted shipping name as "sodium compound." There are about 20 different sodium substances that are named in the dangerous cargo regulations, and they are either oxidizing materials (yellow label), poisons B (white poison label), or inflammable solids (yellow label). What the master meant by phosphoric acid is not certain. Perhaps he was referring to phosphorous oxychloride or phosphorous tribromide

or phosphorous trichloride. If it was one of these materials he was referring to, the container should carry the "white acid label." It is readily seen that the master, after talking about "red label cargo" and being asked the nature of this "red label cargo," named two substances, one of which required a yellow label and the other a white label.

For purposes of safety, it is suggested that the masters and the offi-

cers of all vessels study the dangerous cargo regulations so that they will understand the significance of the different colored labels and thus be able to handle and stow this cargo in the safest possible manner.

A word of caution, with reference to other labels, is necessary. The dangerous cargo regulations require specifically that the labels, referred to above, are to be placed on containers of dangerous articles. These labels

are of a specific design (diamond shape) and size (4" x 4") and are shown in replica in the dangerous cargo regulations. They constitute the official required label. However, the regulations permit the shipper to attach other labels as he may deem necessary, provided the shipper's labels will not by their size, shape, or color be readily confused with the required standard caution labels described by the regulations.

## APPENDIX

### Amendments to Regulations

#### CORRECTION

In the amended Pilot Rules for Western Rivers published in the October 1948 "Proceedings" an error was made in paragraph (b) of section 332.13 on page 174; this paragraph as corrected reads as follows:

332.13 *Approaching bridge span or draw.* \* \* \*

(b) If the ascending steam vessel is already in the bridge span or draw, and the descending steam vessel sounds the danger or alarm signal, it shall be the duty of the ascending steam vessel, if practicable, to drop below the bridge span or draw, and wait until the other steam vessel shall have passed.

#### TITLE 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of the Treasury

[CGFR 48-52]

##### PART I—GENERAL ORGANIZATION AND JURISDICTION

##### ABOLISHMENT OF NEW HAVEN MARINE INSPECTION OFFICE

By virtue of the authority vested in me as Commandant, United States Coast Guard, by section 101 of Reorganization Plan No. 3 of 1946, 11 F. R. 7875, the following amendment to the regulations is prescribed and shall become effective on and after November 1, 1948:

Section 110-20 *Marine inspection districts and offices* (13 F. R. 1815) is amended by deleting in paragraph (a) the name "New Haven—311 Federal Building, New Haven 10, Connecticut" from the listing of marine inspection offices in the 3d Coast Guard District (sec. 3, 60 Stat. 238; 5 U. S. C. 1002).

The Marine Inspection Office at New Haven, Connecticut, will be

abolished and its functions, files, and equipment will be transferred to the Marine Inspection Office at New London, Connecticut, effective on and after November 1, 1948.

Dated: October 19, 1948.

[SEAL] J. F. FARLEY,  
Admiral, U. S. Coast Guard,  
Commandant.

[F. R. Doc. 48-9400; Filed, Oct. 25, 1948; 8:50 a. m.; 13 F. R. 6267, October 26, 1948]

#### TITLE 46—SHIPPING

Chapter I—Coast Guard: Inspection and Navigation

##### SUBCHAPTER F—MARINE ENGINEERING

[CGFR 48-5]

##### MARINE ENGINEERING AND MATERIAL SPECIFICATIONS FOR MERCHANT VESSELS

By virtue of the authority vested in me by R. S. 4405, 4417a, 4418, 4426, 4427, 4429, 4430, 4431, 4432, 4433, 4434, 4453, 4491, sec. 14, 29 Stat. 690, 41 Stat. 305, 49 Stat. 1544, 54 Stat. 346, and sec. 5 (e), 55 Stat. 244, as amended (46 U. S. C. 363, 366, 367, 375, 391a, 392, 404, 405, 407, 408, 409, 410, 411, 412, 435, 1333, 50 U. S. C. 1275), and sec. 101 of Reorganization Plan No. 3 of 1946 (11 F. R. 7875), the following corrections shall be made and the following omissions shall be inserted in Coast Guard Document CGFR 48-5, Federal Register Document 48-2817, filed March 30, 1948, and published in the FEDERAL REGISTER dated March 31, 1948, 13 F. R. 1668, et seq.:

##### PART 52—CONSTRUCTION

##### SUBPART 52.20—HEADS

Section 52.20-15 *Detail requirements* is corrected in paragraph (b) (5) (13 F. R. 1711) by inserting after the reference "52.20-10" the phrase "but only 60 percent of".

##### SUBPART 52.25—OPENINGS AND REINFORCEMENTS

Section 52.25-10 *Materials and workmanship* is corrected in paragraph (g) (13 F. R. 1714) by inserting after the reference "52.20-15" a parenthesis.

##### SUBPART 52.30—SURFACES REQUIRED TO BE STAYED OR REINFORCED

Section 52.30-10 *Computations* is corrected in paragraph (a) (13 F. R. 1715) by removing the radical sign from formula (3).

##### SUBPART 52.55—BOILER AND SUPER-HEATER TUBES

Section 52.55-10 *Computations* is corrected in paragraph (a) (1) (13 F. R. 1723) by changing the numbering of inferior subdivisions from (1) and (2) to (i) and (ii), respectively, and by inserting an inferior subdivision "(iii) All tubes:" immediately above formula (3).

##### SUBPART 52.70—BOILER MOUNTINGS AND ATTACHMENTS

Section 52.70-25 *Feed valves* is corrected in paragraph (e) (13 F. R. 1727) by changing in the third sentence the first phrase "stop check valves" to "stop and check valves" and the phrase "regular stop check valves" to "regular stop and check valves".

##### PART 55—PIPING SYSTEMS

##### SUBPART 55.07—DETAIL REQUIREMENTS

1. The number for Table 55.07 (a) (13 F. R. 1732) is changed to "Table 55.07-5 (a)."

2. The first formula in paragraph (c) of § 55.07-20 *Bolting* (13 F. R. 1737) is designated "(1)."

Dated: September 27, 1948.

[SEAL] J. F. FARLEY,  
Admiral, U. S. Coast Guard,  
Commandant.

[F. R. Doc. 48-8791; Filed, Oct. 1, 1948; 8:50 a. m.; 13 F. R. 5704, Oct. 2, 1948]

## MISCELLANEOUS AMENDMENTS

A notice regarding proposed changes in the inspection and navigation regulations was published in the Federal Register dated March 6, 1948 (13 F. R. 1237) and public hearings were held by the Merchant Marine Council on March 30 and 31, 1948, at Washington, D. C.

The purpose of the amendments to the regulations is to clarify their intent, establish additional safety requirements on the basis of experience obtained, and to permit certain practices to be employed by the industry in the operation of tank vessels.

By virtue of the authority vested in me by R. S. 4405, as amended, 46 U. S. C. 375, section 101 of Reorganization Plan No. 3 of 1946 (11 F. R. 7875), R. S. 4417a, 46 U. S. C. 391a, section 5 (e), 55 Stat. 244, as amended, 50 U. S. C. 1275, the following amendments to the regulations are prescribed, which shall become effective 90 days after date of publication of this document in the Federal Register:

## GENERAL

1. Section 35.1-3 is amended by designating the first paragraph as (a) and adding the following paragraph (b):

§ 35.1-3 *Illness, alcohol, drugs—TB/ALL.* (b) When a member of the crew of a tank vessel which is loading bulk cargo of Grades A, B, or C arrives at the gangway and is observed to be in an intoxicated condition, he shall not be permitted to board the ship without escort.

## GENERAL SAFETY RULES

2. Section 35.4-2 is amended to read as follows:

§ 35.4-2 *Fires, matches, and smoking—TB/ALL.* (a) *General.* In making the determinations required under paragraphs (b), (c), and (d) of this section the senior deck officer on duty, who shall be a licensed officer or certificated tankerman, shall exercise his skill and experience with due regard to attendant conditions and circumstances, including consideration for location of shore-side facilities, maintenance of mobility, provision for fire protection, state or change of winds, tides, sea, weather conditions, forces of nature, and other circumstances generally beyond human control.

(b) *Boiler fires.* Boiler fires are normally permitted during cargo transfer operations: *Provided*, That

prior to loading Grade A, B, and C cargoes, the senior deck officer on duty, who shall be a licensed officer or certificated tankerman, shall make an inspection to determine whether in his judgment boiler fires may be maintained with reasonable safety during the loading operation.

(c) *Galley fires.* Galley fires are normally permitted during cargo transfer operations: *Provided*, That prior to loading Grade A, B and C cargoes the senior deck officer on duty, who shall be a licensed officer or certificated tankerman, shall make an inspection to determine whether in his judgment galley fires may be maintained with reasonable safety during the loading operation.

(d) *Smoking.* Smoking is prohibited on the weather decks of tank vessels when they are not gas free and are alongside docks. At other times and places the senior deck officer on duty, who shall be a licensed officer or certificated tankerman, shall designate when and where the crew may smoke: *Provided*, That prior to loading Grade A, B, and C cargoes the master or senior deck officer on duty shall make an inspection to determine if and where, in his judgment, smoking may be permitted with reasonable safety during the loading operation.

(e) *Matches.* The use of other than safety matches is forbidden aboard tank vessels at all times.

## CARGO HANDLING

3. Section 35.5-5 is amended by adding the following paragraphs (h), (i) and (j):

§ 35.5-5 *Inspection prior to transfer of cargo—TB/ALL.* \* \* \*

(h) In loading Grade A, B, and C cargoes, that an inspection has been made to determine whether boiler fires can be maintained with reasonable safety.

(i) In loading Grade A, B and C cargoes, that an inspection has been made to determine whether galley fires can be maintained with reasonable safety.

(j) In loading Grade A, B and C cargoes, that an inspection has been made to determine whether smoking may be permitted with reasonable safety.

4. Section 35.5-6 is amended to read as follows:

§ 35.5-6 *Approval to start transfer of cargo—(a) TB/ALL.* When the senior deck officer on duty has assured himself that the requirements of § 35.5-5 have been met, he may give his approval to start operations.

(b) *T/ALL.* After completing the inspection required by § 35.5-5 and

prior to giving his approval to start the cargo transfer operation, the master or senior deck officer on duty shall fill in the following Declaration of Inspection in duplicate. The original of the Declaration of Inspection shall be kept aboard for the information of authorized persons. The duplicate, where required, shall be handed to the terminal superintendent or his representative who shall on demand be given the opportunity to satisfy himself that the condition of the vessel is as stated in the Declaration of Inspection.

## DECLARATION OF INSPECTION PRIOR TO BULK CARGO TRANSFER

Date \_\_\_\_\_  
 /S. \_\_\_\_\_ Port of \_\_\_\_\_  
 I, \_\_\_\_\_, being the master or senior deck officer in charge of the transfer of bulk inflammable and combustible cargo about to be undertaken do certify that I have personally inspected this vessel with reference to the following requirements set for in § 35.5-5 and that opposite each of them I have indicated that the regulation has been complied with.

(1) Are warnings displayed as required?  
 (2) Is there any repair work in way of cargo spaces being carried on for which permission has not been given?

(3) Is cargo hose of sufficient length properly connected and supported and are cargo valves properly set?

(4) Have all cargo hose connections for loading Grade A, B, and C cargoes been made to the vessel's pipe lines?

(5) Are there any fires or open flames present on the deck or in any compartment which is located on, facing, open and adjacent to that part of the deck on which the cargo hose is connected?

(6) Has the shore terminal or other tank vessel concerned reported itself in readiness for transfer of cargo?

(7) Are sea valves connected to the cargo system closed?

(8) If Grade A, B, and C cargoes are to be loaded and boiler fires are lighted—has an inspection been made to determine that they may be operated with reasonable safety?

(9) If Grade A, B and C cargoes are to be loaded and galley fires are lighted, has an inspection been made to determine that they may be operated with reasonable safety?

(10) If Grade A, B, and C cargoes are to be loaded, has an inspection been made to determine whether smoking is to be permitted? If smoking is to be permitted, have spaces been designated for this purpose?

5. Section 35.5-8 (c) is amended to read as follows:

§ 35.5-8 *Conditions under which transfer operations shall not be commenced or if started shall be discontinued—TB/ALL.* \* \* \*

(c) If a self-propelled vessel comes directly alongside in way of cargo tanks of a tanker or tank barge which is loading Grade A, B, or C cargo.

(R. S. 4405, as amended, R. S. 4417a, sec 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 375, 391a, 50 U. S. C. 1275; sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875)

Dated: September 7, 1948.

[SEAL] J. F. FARLEY,  
Admiral, U. S. Coast Guard,  
Commandant.

[F. R. Doc. 48-8186; Filed, Sept. 10, 1948;  
8:55 a. m., 13 F. R. 5312, September 11,  
1948]

(S) J. F. FARLEY,  
Admiral, U. S. Coast Guard,  
Commandant.

SUBCHAPTER M—CONSTRUCTION OR MATERIAL ALTERATION OF PASSENGER VESSELS OF THE UNITED STATES OF 100 GROSS TONS AND OVER PROPELLED BY MACHINERY

[CGFR 48-51]

PART 144—CONSTRUCTION OR MATERIAL ALTERATION OF PASSENGER VESSELS OF THE UNITED STATES OF 100 GROSS TONS AND OVER PROPELLED BY MACHINERY

CONVERSION OF CERTAIN VESSELS TO PASSENGER VESSELS

By virtue of the authority vested in me as Commandant, United States Coast Guard, by section 5, 49 Stat. 1384, sec. 2, 54 Stat. 1028, and sec. 5 (e), 55 Stat. 244, as amended, 46 U. S. C. 369, 463a, 50 U. S. C. 1275, and sec. 101 of Reorganization Plan No. 3 of 1946, 11 F. R. 7875, I find that an emergency exists and the following amendment to the regulations shall be made effective on the date of publication of this document in the Federal Register:

Section 144.29 (a) is amended by the addition of the following sentence:

§ 144.29 *Alternate materials.* (a) \* \* \* Vessels to be converted for the transportation of personnel to and from salvage operations, offshore oil drilling operations, and similar operations, may be given special consideration.

(Sec. 5, 49 Stat. 1384, sec. 2, 54 Stat. 1028, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 369, 463a, 50 U. S. C. 1275)

This amendment to the regulations is published without prior general notice of its proposed issuance for the reason that notice, public rule making procedure, and effective date requirements in connection therewith are hereby found to be impracticable and contrary to the public interest. This emergency is due to the shortage of suitable steel hull vessels and the shortage of steel preventing the con-

version or construction of passenger vessels for service in offshore oil drilling or salvage operations. This added regulation allows vessels constructed of material other than steel to be used under certain conditions for the transportation of persons engaged in offshore oil drilling, salvage, and similar operations. Inasmuch as these operations are in the national interest, it will permit the continued operation of certain vessels as well as conversions of others for service in such operations.

Dated: October 8, 1948.

[SEAL] J. F. FARLEY,  
Admiral, U. S. Coast Guard,  
Commandant.

[F. R. Doc. 48-9055; Filed, Oct. 12, 1948;  
8:51 a. m., 13 F. R. 6007, Oct. 13, 1948]

MISCELLANEOUS AMENDMENTS

[CGFR 48-50]

Notices regarding proposed changes in the inspection and navigation regulations were published in the FEDERAL REGISTER dated August 11 and September 15, 1948, 13 F. R. 4638, 5382, and public hearings were held by the Merchant Marine Council on September 28, 1948, at Washington, D. C.

The purpose of the miscellaneous amendments to the regulations is to clarify their intent, effect editorial changes, establish additional safety requirements, to permit certain practices to be employed by the industry in the construction, repair or operation of merchant vessels, and to provide for the licensing of radio operators in accordance with Public Law 525, 80th Congress, 2d Session, approved May 12, 1948. All the written or oral comments, data, and suggestions submitted were considered by the Merchant Marine Council and where practicable were incorporated into the miscellaneous amendments to the regulations.

The regulations in this document shall become effective on and after the 91st day after the date of publication of this document in the FEDERAL REGISTER, except for regulations in 46 CFR 146.27-100, regarding burlap bags, which shall become effective on and after the date of publication because this amendment removes a restriction on the shipment of cleaned bags, and except further for regulations in 46 CFR 10.13-1 to 10.13-33, inclusive, regarding licensing of radio officers, 46 CFR 12.25-15, regarding radio operators, and 46 CFR 131.2 and 131.4, regarding manning of vessels, which shall become effective on and after April 1, 1949, when Public Law 525, 80th Congress, 2d Session, be-

comes effective: *Provided, however,* That all the provisions necessary to receive applications and issue licenses as radio officers to qualified persons shall become effective on and after the date of publication of this document in the FEDERAL REGISTER, in order that merchant vessels will be enabled to operate with properly licensed radio officers on and after April 1, 1949.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by R. S. 4405, as amended, 46 U. S. C. 375, and section 101 of Reorganization Plan No. 3 of 1946, 11 F. R. 7875, as well as the statutes cited with the regulations below, the following amendments to the regulations are prescribed:

SUBCHAPTER B—MERCHANT MARINE OFFICERS AND SEAMEN

PART 10—LICENSING OF OFFICERS AND MOTORBOAT OPERATORS AND REGISTRATION OF STAFF OFFICERS

1. The title for Part 10 is changed to read as set forth above.

SUBPART 10.01—GENERAL

2. Section 10.01-1 is amended to read as follows:

§ 10.01-1 *Basis and purpose of regulations.* By virtue of the authority vested in the Commandant of the Coast Guard under R. S. 4405, 4417a, 4426, 4427, 4438, 4438a, 4439, 4440, 4441, 4442, 4443, and 4447, as amended, sec. 2, 29 Stat. 188, sec. 1, 34 Stat. 1411, 49 Stat. 1544, 1935, 1992, 53 Stat. 1147, sec. 17, 54 Stat. 166, and sec. 5, 55 Stat. 244, as amended; 46 U. S. C. 214, 224, 224a, 225, 226, 228, 229, 230, 233, 237, 247, 367, 375, 391a, 404, 405, 526p, 672a, 1132, 50 U. S. C. 1275, sec. 101, Reorganization Plan No. 3 of 1946, 11 F. R. 7875, and Public Law 525, 80th Congress, approved May 12, 1948; the regulations in this part are prescribed to provide a comprehensive and adequate means of determining the qualifications an applicant must possess in order to be eligible for a license as deck or engineer or radio officer on merchant vessels, for a license to operate motorboats, or for a certificate of registry as staff officer, in accordance with the intent of the statutes and to obtain their correct and uniform administration. (R. S. 4405, 4417a, 4426, 4427, 4438, 4438a, 4439, 4440, 4441, 4442, 4443, 4447, sec. 2, 29 Stat. 188, sec. 1, 34 Stat. 1411, 49 Stat. 1544, 1935, 1992, 53 Stat. 1147, sec. 17, 54 Stat. 166, and sec. 5, 55 Stat. 244, as amended; 46 U. S. C. 214, 224, 224a, 225, 226, 228, 229, 230, 233, 237, 247, 367, 375, 391a, 404, 405, 526p, 672a, 1132, 50 U. S. C. 1275, sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875, and Pub. Law 525, 80th Cong., 2d Sess.)

**SUBPART 10.05—PROFESSIONAL REQUIREMENTS FOR DECK OFFICERS' LICENSES (INSPECTED VESSELS)**

3. Section 10.05-11 is amended by changing paragraphs (a) and (g) and adding paragraph (h), reading as follows:

§ 10.05-11 *Master, mate, or pilot of steam or motor vessels operating under special conditions.* (a) This section shall apply to every applicant for a license as master, mate, or pilot of steam pilot boats or seagoing motor pilot boats of 300 gross tons or over; or of steam vessels navigating the waters of the whaling grounds in the Alaskan Seas; or of steam vessels engaged exclusively in the business of whale fishing; or of steam vessels engaged in the Atlantic, Pacific, or Gulf Coast fisheries; or of steam or sail vessels navigating exclusively between ports in the Hawaiian Islands; or of steam or sail vessels or seagoing motor vessels of 300 gross tons or over navigating exclusively between ports of the Island of Puerto Rico.

(g) An applicant for a master's license of seagoing vessels propelled by internal combustion engines, navigating exclusively between ports in the Hawaiian Islands, shall submit with his application statements duly executed and certified by reputable citizens qualified to judge the character, trustworthiness, and ability of the applicant.

(h) The Officer in Charge, Marine Inspection, shall make a diligent inquiry as to the applicant's character and merits, and if satisfied by the oral examination or practical demonstration and the proof of requisite knowledge and skill offered, the Officer in Charge, Marine Inspection, shall issue the license. No certificate from the United States Public Health Service based upon the subject of ship sanitation and first aid shall be required of such an applicant. (R. S. 4405, 4417a, 4426, 4427, 4438, 4438a, 4439, 4440, 4441, 4442, sec. 2, 29 Stat. 188, 49 Stat. 1544, and sec. 5 (e), 55 Stat. 244, as amended, 46 U. S. C. 214, 224, 224a, 225, 226, 228, 229, 367, 375, 391a, 404, 405, 50 U. S. C. 1275, and sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875)

**SUBPART 10.10—PROFESSIONAL REQUIREMENTS FOR ENGINEER OFFICERS' LICENSES (INSPECTED VESSELS)**

4. Section 10.10-25 (a) is amended to read as follows:

§ 10.10-25 *Engineers of motor vessels operating in Puerto Rican and Hawaiian waters.* (a) An applicant for an engineer's license of seagoing vessels propelled by internal combustion engines navigating exclusively

between ports in the Hawaiian Islands, or navigating exclusively between ports of the Island of Puerto Rico and/or the Virgin Islands, shall submit with his application statements duly executed and certified by reputable citizens qualified to judge the character and ability of the applicant. The Officer in Charge, Marine Inspection, shall make a diligent inquiry as to the applicant's character and merits and, if satisfied by the oral examination or practical demonstration, and the proof of requisite knowledge and skill offered, the Officer in Charge, Marine Inspection, shall issue the license. No certificate from the United States Public Health Service based upon the subject of ship sanitation and first aid shall be required of such applicant.

(R. S. 4405, 4417a, 4426, 4427, 4438, 4438a, 4439, 4440, 4441, 4442, sec. 2, 29 Stat. 188, 49 Stat. 1544, and sec. 5 (e), 55 Stat. 244, as amended, 46 U. S. C. 214, 224, 224a, 225, 226, 228, 229, 367, 375, 391a, 404, 405, 50 U. S. C. 1275, and sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875)

5. Part 10 is amended by adding a new subpart 10.13 reading as follows:

**SUBPART 10.13—LICENSING OF RADIO OFFICERS**

Sec.	
10.13-1	Applicability of laws.
10.13-3	Definitions.
10.13-5	General provisions respecting all licenses issued.
10.13-7	Citizenship and age requirements for all licenses issued.
10.13-9	Evidence of professional competence for all licenses issued.
10.13-13	General requirements for original licenses.
10.13-15	Physical examinations for original licenses.
10.13-17	Character check and references required for original licenses.
10.13-21	General requirements for renewal of license.
10.13-23	Physical requirements for renewal.
10.13-25	Issuance of duplicate license.
10.13-27	Parting with or altering license.
10.13-29	Suspension and revocation of licenses.
10.13-33	Right of appeal.

**AUTHORITY:** §§ 10.13-1 to 10.13-33, issued under Public Law 525, 80th Congress, 2d Session, and section 101, Reorganization Plan No. 3 of 1946, 11 F. R. 7875.

§ 10.13-1 *Applicability of laws.* Public Law 525, 80th Congress, approved May 12, 1948, under which the regulations in this subpart are promulgated, reads as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That whenever the complement of any vessel prescribed pursuant to section 4463 of the Revised Statutes, as amended (46 U. S. C., sec. 222), includes one or more radiotelegraph operators such operators shall be required to be licensed officers.

Sec. 2. The boards of local inspectors authorized under section 4414 of the Revised Statutes (U. S. C., 1940 edition, title 46, sec. 382) shall license radiotelegraph operators, and it shall be unlawful to employ any person or for any person to serve as a radiotelegraph operator of any steamer or of any other vessel of over one hundred gross tons carrying passengers for hire who is not licensed by the inspectors; and anyone violating this section shall be liable to a penalty of \$100 for each offense.

Sec. 3. Whenever any person applies for authority to perform the duties of radiotelegraph operator of any vessel, the inspectors shall require possession of a valid first- or second-class radiotelegraph operator license issued by the Federal Communications Commission; and if, upon full consideration, they are satisfied that his character, habits of life, and physical condition are such as to authorize the belief that he is a suitable and safe person to be entrusted with the powers and duties of such a station, they shall grant him a license, authorizing him to be employed in such duties for the term of five years, provided he continues to hold a valid first- or second-class radiotelegraph operator license issued by the Federal Communications Commission.

All licenses issued under this section shall be subject to suspension or revocation on the same grounds and in the same manner and with like procedure as is provided in the case of suspension or revocation of license of officers under the provisions of section 4450 of the Revised Statutes, as amended.

Sec. 4. (a) Section 2 of the Act of March 4, 1915, as amended (U. S. C., 1940 edition, title 46, sec. 873), is amended by striking out the period after the words "management of the vessel" and inserting a colon and the following words: "Provided, That in the case of radiotelegraph operators this requirement shall be applicable only when three or more radio officers are employed."

(b) Nothing in this Act shall be presumed to repeal the provisions of section 2 of the Act of March 4, 1915, as amended (U. S. C., 1940 edition, title 46, sec. 873), limiting the work of radiotelegraph operators to eight hours in one day.

Sec. 5. Every radiotelegraph operator who receives a license shall, before entering upon his duties, make oath before one of the inspectors herein provided for, to be recorded with the certificate, that he will faithfully and honestly, according to his best skill and judgment, without concealment or reservation, perform all the duties required of him by law.

Every applicant for license as radiotelegraph operator under the provisions of this Act shall make and subscribe to an oath or affirmation, before one of the inspectors referred to in this Act, to the truth of all the statements set forth in his application for such license.

Any person who shall make or subscribe to any oath or affirmation authorized in this Act and knowing the same to be false shall be deemed guilty of perjury.

Every radiotelegraph operator, who shall change, by addition, interpolation, or erasure of any kind, any certificate or license issued by an inspector or inspectors referred to in this Act shall, for every such offense, upon conviction, be punished by a fine of not more than \$500 or by imprisonment at hard labor for a term not exceeding three years.

Sec. 6. Every radiotelegraph operator who shall receive a license shall, when employed upon any vessel, within forty-eight hours after going on duty, place his certificate of license, which shall be framed under glass, in some conspicuous place in such vessel, where it can be seen by passengers and others at all times: *Provided*, That in case of emergency such radiotelegraph operator may be transferred to another vessel of the same owners for a period of not exceeding forty-eight hours without the transfer of his license; and for every neglect to comply with this provision by any such radiotelegraph operator, he shall be subject to a fine of \$100 or to the revocation of his license.

Sec. 7. Nothing in this Act shall affect the status of radiotelegraph operators while serving aboard vessels operating solely on the Great Lakes.

Sec. 8. Nothing in this Act shall increase the number of radiotelegraph operators at present required by law to be carried on vessels, or the type of vessels on which radiotelegraph operators are required to be carried, or to alter, repeal, modify, or affect any other statute of the United States, it being the only intent of this Act to give to radiotelegraph operators the status of licensed officers as herein provided without affecting in any way any statute of the United States except as specifically hereinbefore authorized.

Sec. 9. The provisions of this Act will become effective on April 1, 1949.

**§ 10.13-3 Definitions—(a) License.** Where the word "license" appears throughout the regulations in this subpart it shall be construed as meaning a license issued by the Coast Guard, unless indicated otherwise.

(b) *Original license.* The first license issued to a radiotelegraph operator by the Coast Guard shall be considered an original license, when the records of the Coast Guard show no previous issue to such person.

**§ 10.13-5 General provisions respecting all licenses issued.** (a) Applicants for licenses, issued in accordance with the regulations in this subpart, are charged with the duty of establishing to the satisfaction of the Coast Guard that they possess all of the qualifications necessary, such as, age, experience, character and citizenship, before they shall be entitled to be issued licenses. Until an applicant meets this mandatory requirement, he is not entitled to be licensed to serve as an officer on a vessel of the United States. No person who has been convicted by court-martial of desertion or treason in time of war, or has lost his nationality for any of the other reasons listed in 8 U. S. C. 801, is eligible for a license.

(b) After application to an Officer in Charge, Marine Inspection, any person who is found qualified under the requirements set forth in this subpart shall be issued an appropriate license valid for a term of five (5) years, provided he continues to hold a valid first- or second-class radio-

telegraph operator's license issued by the Federal Communications Commission.

(c) Every person to whom a license is issued shall place his signature and left thumbprint thereon.

(d) Every person who receives a license shall make oath before an Officer in Charge, Marine Inspection, to be recorded upon his official file, that he will faithfully and honestly, according to his best skill and judgment, without concealment or reservation, perform all the duties required of him by law.

**§ 10.13-7 Citizenship and age requirements for all licenses issued.**

(a) No license shall be issued to any person who is not a United States citizen. An applicant claiming to be a citizen of the United States shall furnish documentary evidence of his citizenship. Acceptable evidence of citizenship is described in § 10.02-5.

(b) Any citizen who has attained the age of 19 years and is qualified in all other respects shall be eligible for a license: *Provided*, That an applicant who has attained the age of 18 years and who can show 6 months' service as a radio operator at sea prior to April 1, 1949, will be considered eligible insofar as age is concerned.

**§ 10.13-9 Evidence of professional competence for all licenses issued.**

Each applicant for a license must present to the Officer in Charge, Marine Inspection, at the time of making application his currently valid first- or second-class radiotelegraph operator's license issued by the Federal Communications Commission.

**§ 10.13-13 General requirements for original licenses—(a) First aid certificate.** No candidate for original license shall be qualified until he presents a certificate from the United States Public Health Service that he has passed a satisfactory examination based on the contents of "The Ship's Medicine Chest and First Aid at Sea," or other manual arranged for the purpose and having the approval of the United States Public Health Service.

(b) *Written application.* (1) The Officers in Charge, Marine Inspection, shall require all applicants for original licenses to make written applications upon Coast Guard Form CG 866.

(2) This application shall be submitted in duplicate. The applicant shall also furnish two unmounted, dull finish photographs, 2 inches by 1½ inches, of passport type taken within 1 year of the date of application. Photographs shall show the full face, at least 1 inch in height, with the head uncovered, and shall be a satisfactory likeness of the applicant. The issuing officer shall affix a photograph

to each of the applications and impress his official seal partly over the photograph, after the applicant has in his presence signed the applications.

(3) The applicant shall place his left thumbprint on each of the applications.

(4) The applicant shall enter on the application form the number, class, and date of issuance of his currently valid Federal Communications Commission license.

(5) The applicant shall make and subscribe to an oath or affirmation, before the issuing officer, to the truth of all the statements set forth in his application. Any applicant who shall make or subscribe to any oath or affirmation on the application form and knowing the same to be false shall be deemed guilty of perjury.

(c) *Evidence of employment.* Applicants for licenses must present to the Officers in Charge, Marine Inspection, at the time of making application evidence that they are going to sea or expect to go to sea. This evidence shall be in the form of one of the following and shall be entered on the application form:

(1) A currently valid certificate of service as radio operator or merchant mariner's document indorsed as radio operator.

(2) One or more certificates of discharge showing service as radio operator on a merchant vessel. Evidence of service on United States Government vessels or foreign vessels is acceptable.

(3) An applicant for a license who has not served as radio operator aboard a vessel must present satisfactory proof that he has a commitment of employment as a radio operator on a United States merchant vessel. This proof shall be in the form of a letter and shall be signed by a responsible official of the vessel, agent, owner, operator, or organization concerned with manning vessels.

(d) *Surrender of certificate of service.* Upon the issuance of a license the certificate of service as radio operator or merchant mariner's document indorsed as radio operator held by the licensee shall be surrendered to the issuing officer.

**§ 10.13-15 Physical examinations for original licenses.** (a) All applicants for original licenses shall be required to pass physical examinations given by a medical officer of the United States Public Health Service and present certificates executed by this Public Health Service Officer to the Officers in Charge, Marine Inspection. This certificate shall attest to the applicant's acuity of vision and general physical condition.

(b) Epilepsy, insanity, senility, acute venereal disease or neurosyph-

ilis, badly impaired hearing, or other defect that would render the applicant incompetent to perform the ordinary duties of a radio officer at sea are causes for certification as incompetent.

(c) For original license the applicant must have, either with or without glasses, at least 20/30 vision in one eye and at least 20/50 in the other. The applicant who wears glasses, however, must also be able to pass a test without glasses of at least 20/50 in one eye and at least 20/70 in the other. Any applicant for original license who is possessed of monocular vision and who has served as a radio operator on merchant vessels of the United States while possessed of such vision may be issued a license if eligible in all other respects. Vision of at least 20/30 without glasses in the remaining eye shall be required in all such cases.

(d) Where an applicant is not possessed of the vision, hearing, and general physical condition considered necessary, the Officer in Charge, Marine Inspection, after consultation with the Public Health Service physician, shall make a recommendation to the Commandant for an exception to these requirements if, in their opinion, extenuating circumstances warrant special consideration. Any request for a decision by the Commandant must be accompanied by all pertinent correspondence, records, and reports. Special consideration will be given to an applicant who has served satisfactorily at sea as a radio operator even though he is possessed of physical defects which would be cause for rejection of an applicant with no sea service. Recommendations from interested parties having knowledge of the applicant's qualifications will be given full consideration in arriving at a decision.

**§ 10.13-17 Character check and references required for original licenses.** (a) In those cases where an applicant for an original license has served at sea as a radio operator, the Officer in Charge, Marine Inspection, shall require such applicant to have written indorsements of a master of a vessel on which he has served, together with those of two other licensed officers. Upon a showing that the written indorsements required above cannot be obtained without undue delay or hardship, the Officer in Charge, Marine Inspection, may accept in lieu of these indorsements those from officials of the steamship company or other employers of the applicant. Letters of recommendation attesting to the applicant's character, etc., from former employers of the applicant may be accepted in lieu of the indorsements, but such letters must

be filed with the application. Where no sea service has been obtained, the applicant shall have the written indorsements of three reputable persons to whom he is well-known.

(b) Fingerprint records of each applicant shall be made on Form CG 2515B. This record shall be submitted to the Commandant together with the application for license.

(c) Every application for an original license shall be approved by the Commandant. No license shall be issued or temporary permit granted pending the Commandant's authorization.

(d) (1) The application of any person may be rejected by the Commandant when derogatory information has been brought to his attention which indicates that the applicant's character and habits of life are such as to authorize the belief that he is not a suitable and safe person to be entrusted with the duties of radiotelegraph operator on any vessel.

(2) Applications will be rejected and the issuance of licenses refused to persons in the following categories:

(i) Those who have been convicted in the courts of offenses such as: Crimes of violence on shipboard and in certain instances ashore; sabotage; possession, use, or sale of narcotics; smuggling of aliens into the United States; malicious destruction of ship's property; serious cases of theft of ship's property or stores; and offenses of an infamous character.

(ii) Those who have been disapproved for service as radio operator aboard merchant vessels of the United States in time of war.

(iii) Those who have been issued a dishonorable discharge from any of the armed services of the United States.

(3) Where an application for a license is rejected by the Commandant under the provisions of this section, the application will be reconsidered upon written request of the applicant, provided he can produce additional evidence of satisfactory character and habits over a reasonable period of time immediately prior to the date of request for reconsideration. This evidence may consist of certificates showing satisfactory service in any of the armed forces of the United States; or letters from employers, from persons having direct and personal knowledge of the applicant, or from reputable institutions. The letters should indicate familiarity of the writer with the applicant, approximate dates of employment (if any), and other pertinent statements indicating the writer's belief about the applicant's character and habits.

(4) The fact that an applicant for an original license is on probation as

a result of action under R. S. 4450, as amended, 46 U. S. C. 239, does not itself make such an applicant ineligible, provided he meets all the requirements for such original license. However, any original license issued under those circumstances will be subject to the same probationary conditions as were imposed against the seaman's certificates or licenses in proceedings under R. S. 4450, as amended. Any such applicant must file an application for license in the usual manner, and the offense for which he was placed on probation will be considered on the merits of the case in determining his fitness to hold the license applied for.

(5) Nothing in the regulations in this subpart shall be construed to permit the issuance of an original license during any period when a suspension without probation or a revocation imposed pursuant to R. S. 4450, as amended, is effective against any document held by him.

**§ 10.13-21 General requirements for renewal of license.**—(a) *Establishing eligibility.* Applicants for renewals of licenses are charged with the duty of establishing to the satisfaction of the Coast Guard that they possess all of the qualifications necessary before they shall be issued a renewal of license.

(b) *Application for renewal.* The applicant for renewal shall appear in person before an Officer in Charge, Marine Inspection, except where the applicant would be put to great inconvenience or expense to appear in person or is engaged in a service that necessitates his continuous absence from the United States. In such cases the license may be renewed by forwarding the following documents to the Officer in Charge, Marine Inspection, of the office which issued the license to be renewed:

(1) A letter of transmittal indicating reasons for not appearing in person and stating that to the best of his knowledge no physical incapacity exists.

(2) The oath of office on the form prescribed by the Coast Guard which has been duly executed before a person authorized to administer oaths.

(3) The license to be renewed.

(4) The currently valid license as first- or second-class radiotelegraph operator issued by the Federal Communications Commission. (This license will be sighted and returned to the applicant).

(c) *Fitness.* No license shall be renewed if title has been permanently relinquished or facts which would render a renewal improper have come to the attention of the Coast Guard.

(d) *Period of grace.* (1) Licenses shall be renewed within 12 months

after the date of expiration as shown on the license held. During this 12-month period of grace, the license is not valid.

(2) No license shall be renewed more than 30 days in advance of the date of expiration thereof, unless there are extraordinary circumstances that justify a renewal beforehand, in which case the reasons therefor must appear in detail upon the records of the Officer in Charge, Marine Inspection, renewing the license.

(e) *Surrender of expiring license.* An applicant for renewal shall surrender his license which is being renewed upon issuance of the new license.

§ 10.13-23 *Physical requirements for renewal.* (a) In the event it is found that an applicant for renewal of license obviously suffers from some physical or mental infirmity to a degree that, in the opinion of the Officer in Charge, Marine Inspection, would render him incompetent to perform the ordinary duties of a radio officer at sea, the applicant shall be required to undergo an examination by a medical officer of the Public Health Service to determine his competency. If the applicant subsequently produces a certificate from the Public Health Service to the effect that his condition has improved to a satisfactory degree, or is normal, he shall be qualified in this respect.

(b) Nothing herein contained shall debar an applicant who has lost the sight of one eye since obtaining his original license from securing a renewal of his license, provided he is qualified in all other respects, and the vision in his one eye passes the test required for the better eye of an applicant possessed of both eyes.

(c) In exceptional cases where an applicant would be put to great inconvenience or expense to appear before a medical officer of the United States Public Health Service, the physical examination or certification may be made by another reputable physician.

(d) Whenever an applicant shall apply for renewal of his license after 12 months after the date of its expiration, he shall be required to pass the physical examination required of an applicant for an original license.

§ 10.13-25 *Issuance of duplicate license.* (a) Whenever a person to whom a license has been issued loses his license, he shall report such loss to an Officer in Charge, Marine Inspection, who shall issue a duplicate license after receiving from such person a properly executed affidavit giving satisfactory evidence of such loss, and a record of the license from the Marine Inspection Office where it was issued. Such license shall be issued as

a duplicate by the addition of the following typewritten indorsement, "This license replaces License No. \_\_\_\_\_ issued at \_\_\_\_\_ on the above date," as well as the port and date of the duplicate issue.

(b) The duplicate license, issued for the unexpired term, shall have the same force and effect as the lost license.

(c) When a person reports the loss of his license, or when it is discovered that any license or license form has been stolen from a Marine Inspection Office or when such lost or stolen licenses are recovered, the Officer in Charge, Marine Inspection, shall immediately report the loss, theft, or recovery to the Commandant giving a description of the license and all facts incident to its loss, theft, or recovery.

§ 10.13-27 *Parting with or altering license.* (a) If the holder of any license voluntarily parts with it or places it beyond his personal control by pledging or depositing it with any other person for any purpose, he may be proceeded against in accordance with the provisions of R. S. 4450, as amended, 46 U. S. C. 239, looking to a suspension or revocation of his license.

(b) The holder of any license issued pursuant to the regulations in this subpart who shall change, by addition, interpolation, or erasure of any kind any license shall be subject to all the penalties provided by law; and any license so changed is null and void and without force and effect.

§ 10.13-29 *Suspension and revocation of licenses.* (a) Licenses issued pursuant to the regulations in this subpart shall be subject to suspension or revocation on the same ground and in the same manner and with like procedure as is provided in the case of suspension or revocation of licenses under the provisions of R. S. 4450, as amended, 46 U. S. C. 239.

(b) Whenever a license is revoked such license expires with such revocation and any license subsequently granted to such person shall be considered in the light of an original license except as to number of issue.

(c) No person whose license has been suspended or revoked shall be issued another license except upon approval of the Commandant.

(d) When a license which is about to expire is suspended, the renewal of such license may be withheld until the expiration of the period of suspension.

(e) When the license issued by the Federal Communications Commission upon which the license issued pursuant to the regulations in this subpart is predicated is suspended or revoked, such suspension or revocation shall operate as a suspension or revocation of the license issued under the regulations in this subpart. No

formal proceedings shall be required in such cases.

§ 10.13-33 *Right of appeal.* Whenever any person directly interested in or affected by any decision or action of any Officer in Charge, Marine Inspection, shall feel aggrieved by such decision or action with respect to the issuance of a license, he may appeal therefrom to the District Coast Guard Commander having jurisdiction. A like appeal shall be allowed from any decision or action of the District Coast Guard Commander to the Commandant, whose action shall be final. Such appeals shall be made in writing within 30 days after the date of decision or action appealed from. Pending the determination of the appeal, the decision of the Officer in Charge, Marine Inspection, shall remain in effect.

## PART 12—CERTIFICATION OF SEAMEN

### SUBPART 12.02—GENERAL REQUIREMENTS FOR CERTIFICATION

Section 12.02-11 (d) is amended by adding a new subparagraph (3), reading as follows:

§ 12.02-11 *General provisions respecting merchant mariner's documents.* \* \* \*

(d) \* \* \*

(3) A merchant mariner's document issued to a licensed radio officer will be indorsed as follows: "See License as Radio Officer." If a licensed radio officer qualifies as lifeboatman, the further indorsement, "Lifeboatman," will be placed on the merchant mariner's document. Qualifications for other ratings for which a radio officer is eligible may also be indorsed on the document. (R. S. 4405, 4417a, 4488, and 4551, as amended; Sec. 13, 38 Stat. 1169, as amended by sec. 1, 49 Stat. 1930, sec. 1, 2, 50 Stat. 199, sec. 1, 52 Stat. 753, 55 Stat. 579, 732, sec. 1, 49 Stat. 1544, sec. 7, 49 Stat. 1936, and sec. 5 (e), 55 Stat. 244, as amended, 46 U. S. C. 367, 375, 391a, 481, 643, 672, 672-1, 672-2, 672b, 689, 50 U. S. C. 1275; sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875 and Pub. Law 525, 80th Cong., 2d Sess.)

2. Section 12.02-13 is amended to read as follows:

§ 12.02-13 *Citizenship requirements.*

(a) Any person making application for a continuous discharge book or a certificate of identification or a merchant mariner's document representing a certificate of identification and claiming to be a citizen of the United States shall present acceptable evidence of such citizenship at the time of making application. No original document shall be issued to any person claiming to be a citizen of the

United States until such citizenship is established by acceptable evidence.

(b) Any person who has been issued a continuous discharge book or certificate of identification or merchant mariner's document showing question marks prior to the effective date of this section may at any time produce additional evidence of citizenship to a shipping commissioner or Officer in Charge, Marine Inspection. If the additional evidence produced satisfies the shipping commissioner or the Officer in Charge, Marine Inspection, to whom it is presented that the same is acceptable evidence of the citizenship of the person, such official may draw lines through the question marks and note the citizenship of the person in the space provided therefor, attesting the change, or reissue the certificate or document. Whenever such changes are made the official making the change shall immediately thereafter notify the Commandant.

(c) Acceptable evidence of citizenship is set forth in § 10.02-5 of this subchapter. (Secs. 5, 7, and 302, 49 Stat. 1935, 1936, 1992, 46 U. S. C. 672a, 689, 1132, and sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875)

3. Part 12 is amended by adding a new § 12.02-14, to follow § 12.02-13, reading as follows:

§ 12.02-14 *Nationality of aliens.*

(a) Any alien making application for a continuous discharge book or certificate of identification or merchant mariner's document representing a certificate of identification shall present acceptable evidence of nationality at the time of making application. No original document shall be issued to any alien until nationality is established by acceptable evidence.

(b) Any document of an official character showing the country of which the alien is a citizen or subject may be accepted as acceptable evidence of an alien's nationality. The following are examples of such a document:

(1) Declaration of intention to become a citizen of the United States made by the alien after 1929.

(2) A travel document in the nature of a passport issued by the government of the country of which the alien is a citizen or subject.

(3) A certificate issued by the consular representative of the country of which the alien is a citizen or subject.

(c) Should any doubt arise as to whether or not the document presented may be considered as acceptable evidence of the alien's nationality, the matter shall be referred to the Commandant for decision.

(d) (1) No documents shall be issued to any enemy alien. The term "enemy alien" shall include the following:

(i) All aliens of the age of 14 years or older who were or are citizens or subjects of Germany or Japan.

(ii) All aliens of the age of 14 years or older who at present are stateless but who at the time at which they became stateless were citizens or subjects of Germany or Japan.

(2) The term "enemy alien" shall not include the following:

(i) Former German or Japanese citizens or subjects who, before December 7, 1941, in the case of former Japanese citizens or subjects, and before December 8, 1941, in the case of former German citizens or subjects, became and are citizens or subjects of any nation other than Germany or Japan.

(ii) Austrians or Austrian-Hungarians (Austro-Hungarians) or Koreans who registered as such under the Alien Registration Act of 1940: *Provided*, That such persons have not at any time voluntarily become German or Japanese citizens or subjects.

(iii) All citizens or subjects of Italy, and all aliens who at present are stateless but who at the time at which they became stateless were citizens or subjects of Italy.

(iv) Aliens of enemy nationalities during their term of military service in the armed forces of the United States.

(3) Should any difficulties arise as to whether or not any person is an enemy alien, such case will be referred to the Commandant together with the date and place of birth and statements regarding the citizenship of the person whose status is in doubt. (Secs. 5, 7, and 302, 49 Stat. 1935, 1936, 1992, 46 U. S. C. 672a, 689, 1132, and sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875)

SUBPART 12.25—CERTIFICATES OF SERVICE FOR RATINGS OTHER THAN ABLE SEAMAN OR QUALIFIED MEMBER OF THE ENGINE DEPARTMENT

4. Section 12.25-15 *Radio operator* is deleted.

SUBCHAPTER C—MOTORBOATS, AND CERTAIN VESSELS PROPELLED BY MACHINERY OTHER THAN BY STEAM MORE THAN 65 FEET IN LENGTH

PART 28—SPECIFICATIONS AND PROCEDURE FOR APPROVAL OF EQUIPMENT

1. Section 28.4-4 *Specifications for block-cork life preserver* and Figure 1 are deleted.

2. Section 28.4-5 *Specifications for balsa-wood life preserver* is deleted.

3. Section 28.4-9 *Factory inspection* is deleted.

4. Section 28.4-10 *Manufacturer's affidavit* is deleted.

SUBCHAPTER D—TANK VESSELS

PART 37—SPECIFICATIONS FOR LIFESAVING APPLIANCES

1. Section 37.6-4 *Specifications for standard type block-cork life preserver* and Figure 1 are deleted.

2. Section 37.6-5 *Specifications for standard type balsa-wood life preserver* is deleted.

3. Section 37.6-7 *Factory inspection* is deleted.

4. Section 37.7-1 *Manufacturer's affidavit* is deleted.

SUBCHAPTER F—MARINE ENGINEERING

PART 54—UNFIRED PRESSURE VESSELS

Section 54.01-40 is amended to read as follows:

§ 54.01-40 *Tests*—(a) *New pressure vessels.* Upon completion of a new pressure vessel one of the following applicable hydrostatic tests shall be made in the presence of an inspector:

(1) Riveted construction:  $1\frac{1}{2}$  times the maximum allowable pressure.

(2) Brazed construction: 2 times the maximum allowable pressure. (See § 56.05-10 of this subchapter.)

(3) Welded construction: 2 times the maximum allowable pressure. (See § 56.05-10 of this subchapter.)

(4) Cast construction: 2 times the maximum allowable pressure.

(b) *Pressure vessels in service.* (1) Pressure vessels which have manholes or access openings permitting internal examination are not required to be hydrostatically tested. Pressure vessels, other than tubular heat exchangers and those used in refrigeration service, which cannot be examined internally, shall be tested hydrostatically to  $1\frac{1}{4}$  times the maximum allowable pressure biennially at the annual inspection.

(2) Tubular heat exchangers shall be examined under operating conditions at the annual inspection.

(3) Refrigeration units, gas condensers, receivers, evaporators, and direct expansion cooling coils shall be leak tested to their design pressure as indicated in Table 54.01-40 (b) (3).

TABLE 54.01-40 (b) (3)—REFRIGERATION LEAK TESTS

Refrigerant	Design pressure (leak test—gas)	
	High side p. s. i.	Low side p. s. i.
Ammonia..... NH <sub>3</sub>	300	150
Carbon Dioxide..... CO <sub>2</sub>	1,500	1,000
Freon-11..... CCl <sub>3</sub> F	40	40
Freon-12..... CCl <sub>2</sub> F <sub>2</sub>	235	150
Freon-21..... CHCl <sub>2</sub> F	75	40
Freon-22..... CHClF <sub>2</sub>	375	245
Freon-113..... C <sub>2</sub> Cl <sub>3</sub> F <sub>3</sub>	30	30
Freon-114..... C <sub>2</sub> Cl <sub>2</sub> F <sub>4</sub>	80	45

These tests shall be made every fourth year at the annual inspection.

(4) No gas tests shall be made aboard ship higher than the design pressure of the part of the system being tested. The refrigerant in the system may be used for this test. If the refrigerant has been removed, oil pumped dry nitrogen or bone dry carbon dioxide with a detectable amount of the refrigerant added, should be used as a testing medium. (Carbon dioxide should not be used to leak test an existing ammonia system.) In no case should air, oxygen, any flammable gas or any flammable mixture of gases be used for testing.

(R. S. 4405, 4417a, 4418, 4426, 4429-4434, 49 Stat. 1544, 54 Stat. 346, 1028, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 391a, 392, 404, 407-412, 463a, 1333, 50 U. S. C. 1275; and sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875)

#### PART 55—PIPING SYSTEMS

##### SUBPART 55.07—DETAIL REQUIREMENTS

1. Section 55.07-1 (c) is amended to read as follows:

###### § 55.07-1 *Material.* \* \* \*

(c) Lap-welded steel or iron pipe without diameter limitation may be used where the pressure does not exceed 350 pounds per square inch, or the temperature does not exceed 450° F. Furnace butt-welded steel or iron pipe without diameter limitation may be used where the pressure does not exceed 150 pounds per square inch, or the temperature does not exceed 450° F. Electric resistance-welded steel pipe may be used where the pressure does not exceed 350 pounds per square inch or the temperature does not exceed 650° F.

(R. S. 4405, 4417a, 4418, 4426, 4429-4434, 49 Stat. 1544, 54 Stat. 346, 1028, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 391a, 392, 404, 407-412, 463a, 1333, 50 U. S. C. 1275; and sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875)

2. Section 55.07-15 is amended by changing the descriptions of Figures 55.07-15 (f12), 55.07-15 (f13), and 55.07-15 (f17) to read as follows:

###### § 55.07-15 *Joints and flange connections.* \* \* \*

*Figures 55.07-15 (f12).* The flange of the type described and illustrated by Figure 55.07-15 (f11), except with the fillet weld omitted, may be used for class II piping for pressures not exceeding 150 pounds per square inch and temperatures not exceeding 450° F.

*Figure 55.07-15 (f13).* Flanges may be attached by expanding the pipe into the grooves machined in the hub of the flange and flaring the end of the pipe to an angle of not less than 20°. This type of flange is limited to a maximum pressure of 250 pounds per square inch at a temperature not exceeding 500° F. For class II piping and where the temperature does not ex-

ceed 450° F. It is not required that the ends of the pipe be flared.

*Figure 55.07-15 (f17).* The flange of the type described and illustrated by Figure 55.07-15 (f16), except with the brazing omitted, may be used for class II piping and where the temperature does not exceed 406° F.

(R. S. 4405, 4417a, 4418, 4426, 4429-4434, 49 Stat. 1544, 54 Stat. 346, 1028, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 391a, 392, 404, 407-412, 463a, 1333, 50 U. S. C. 1275; and sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875)

#### SUBCHAPTER C—OCEAN AND COASTWISE: GENERAL RULES AND REGULATIONS

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

Section 59.55 *Life preservers* is amended by deleting paragraph (f) *Specifications for standard type block-cork life preserver* and Figure 1, paragraph (g) *Specifications for standard type balsa-wood life preserver*, paragraph (i) *Factory inspection*, and paragraph (k) *Manufacturer's affidavit*, and by redesignating paragraph (j) *Shipboard inspections* as paragraph (c).

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

Section 60.48 *Life preservers* is amended by deleting paragraph (f) *Specifications for standard type block-cork life preserver* and Figure 1, paragraph (g) *Specifications for standard type balsa-wood life preserver*, paragraph (i) *Factory inspection*, and paragraph (k) *Manufacturer's affidavit*, and by redesignating paragraph (j) *Shipboard inspections* as paragraph (c).

#### SUBCHAPTER H—GREAT LAKES: GENERAL RULES AND REGULATIONS

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

Section 76.52 *Life preservers* is amended by deleting paragraph (f) *Specifications for standard type block-cork life preserver* and Figure 1, paragraph (g) *Specifications for standard type balsa-wood life preserver*, paragraph (i) *Factory inspection*, and paragraph (k) *Manufacturer's affidavit*, and by redesignating paragraph (j) *Shipboard inspections* as paragraph (c).

#### SUBCHAPTER I—BAYS, SOUNDS, AND LAKES OTHER THAN THE GREAT LAKES: GENERAL RULES AND REGULATIONS

##### PART 94—BOATS, RAFTS, BULKHEADS, AND LIFESAVING APPLIANCES

Section 94.52 *Life preservers* is amended by deleting paragraph (f)

*Specifications for standard type block-cork life preserver* and Figure 1, paragraph (g) *Specifications for standard type balsa-wood life preserver*, paragraph (i) *Factory inspection*, and paragraph (k) *Manufacturer's affidavit*, and by redesignating paragraph (j) *Shipboard inspections* as paragraph (c).

#### SUBCHAPTER J—RIVERS: GENERAL RULES AND REGULATIONS

##### PART 113—BOATS, RAFTS, BULKHEADS, AND LIFESAVING APPLIANCES

Section 113.44 *Life preservers* is amended by deleting paragraph (f) *Specifications for standard type block-cork life preserver* and Figure 1, paragraph (g) *Specifications for standard type balsa-wood life preserver*, paragraph (i) *Factory inspection*, and paragraph (k) *Manufacturer's affidavit*, and by redesignating paragraph (j) *Shipboard inspections* as paragraph (c).

#### SUBCHAPTER K—SEAMEN

##### PART 131—HOURS OF LABOR ON SHIPBOARD

Section 131.2 is amended to read as follows:

§ 131.2 *Division into three watches.* On vessels to which all of the provisions of section 2 of the Seamen's Act of 1915, as amended (49 Stat. 1933; 46 U. S. C. 673), apply, the licensed officers, sailors, coal passers, firemen, oilers, and water tenders shall, while at sea, be divided into at least 3 watches, the number in each watch to be as nearly equal as the division of the total number in each class will permit. The watches shall be kept on duty successively. The requirement for division into watches applies only to those classes of the crew specifically named in the aforesaid section 2: *Provided*, That in the case of radiotelegraph operators this requirement shall be applicable only when three or more radio officers are employed. (49 Stat. 1936, as amended, 46 U. S. C. 689, sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875, Pub. Law 525, 80th Cong., 2d Sess.)

Section 131.4 is amended by changing the first sentence to read as follows:

§ 131.4 *Officers in Charge, Marine Inspection, to note three-watch system in fixing complement of licensed officers and crew; licensed officers and crew of tugs and barges engaged in voyages of less than 600 miles.* Officers in Charge, Marine Inspection, will note that the 3-watch system extends to all licensed officers and to the sailors, coal passers, firemen, oilers,

and water tenders of all vessels to which all of the provisions of section 2 of the Seamen's Act of 1915, as amended (49 Stat. 1933; 46 U. S. C. 673), apply and will be governed accordingly in fixing the complement of licensed officers and crew, as authorized by R. S. 4463, as amended (46 U. S. C. 222): *Provided*, That in the case of radio telegraph operators this requirement shall be applicable only when three or more radio officers are employed. \* \* \*

(49 Stat. 1936, as amended, 46 U. S. C. 689, sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875, Pub. Law 525, 80th Cong., 2d Sess.)

**SUBCHAPTER N—EXPLOSIVES OR OTHER DANGEROUS ARTICLES OR SUBSTANCES, AND COMBUSTIBLE LIQUIDS ON BOARD VESSELS**

**PART 146—TRANSPORTATION OR STORAGE OF EXPLOSIVES OR OTHER DANGEROUS ARTICLES OR SUBSTANCES, AND COMBUSTIBLE LIQUIDS ON BOARD VESSELS**

**SUBPART—DETAILED REGULATIONS GOVERNING HAZARDOUS ARTICLES**

Section 146.27-100 is amended by changing the description in column 1 under "burlap cloth (Hessian)" as follows:

**§ 146.27-100 Table K—Classification: Hazardous Articles. \* \* \***

**Burlap cloth (Hessian):**

Burlap bags, new.

Burlap bags, used and washed.

Burlap bags, vacuum cleaned, wheel cleaned, or otherwise mechanically brushed.

The originating bill of lading or other shipping paper covering used bags shall bear the shipper's certifying statement that the bags have been thoroughly washed or cleaned and all traces of the previous lading removed therefrom.

Bags showing stains from oil, grease, or organic oxidizing materials shall not be shipped.

Washed bags shall not be baled or shipped unless thoroughly dry.

Burlap bags, used and unwashed or uncleaned.

**NOTE:** See also "Bags, nitrate of soda, empty and unwashed" in the inflammable solids table.

(R. S. 4472, as amended, and sec. 5 (e), 55 Stat. 244, 46 U. S. C. 170, 50 U. S. C. 1275, and sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875)

**SUBCHAPTER Q—SPECIFICATIONS**

**PART 160—LIFESAVING EQUIPMENT**

**SUBPART 160.002—LIFE PRESERVERS, KAPOK, ADULT AND CHILD (JACKET TYPE), MODELS 2, 3, 5 AND 6**

1. Section 160.002-1 (a) is amended by changing subparagraph (4) and

adding a new subparagraph (5), reading as follows:

**§ 160.002-1 Applicable specifications and plans—(a) Specifications. \* \* \***

(4) *Coast Guard Specification.* 164.003—Kapok, processed.

(5) *Joint Army-Navy Specification.* JAN-C-496—Clips, End.

2. Section 160.002-3 is amended by changing paragraphs (a), (b), (f), (g), (h), and (i) to read as follows:

**§ 160.002-3 Materials. \* \* \***

(a) *Kapok.* The kapok shall comply with subpart 164.003 of this subchapter and shall be properly processed.

(b) *Envelope.* The life preserver envelope, or cover, shall be made of cotton drill without sizing, thread count approximately 74 x 60, having a minimum breaking strength of 100 pounds in the warp and 80 pounds in the filling when tested in accordance with Federal Specification CCC-T-191, and may be treated with a clear, uncolored, fire-resistive substance of an approved type. Cotton drills conforming to Navy Department Specification 27D1 (except as to color) or those meeting the requirements for Type A drill contained in Federal Specification CCC-D-651, are acceptable. The color shall be Indian Orange, Cable No. 70072, Standard Color Card of America, Ninth Edition, issued by the Textile Color Association of the United States, Inc., 200 Madison Avenue, New York, N. Y. Samples of fabric conforming to this color requirement may be obtained upon request. The fastness of the color shall be rated "good" when tested in accordance with Federal Specification CCC-T-191, Section XIII, paragraph 2C, Test No. 2 for light, paragraph 4 for laundering, and paragraph 6 for water.

(f) *Tie tapes and drawstrings.* The tie tapes at the neck and the lower drawstrings shall be made of 1 1/4 inch cotton tape weighing not less than 0.3 ounce per linear yard, and having a minimum breaking strength of 200 pounds. The tie tapes and drawstrings shall not be treated with a fire-resistive substance.

(g) *Body strap.* The body strap shall be made of one-inch cotton webbing having a minimum breaking strength of 400 pounds. Types IIb, III, IV, V, or VI, 1" webbing meeting the requirements of U. S. Army Specifications 6-185, listed in § 160.002-1 are satisfactory.

(h) *Dee rings and tip.* The Dee rings and tip shall be made of brass or bronze. The Dee ring ends shall be welded together to form a com-

plete ring. They shall be of the approximate size indicated by Dwg. No. F-49-6-1, Sheet 1, or by Dwg. No. F-49-6-5, Sheet 1, and the tip shall be a ball type end clip as described in Joint Army-Navy Specification JAN-C-496. When assembled, the complete body strap with Dee ring fastening arrangement shall have a breaking strength of not less than 360 pounds.

(i) *Reinforcing tape.* The reinforcing tape shall be made of 3/4 inch cotton tape weighing not less than 0.18 ounce per linear yard and having a minimum breaking strength of 120 pounds. This cotton tape may be treated with an approved fire-resistive substance.

(R. S. 4405, 4417a, 4426, 4482, 4488, 4491, 4492, sec. 11, 35 Stat. 428, 49 Stat. 1544, 54 Stat. 163-167, 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 391a, 396, 404, 475, 481, 489, 490, 526-526t, 1333, 50 U. S. C. 1275, and sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875)

3. Section 160.002-5 (a) is amended by adding the following sentence:

**§ 160.002-5 Inspections and tests—**

(a) *General.* \* \* \* The manufacturer shall provide a suitable place and necessary apparatus for the use of the inspector in conducting tests at the place of manufacture.

(R. S. 4405, 4417a, 4426, 4482, 4488, 4491, 4492, sec. 11, 35 Stat. 428, 49 Stat. 1544, 54 Stat. 163-167, 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 391a, 396, 404, 475, 481, 489, 490, 526-526t, 1333, 50 U. S. C. 1275, and sec. 101, Reorg. Plan No. 3 of 1946, 11 F. R. 7875)

**SUBPART 160.003—LIFE PRESERVERS, CORK (JACKET TYPE), MODELS 31 AND 35**

Part 160 is amended by adding a new subpart 160.003 reading as follows:

Sec.	
160.003-1	Applicable specifications and plans.
160.003-2	Types and models.
160.003-3	Materials.
160.003-4	Construction.
160.003-5	Inspections and tests.
160.003-6	Marking.
160.003-7	Procedure for approval.

**AUTHORITY:** §§ 160.003-1 to 160.003-7, issued under R. S. 4405, 4417a, 4426, 4482, 4488, 4491, 4492, section 11, 35 Stat. 428, 49 Stat. 1544, 54 Stat. 163-167, 346, and section 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 391a, 396, 404, 475, 481, 489, 490, 526-526t, 1333, 50 U. S. C. 1275, and section 101, Reorganization Plan No. 3 of 1946, F. R. 7875.

**§ 160.003-1 Applicable specifications and plans—(a) Specifications.** The following specifications, of the issue in effect on the date life pre-

servers are manufactured, form a part of this subpart:

(1) *Navy Department specification.*  
27D1.....Drill, cotton, fire and weather-resistant.

(2) *Federal specifications.*

V-T-276.....Thread; cotton.  
V-T-291.....Thread; linen.  
CCC-D-651.....Drill, unbleached.  
CCC-T-191.....Textiles; general specifications; test methods.  
DDD-S-751.....Stitches; seams; and stitching.

(3) *Coast Guard specification.*

164.001.....Cork, sheet.

(b) *Plan.* The following plan of the issue in effect on the date life preservers are manufactured forms a part of this subpart:

Dwg. No. 160.003-1 (b) Cork and balsawood life preserver (adult).

§ 160.003-2 *Types and models.* (a) Life preservers specified by this subpart shall be of the following types and models:

Type A—Adult: Model 31—Adult cork life preserver (jacket type).

Type B—Child: Model 35—Child cork life preserver (jacket type).

§ 160.003-3 *Materials.*—(a) *Cork.* The cork blocks shall comply with subpart 164.001 of this subchapter. Cork blocks from life preservers may be reused if in good condition and in compliance with subpart 164.001 of this subchapter.

(b) *Envelope.* The life preserver envelope, or cover, shall be made of cotton drill without sizing, thread count approximately 74 x 60, having a minimum breaking strength of 100 pounds in the warp and 80 pounds in the filling when tested in accordance with Federal Specification CCC-T-191, and may be treated with a clear, uncolored, fire-resistant substance of an approved type. Cotton drills conforming to Navy Department Specification 27D1 (except as to color) or those meeting the requirements for Type A drill contained in Federal Specification CCC-D-651, are acceptable. The color shall be Indian Orange. Cable No. 70072, Standard Color Card of America, Ninth Edition, issued by The Textile Color Card Association of the United States, Inc., 200 Madison Avenue, New York, N. Y. Samples of fabric conforming to this color requirement may be obtained upon request. The fastness of the color shall be rated "good" when tested in accordance with Federal Specification CCC-T-191, section XIII, paragraph 2C, Test No. 2 for light, paragraph 4 for laundering, and paragraph 6 for water.

(c) *Tie tapes and body straps.* The tie tapes at the neck and the lower body straps shall be 1½ inch cotton tape, weighing not less than

0.3 ounce per linear yard, and having a minimum breaking strength of 200 pounds. The tie tapes and body straps shall not be treated with a fire-resistant substance.

(d) *Thread.* The thread shall be No. 25, three-cord linen complying with Table I of Federal Specification V-T-291, or heavy cotton thread, Type IIIB, designation 10/4, complying with Table IV of Federal Specification V-T-276. Alternate threads will be given special consideration.

§ 160.003-4 *Construction.*—(a) *General.* This specification covers life preservers which essentially consist of a vest-cut envelope containing pockets in which are enclosed blocks of buoyant material, the life preserver being secured with tapes to provide reversibility and adjustment for fitting it to the body. The type shall conform to Dwg. No. 160.003-1 (b). Child size life preservers are to be of the same general form and construction and conform in every respect, as regard material and design, to the adult size with the exception that the size is to be reduced approximately one-third.

(b) *Envelope.* The envelope shall be of not more than two pieces, one piece for either side, cut to the pattern shown on Dwg. No. 160.003-1 (b) for adult size, and joined by seams and stitching as shown on the drawing.

(c) *Buoyant material.*—(1) *Dimensions.* The dimensions of the buoyant material for Type A, Adult size life preservers shall be as follows:

4 blocks—11" x 5" x 1½"  
4 blocks—8" x 5" x 1½"

(2) *Forming.* The corners and edges of the blocks shall be slightly rounded or beveled. The surface, edges, and corners of the buoyant material shall be of such smoothness as will prevent undue destruction of the covering and present a smooth surface to provide a suitable backing for legible stenciling or stamping on the cover of the required marking. If blocks are of more than one piece of buoyant material, the pieces shall be neatly fitted and secured together by waterproof glue or by dowel pins or skewers, or by a combination of waterproof glue and dowel pins or skewers.

(d) *Tie tapes and body straps.* The tie tapes at the neck and the two body straps (one body strap is located on each side of the life preserver) shall be secured by stitching through both thicknesses of the envelope as indicated by Dwg. 160.003-1 (b), and the free ends, which shall extend approximately 12 inches from the edges of the life preserver, shall be doubled over and stitched.

(e) *Stitching.* All machine stitching shall be short lock stitch, conforming to Stitch Type 301 of Federal Specification DDD-S-751, with not less than 7 nor more than 9 stitches to the inch. The lower longitudinal edge of the jacket shall be turned to a roll and rope stitched with double thread, not less than 2½ stitches to the inch, or it may be machine sewn.

(f) *Workmanship.* Life preservers shall be of first-class workmanship and shall be free from any defects materially affecting their appearance or serviceability.

§ 160.003-5 *Inspections and tests.*—

(a) *General.* An inspector shall examine all life preservers at the place of manufacture for compliance with this specification. Samples of materials entering into the construction may be taken at random by the inspector and tests made for compliance with the applicable requirements. After satisfying himself that the life preservers have been manufactured according to this specification, he shall select indiscriminately from each lot of 250 or less, at least one life preserver to be tested for buoyancy as specified by paragraph (b) of this section. If the specimen life preserver passes the buoyancy test, the lot shall be acceptable as to buoyancy. If the specimen life preserver fails the buoyancy test, ten additional specimen life preservers shall be selected at random from the lot and tested for buoyancy. If all the ten additional specimen life preservers pass the test, the lot shall be acceptable as to buoyancy. If any one of the ten additional specimen life preservers fails the buoyancy test, the lot shall be rejected. Rejected lots may be tested 100% by the manufacturer and all nonconforming units eliminated, whereupon the remainder of the lot may be resubmitted for official inspection. When any specimen life preserver shall fail the buoyancy test, ten specimen life preservers shall be selected at random and tested from the next succeeding lot submitted for official inspection. When the inspector has satisfied himself that the life preservers submitted for inspection are of a type officially approved in the name of the company, and that such life preservers meet the requirements of this specification, they shall be plainly marked in waterproof ink with the words, "Approved, U. S. Coast Guard, (Inspection date), (Inspector's initials), (Port)." The manufacturer shall provide a suitable place and the necessary apparatus for the use of the inspector in conducting tests at the place of manufacture.

(b) *Buoyancy test.* Place the life preserver in a weighted wire cage and

submerge for forty-eight hours in a tank of fresh water so the top is approximately two inches below the surface. The weights shall be more than sufficient to submerge the cage with the enclosed life preserver. The buoyancy shall be determined to equal the weight of the weighted cage in the water less the weight of the cage inside. The Type A Adult life preserver shall provide not less than 16½ pounds buoyancy, and the Type B Child life preserver shall provide not less than 11 pounds buoyancy.

§ 160.003-6 *Marking*—(a) *General*. Each life preserver shall be plainly marked in waterproof ink on a front compartment with the word, "Adult" or "Child" as the case may be, with the model number, the kind of buoyant material, the name and address of the manufacturer, and the official approval number assigned to the life preserver.

§ 160.003-7 *Procedure for approval*—(a) *General*. Life preservers are approved only by the Commandant, U. S. Coast Guard, Washington, D. C. Each model life preserver is considered separately. Correspondence pertaining to the subject matter of this specification shall be addressed to the Commander of the Coast Guard District in which the factory is located. The Commander of the district will detail a marine inspector to the factory to observe the production facilities and manufacturing methods and to select at random, from not less than ten life preservers already manufactured, not less than three life preservers for test in accordance with § 160.003-5 (b). A copy of the inspector's report, together with one specimen life preserver, will be forwarded to the Commandant for assignment of an official approval number.

#### SUBPART 160.004—LIFE PRESERVERS, Balsa Wood (JACKET TYPE), MODELS 41 AND 45

Part 160 is amended by adding a new subpart 160.004 reading as follows:

- Sec.  
160.004-1 Applicable specifications and plans.  
160.004-2 Types and models.  
160.004-3 Materials.  
160.004-4 Construction.  
160.004-5 Inspections and tests.  
160.004-6 Marking.  
160.004-7 Procedure for approval.

AUTHORITY: §§ 160.004-1 to 160.004-7 issued under R. S. 4405, 4417a, 4426, 4482, 4488, 4491, 4492, section 11, 35 Stat. 428, 49 Stat. 1544, 54 Stat. 163-167, 346, and section 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 391a, 396, 404, 475, 481, 489, 490, 526-526t, 1333, 50 U. S. C.

1275, and section 101, Reorganization Plan No. 3 of 1946, 11 F. R. 7875.

§ 160.004-1 *Applicable specifications and plan*—(a) *Specifications*. The following specifications, of the issue in effect on the date life preservers are manufactured, form a part of this subpart:

##### (1) *Coast Guard Specifications*.

- 160.003—Life preservers, cork (jacket type) models 31 and 35.  
164.002—Balsa wood.

(b) *Plan*. This shall be the same as § 160.003-1 (b).

§ 160.004-2 *Types and models*. (a) Life preservers specified by this subpart shall be of the following types and models:

- Type A—Adult: Model 41—Adult balsa wood life preserver (jacket type).  
Type B—Child: Model 45—Child balsa wood life preserver (jacket type).

§ 160.004-3 *Materials*—(a) *Balsa wood*. Balsa wood blocks shall be new wood complying with subpart 164.002 of this subchapter of a density to meet the requirements for "Density B". Reuse of balsa wood blocks from old life preservers or other devices is not permitted.

(b) *Envelope*. This shall be the same as § 160.003-3 (b).

(c) *Tie tapes and body straps*. This shall be the same as § 160.003-3 (c).

(d) *Thread*. This shall be the same as § 160.003-3 (d).

(e) *Coating*. Coating for the balsa wood blocks shall be a suitable waterproofing substance, such as "Hydrotuf," "Synthetic Plasoleum," "Balsa Wood Coating," or other substance of equal quality and effectiveness.

NOTE: "Hydrotuf," "Synthetic Plasoleum," and "Balsa Wood Coating" are trade names for waterproof substances for covering balsa wood, and are furnished by the Atlantic-Pacific Mfg. Corp., 124 Atlantic Ave., Brooklyn 2, N. Y.; Revertex Corp. of America, 3708 Northern Blvd., Long Island City, N. Y.; and Akron Paint & Varnish Co., Akron, Ohio, respectively.

§ 160.004-4 *Construction*—(a) *General*. This shall be the same as § 160.003-4 (a).

(b) *Envelope*. This shall be the same as § 160.003-4 (b).

(c) *Buoyant material*—(1) *Dimensions*. This shall be the same as § 160.003-4 (c) (1).

(2) *Forming*. This shall be the same as § 160.003-4 (c) (2).

(3) *Coating*. The balsa wood blocks shall be given a copious coating with a waterproof coating material which is in accordance with § 160.004-3 (e), and be allowed to dry thoroughly before being inserted in the pockets of the envelope.

(d) *Tie tapes and body straps*. This shall be the same as § 160.003-4 (d).

(e) *Stitching*. This shall be the same as § 160.003-4 (e).

(f) *Workmanship*. This shall be the same as § 160.003-4 (f).

§ 160.004-5 *Inspections and tests*—(a) *General*. This shall be the same as § 160.003-5 (a).

(b) *Buoyancy test*. This shall be the same as § 160.003-5 (b).

§ 160.004-6 *Marking*—(a) *General*. This shall be the same as § 160.003-6 (a).

§ 160.004-7 *Procedure for approval*—(a) *General*. This shall be the same as § 160.003-7 (a).

#### PART 162—ENGINEERING EQUIPMENT

Part 162 is amended by adding a new subpart 162.015 reading as follows:

#### SUBPART 162.015—FLAME ARRESTERS, BACKFIRE (FOR CARBURETORS), FOR MERCHANT VESSELS AND MOTORBOATS

- Sec.  
162.015-1 Applicable specifications.  
162.015-2 Type.  
162.015-3 Materials, construction, and workmanship.  
162.015-4 Inspections and testing.  
162.015-5 Marking.  
162.015-6 Procedure for approval.

AUTHORITY: §§ 162.015-1 to 162.015-6 issued under R. S. 4405, and 54 Stat. 163-167, as amended; 46 U. S. C. 375, 526-526t, and section 101, Reorganization Plan No. 3 of 1946.

§ 162.015-1 *Applicable specifications*. (a) There are no other specifications applicable to this subpart.

§ 162.015-2 *Type*. (a) This specification covers the design and construction of backfire flame arresters of the type intended for installation on carburetor air intakes of internal combustion engines. The term "backfire flame arrester" means any device or assembly of a cellular, tubular, or baffle arrangement, or such other type as may be approved by the Commandant, which is suitable for arresting the propagation of backfire flame to the surrounding atmosphere through the air intakes.

§ 162.015-3 *Materials, construction, and workmanship*. (a) The device shall be of first-class workmanship and shall be free from imperfections of manufacture which may affect its serviceability.

(b) The device or assembly shall be of substantial construction and shall be capable of withstanding internal pressures resulting from explosions without distortion or damage.

(c) The flame arrester housing and grid element shall be of such corrosion-resistant material as may be accepted by the Commandant.

(d) The design and construction of the flame arrester shall permit easy

inspection and cleaning of the grid or arrester element.

(e) Non-metallic materials shall not be permitted in the construction of the backfire flame arrester.

(f) The arrester grid element shall be fitted on or in the arrester body in such a manner as to prevent the flame from by-passing the element. All joints in the flame arrester, which are subjected to explosive pressures, shall be of the metal-to-metal type. Gasketed joints will not be permitted.

(g) Arrester element shall be so designed as to permit minimum restriction to the flow of air through the intake.

(h) The flame arrester assembly shall be so constructed that its effectiveness will not be impaired by vibrations encountered under actual service conditions.

(i) Means shall be provided to securely fasten the device to the air intake by pipe threaded connection, clamp, or clamp screws, or by such means as may be accepted by the Commandant.

(j) The housing of the arrester shall be designed to withstand the internal pressures resulting from explosions without distortion or damage.

§ 162.015-4 *Inspections and testing*—(a) *General*. Backfire flame arresters for carburetors may be subject to inspection and tests at the plant of the manufacturer. The inspector may conduct such tests and examinations as may be necessary to determine compliance with this specification.

§ 162.015-5 *Marking*. (a) Each backfire flame arrester shall be permanently and legibly marked with the style, type, or other designation of the manufacturer, the size, and the name or registered trademark of the manufacturer.

§ 162.015-6 *Procedure for approval*—(a) *General*. Backfire flame arresters installed on carburetors of internal combustion engines shall be approved for such use on merchant vessels and motorboats only by the Commandant, U. S. Coast Guard, Washington 25, D. C. Correspondence pertaining to the subject matter of this specification shall be addressed to the Commander of the Coast Guard District in which the factory is located.

(b) *Drawings and specifications*. Manufacturers desiring approval of a new design or type of backfire flame arrester shall submit drawings in quadruplicate showing the design of the device, the sizes and material specifications of component parts, and the detail construction of the arrester element.

(c) *Pre-approved tests*. Before approval is granted, manufacturers may have tests conducted, or submit evidence that such tests have been conducted, and the backfire flame arrester has been found acceptable by the U. S. Navy, Underwriters' Laboratories, Factory Mutual Laboratories, or by a properly supervised and inspected test laboratory acceptable to the Commandant, relative to determining the vapor-air explosion resistance of representative samples of the device in the size for which approval is desired. The explosion resistance tests shall conclusively indicate that, (1) the device can withstand the maximum explosive pressures of vapor-air test mixtures, and (2) the device can resist the propagating effects of the vapor-air test mixture, without distortion or damage.

Dated: October 27, 1948.

[SEAL] J. F. FARLEY,  
Admiral, U. S. Coast Guard,  
Commandant.

[F. R. Doc. 48-9608; Filed, Oct. 29, 1948;  
8:52 a. m.; 13 F. R. 6415, Oct. 30, 1948.]

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

[CGFR 48-38]

##### CANCELLATION OF GENERAL WAIVERS

Pursuant to the authority vested in me, as Commandant, United States Coast Guard, by the act of March 31, 1947 (Public Law 27, 80th Congress, 1st Session), as amended by the act of July 31, 1947 (Public Law 293, 80th Congress, 1st Session), and as amended by section 2 of the act of February 27, 1948 (Public Law 423, 80th Congress, 2d Session), I hereby find it no longer necessary in the orderly reconversion of the merchant marine from wartime to peacetime operations to continue in effect the general waivers of navigation and vessel inspection laws and regulations listed below, since such waivers have served their purpose:

Therefore, it is ordered, That the general waivers of navigation and vessel inspection laws and regulations listed below shall be canceled, effective upon date of publication of this order in the Federal Register: *Provided*, That nothing herein shall impair the continuing effectiveness of any individual waiver effectuated on or before such date issued pursuant to any general waiver order listed below, nor shall any penalty of law be imposed because of failure to comply with any provision of law or regulation the waiver of which was made effective pursuant thereto.

1. Investigation of Marine Casualties, dated January 12, 1942, 7 F. R. 258, 46 CFR 1943 Supp., page 2079.

2. Name and Home Port of Certain Vessels Operating in Foreign and Intercoastal Trade, dated February 27, 1942, 7 F. R. 1601, 46 CFR 1943 Supp., page 2078.

3. Able Seamen and Qualified Members of Engine Department, dated March 26, 1942, 7 F. R. 2515, 46 CFR 1943 Supp., page 2078.

4. Waivers of Navigation Laws Confirmed, dated April 15, 1942, 7 F. R. 2868, 46 CFR 1943 Supp., page 2073.

5. Employment of Aliens as Unlicensed Crew Members, as amended, dated June 13, 1942, 7 F. R. 4515, 46 CFR 1943 Supp., page 2081.

6. Authorization for Commandant, U. S. Coast Guard, to Invoke General Waiver of Navigation Laws, as amended, dated October 1, 1942, 7 F. R. 7979, 46 CFR 1943 Supp., page 2074.

7. Amendment to Wartime Regulations for Able Seamen Certificates, dated October 15, 1942, 7 F. R. 8403, 46 CFR 1943 Supp., page 2079.

8. War Department Vessels, dated August 25, 1943, 8 F. R. 11876, 46 CFR 1943 Supp., page 2076.

9. Vessels Manned by Military Personnel, dated September 21, 1943, 8 F. R. 12952, 46 CFR 1943 Supp., page 2076.

10. Navy Department Vessels, dated November 11, 1943, 8 F. R. 15529, 46 CFR 1943 Supp., page 2077.

11. Monthly Reports of Number of Passengers Carried on Ocean and Coastwise Vessels, dated May 5, 1944, 9 F. R. 4904, 46 CFR 1944 Supp., page 3476.

12. Deep Sea Sounding Machines on 176 Foot Design 381 Army Vessels, dated August 19, 1944, 9 F. R. 10267, 46 CFR 1943 Supp., page 3473.

13. Life Rafts on United States Army 176 Foot Supply Vessels, Design No. 381; United States Army 180 Foot Tankers, Design No. 294, dated December 16, 1944, 9 F. R. 14784, 46 CFR 1944 Supp., page 3474.

14. Slop Chest; Minimum Specifications for Vessels, dated January 16, 1945, 10 F. R. 732, 46 CFR 1945 Supp., page 4233.

15. Inspection of Auxiliary Bollers to be Installed on Certain United States Maritime Commission Vessels, dated January 22, 1945, 10 F. R. 900, 46 CFR 1945 Supp., page 4234.

16. Nonreversible Life Preservers for Military Personnel, dated February 28, 1945, 10 F. R. 2445, 46 CFR 1945 Supp., page 4235.

17. Lifesaving Equipment on Certain Army Steam Tugs, dated March 13, 1945, 10 F. R. 2837, 46 CFR 1945 Supp., page 4236.

18. Deck Officers, Proficiency in Communications, dated March 30, 1945, 10 F. R. 3562, 46 CFR 1945 Supp., page 4230.

19. Marine Engineering and Material Specifications, Six-Way Valves Containing Cast Iron in Piping to Hydraulic Steering Gear, dated May 22, 1945, 10 F. R. 5961, 46 CFR 1945 Supp., page 4239.

20. Cast Iron Four-Way Valves in Piping to Hydraulic Steering Gear, dated June 11, 1945, 10 F. R. 7057, 46 CFR 1945 Supp., page 4240.

21. Load Lines for Great Lakes Voyages, dated September 12, 1946, 11 F. R. 10436, 46 CFR 1946 Supp., page 6553.

(Pub. Laws 27, 293, 423, 80th Cong.)

Dated: August 9, 1948.

MERLIN O'NEILL,  
Rear Admiral, U. S. Coast Guard,  
Acting Commandant.

[F. R. Doc. 48-7297; Filed, Aug. 12, 1948;  
8:50 a. m.; 13 F. R. 4695; Aug. 13, 1948.]

## Equipment Approved by the Commandant

### APPROVAL OF EQUIPMENT AND COR- RECTION OF PRIOR DOCUMENTS

By virtue of the authority vested in me as Commandant, United States Coast Guard, by R. S. 4405 and 4491, as amended (46 U. S. C. 375, 489), and section 101 of Reorganization Plan No. 3 of 1946 (11 F. R. 7875), as well as the additional authorities cited as specific items below, the following corrections of prior documents and approvals of equipment are prescribed and the approvals shall be effective for a period of 5 years from date of publication in the Federal Register unless sooner canceled or suspended by proper authority.

### CLEANING PROCESS FOR LIFE PRESERVERS

Note: When buoyancy fillers are not removed from envelope covers during cleaning process.

Approval No. 160.006/14/0, Magaril cleaning process for cork and balsa wood life preservers with permanently installed buoyant inserts, as outlined in Coast Guard Inspector's test report, dated June 9, 1948, describing cleaning process submitted by Magaril, Inc., Bordentown, N. J.

(R. S. 4417a, 4426, 4488, 4492, 35 Stat. 428, 49 Stat. 1544, 54 Stat. 164, 166, 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 391a, 396, 404, 481, 490, 526e, 526p, 1333, 50 U. S. C. 1275; 46 CFR 160.006-4)

### BUOYANT CUSHIONS, STANDARD

Note: Cushions are for use on motor-boats of classes A, 1, or 2 not carrying passengers for hire.

Approval No. 160.007/69/0, standard kapok buoyant cushion, U. S. C. G., Specification 160.007, manufactured by the Denison Mattress Factory, 1001-31 West Owing Street, Denison, Tex.

Approval No. 160.007/70/0, standard kapok buoyant cushion, U. S. C. G., Specification 160.007, manufactured by the Reed Furniture Manufacturing Co., 8206 East Admiral Place, Tulsa, Okla.

Approval No. 160.007/71/0, standard kapok buoyant cushion, U. S. C. G., Specification 160.007, manufactured by the Hacker Boat Co., 9 Judge Street, Mount Clemens, Mich.

(54 Stat. 164, 166; 46 U. S. C. 526e, 526p; 46 CFR 25.4-1, 28.4-8)

### BUOYANT CUSHIONS, NONSTANDARD

Approval No. 160.008/379/0, 15" x 15" x 2" rectangular buoyant cushion, 20 oz. kapok unsupported plastic film cover and straps, Dwg. No. 3-17-48 manufactured by Atlantic-Pacific Manufacturing Corp., 124 Atlantic Avenue, Brooklyn 2, N. Y.

Approval No. 160.008/382/0, 15" x 15" x 2" rectangular buoyant cushion, 20 oz. kapok, unsupported plastic film cover and straps, Dwg. No. 12-31-47, manufactured by Atlantic-Pacific Manufacturing Corp., 124 Atlantic Avenue, Brooklyn 2, N. Y.

Approval No. 160.008/395/0, 12" x 14" x 2" seat, 15 oz. kapok; 12" x 14" x 2" back, 15 oz. kapok; double buoyant cushion, U. S. C. G., Specification 160.008, Dwg. No. 5-11-48, manufactured by Atlantic-Pacific Manufacturing Corp., 124 Atlantic Avenue, Brooklyn 2, N. Y.

Approval No. 160.008/396/0, 15" x 15" x 2" seat, 20 oz. kapok; 15" x 15" x 2" back, 20 oz. kapok; double buoyant cushion, U. S. C. G., Specification 160.008, Dwg. No. 5-11-48, manufactured by Atlantic-Pacific Manufacturing Corp., 124 Atlantic Avenue, Brooklyn 2, N. Y.

Approval No. 160.008/397/0, 12" x 67" x 2" rectangular buoyant cushion, 72 oz. kapok, U. S. C. G., Specification 160.008, Dwg. No. 5-5-48, manufactured by Atlantic-Pacific Manufacturing Corp., 124 Atlantic Avenue, Brooklyn 2, N. Y.

(54 Stat. 164, 166; 46 U. S. C. 526e, 526p; 46 CFR 25.4-1, 28.4-8)

### WINCHES, LIFEBOAT

Approval No. 160.015/45/0, Type CL 7.5 lifeboat winch, approved for maximum working load of 35,000

pounds pull at the drums (17,500 pounds per fall), identified by General Arrangement Dwg. No. CL-17.5-1 dated December 6, 1946, submitted by the Marine Safety Equipment Corp., Point Pleasant, N. J.

(R. S. 4417a, 4426, 4488, 49 Stat. 1544, 54 Stat. 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 391a, 404, 481, 1333, 50 U. S. C. 1275; 46 CFR 37.1-5, 59.3a, 60.21, 76.15a, 94.14a)

### LIFEBOATS

Approval No. 160.035/137/1, 16.0' x 5.5' x 2.38' steel, oar-propelled lifeboat, 12-person capacity, identified by General Arrangement Dwg. No. 557-A dated March 10, 1944, and revised April 24, 1948, submitted by Boatcraft Co., Inc., corner of Cropsey and 26th Avenue, Brooklyn 14, N. Y. (This supersedes Approval No. 160.035/137/0 in the Federal Register dated July 31, 1947.)

Approval No. 160.035/198/0, 14.0' x 5.2' x 2.3' steel, oar-propelled lifeboat, 10-person capacity, identified by General Arrangement Dwg. No. 1403, dated June 14, 1946, submitted by Boatcraft Company, Inc., corner of Cropsey and 26th Avenue, Brooklyn 14, N. Y.

### SAFETY VALVES

Approval No. 162.001/85/0, Cat. No. 2501, Crane Co. pop safety valve, bronze body and bonnet, enclosed spring, single lifting lever, screwed inlet and outlet, maximum working pressure 30 p. s. i., Dwg. No. A-24144, Rev. B, approved for sizes 1½" and 2" diameters, sizes ¾", 1", and 1¼" diameters are approved only for heating boiler service, manufactured by Crane Co., 836 South Michigan Avenue, Chicago 5, Ill.

Approval No. 162.001/86/0, SPL Cat. No. 2501, Crane Co. pop safety valve, bronze body and bonnet, enclosed spring, single lifting lever, flanged inlet and screwed outlet, maximum working pressure 250 p. s. i., maximum working temperature 406° F., Dwg. No. A-24158, Rev. B, approved for sizes 1½" and 2" diameters, manufactured by Crane Co., 836 South Michigan Avenue, Chicago 5, Ill.

(R. S. 4417a, 4418, 4426, 4433, 49 Stat. 1544, 54 Stat. 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 391a, 392, 404, 411, 1333, 50 U. S. C. 1275, 46 CFR, Part 52)

### COMBUSTIBLE MATERIALS

Approval No. 164.009/16/0, "G-B Ultralite MC Fiberglass Hull Insulation" glass wool insulation type incombustible material identical to that described in National Bureau of Standards Test Report No. TG 3610-1519; FP 2622, dated May 19, 1948,

approved in a one-pound per cubic foot density, manufactured by Gustin-Bacon Manufacturing Co., 1412 West 12th Street, Kansas City 7, Mo. (R. S. 4417a, 4426, 49 Stat. 1384, 1544, 54 Stat. 346, 1028, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 369, 391a, 404, 463a, 1333, 50 U. S. C. 1275; 46 CFR, Part 144)

#### CORRECTIONS OF PRIOR DOCUMENTS

1. In Approval No. 160.035/204/0 for a steel oar-propelled lifeboat, change "20-person capacity" to "18-person capacity," which was published in Coast Guard document CGFR 48-12, Federal Register document 48-2903, filed March 31, 1948, and published in the Federal Register dated April 1, 1948 (13 F. R. 1800).

2. In Approval No. 160.032/101/0 for a mechanical davit change date of arrangement Dwg. No. 3211 from "13 March 1948" to "13 April 1948"; in Approval No. 162.032/102/0, for a mechanical davit change the date of arrangement Dwg. No. 2082-10 from "September 22, 1947" to "August 22, 1947"; and in Approval No. 160.035/159/0 for a steel oar-propelled lifeboat, change the revised date of general arrangement and construction Dwg. No. 1215 from "April 27, 1947" to "April 21, 1947"; which approvals were listed in Coast Guard document CGFR 48-31, Federal Register document 48-5132, filed June 8, 1948, and published in the Federal Register June 9, 1948 (13 F. R. 3099).

Dated: June 25, 1948.

[SEAL] J. F. FARLEY,  
Admiral, U. S. Coast Guard,  
Commandant.

[F. R. Doc. 48-5893; Filed, June 30, 1948;  
8:52 a. m.; 13 F. R. 3678, July 1, 1948]

By virtue of the authority vested in me, as Commandant, United States Coast Guard, by R. S. 4405, 4491, as amended; 46 U. S. C. 375, 489; and section 101 of Reorganization Plan No. 3 of 1946 (11 F. R. 7875), as well as the additional authorities cited with specific items below, the following approvals of equipment are prescribed and shall be effective for a period of five years from date of publication in the FEDERAL REGISTER unless sooner canceled or suspended by proper authority:

#### CLEANING PROCESSES FOR LIFE PRESERVERS

NOTE: Where buoyancy fillers are not removed from envelope covers during cleaning process.

Approval No. 160.006/15/0, Water-front cleaning process for kapok life preservers with permanently installed buoyant inserts, as outlined in letter

of August 28, 1948, from the Water-front Service Co., 1490 Francisco Street, San Francisco, Calif.

(R. S. 4417a, 4426, 4488, 4492, 35 Stat. 428, 49 Stat. 1544, 54 Stat. 164, 166, 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 391a, 396, 404, 481, 490, 526e, 526p, 1333, 50 U. S. C. 1275; 46 CFR 160.006-4)

#### BUOYANT CUSHIONS, STANDARD

NOTE: Cushions are for use on motorboats of classes A, 1, or 2 not carrying passengers for hire.

Approval No. 160.007/74/0, Standard kapok buoyant cushion, U. S. C. G. Specification 160.007, manufactured by the Distin Boat Co., Inc., Saranac Lake, N. Y.

(54 Stat. 164, 166; 46 U. S. C. 526e, 526p; 46 CFR 25.4-1, 28.4-8)

#### GAS MASKS AND OTHER BREATHING APPARATUS

Approval No. 160.011/6/1, Bullard Supplied Fresh Air Hose Mask No. 1903, Bureau of Mines Approval No. BM-1903, consisting of face piece BM-1903, blower BM-1903 (both centrifugal type and positive pressure type), harness BM-1903, and hose BM-1903 or BM-1903A, maximum of two hose lines each originating at the blower and not exceeding 150 feet in length, manufactured by E. D. Bullard Co., 275 Eighth Street, San Francisco 3, Calif. (This approval supersedes previous approval No. 160.011/6/0 published in the FEDERAL REGISTER of July 31, 1947.)

(R. S. 4417a, 4426, 49 Stat. 1544, 54 Stat. 1028, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 391a, 404, 463a, 50 U. S. C. 1275; 46 CFR 35.4-5, 61.18, 77.18, 95.17, 114.18)

#### DAVITS, LIFEBOAT

Approval No. 160.032/44/1, Mechanical davit, crescent sheath screw Type C59A (Formerly Type CA), approved for maximum working load of 11,700 pounds per set (5850 pounds per arm) using not less than three part falls, identified by General Arrangement Dwg. No. 3071-2 dated February 8, 1946, and revised August 13, 1948, manufactured by Welin Davit & Boat Division of the American Steel & Copper Industries, Inc., Perth Amboy, N. J. (This approval supersedes previous approval No. 160.032/44/0 published in the FEDERAL REGISTER of July 31, 1947.)

(R. S. 4417a, 4426, 4481, 4488, 49 Stat. 1544, 54 Stat. 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 391a, 404, 474, 481, 1333, 50 U. S. C. 1275; 46 CFR 37.1-4, 59.3, 60.21, 76.15, 94.14, 113.23)

#### AUTOMATIC FLOATING ELECTRIC WATER LIGHTS

Approval No. 161.001/1/0, Light (water), electric, floating, automatic (with bracket for mounting), Dwg. No. 1000, Alt. 1, dated July 16, 1948, submitted by Paul J. Ambrose, 9408 Warren Street, Silver Spring, Md.

(R. S. 4417a, 4426, 4488, 49 Stat. 1544, 54 Stat. 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 404, 481, 1333, 50 U. S. C. 1275; 46 CFR 33.3-6, 33.3-8, 33.7-1, 37.9-1, 59.52, 59.54b, 59.56, 60.45, 60.47b, 60.49, 76.48, 76.48a, 76.48b, 76.53, 94.53, 113.46)

#### FIRE EXTINGUISHERS, PORTABLE, HAND, CARBON-TETRACHLORIDE TYPE

Approval No. 162.004/23/1, Quick Aid, Model 85, 1-qt. carbon tetrachloride hand portable fire extinguisher (formerly S. O. S. Fire Guard), Assembly Dwg. No. BF-100, dated November 8, 1943, Name Plate Dwg. No. BPT-185-1, rev. April 30, 1947, manufactured by the General Pacific Corp., 1501 East Washington Boulevard, Los Angeles 21, Calif. (This approval supersedes previous approval No. 162.004/23/0 published in the FEDERAL REGISTER of July 31, 1947.)

(R. S. 4417a, 4426, 4479, 4492, 49 Stat. 1544, 54 Stat. 165, 166, 346, 1028, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 391a, 404, 463a, 472, 490, 526g, 526p, 1333, 50 U. S. C. 1275; 46 CFR 25.5-1, 26.3-1, 27.3-1, 34.5-1, 61.13, 77.13, 95.13, 114.15)

#### PRESSURE VACUUM RELIEF VALVES

Approval No. 162.017/23/1, Shand & Jurs Figure ST-4000 pressure vacuum relief valve, weight loaded enclosed pattern, bronze body and pallet valves, fitted with pressure pallet lifting wheel, flanged ends, Dwg. No. ST-4000, revised July 27, 1948, approved for 4" and 6" sizes, for use with combustible or inflammable liquids of Grade A or lower in closed vent header system, manufactured by Shand & Jurs Co., Berkeley, Calif. (This approval supersedes previous approval No. 162.017/23/0 published in the FEDERAL REGISTER of July 31, 1947.)

(R. S. 4417a, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 391a, 50 U. S. C. 1275; 46 CFR 32.7-4)

#### LIQUEFIED PETROLEUM GAS VALVES, FITTINGS, AND GAUGES

Approval No. 162.018/17/1, Model No. 62B Metal Goods manufacturing liquefied petroleum gas tank gauge, slip tube type, Dwg. No. L107, sheets 1 to 23, inclusive, manufactured by Metal Goods Manufacturing Co., 106-110 South Park Avenue, Bartlesville, Okla. (This approval supersedes pre-

vious approval No. 162.018/17/0 published in the **FEDERAL REGISTER** of July 31, 1947.)

Approval No. 162.018/23/0, Model No. 62D Metal Goods manufacturing liquefied petroleum gas tank gauge, slip tube type, stainless steel parts, Dwg. No. L106, sheets 1 to 15, inclusive, dated January 21, 1948, manufactured by Metal Goods Manufacturing Co., 106-110 South Park Avenue, Bartlesville, Okla.

(R. S. 4417a, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 391a, 50 U. S. C. 1275; 46 CFR Part 38)

#### BULKHEAD PANELS

Approval No. 164.008/24/0, "Kaylo", inorganic composition board type bulkhead panel with wood or steel veneer on both sides identical to that described in National Bureau of Standards Test Report No. TG 10230-7; FP2635, dated July 22, 1948, approved as meeting Class B-15 requirements in a 7/8-inch thickness, exclusive of the veneer, manufactured by United States Plywood Corp., 55 West Forty-fourth Street, New York 18, N. Y.

Dated: September 27, 1948.

[SEAL] J. F. FARLEY,  
Admiral, U. S. Coast Guard,  
Commandant.

[F. R. Doc. 48-8790; Filed, Oct. 1, 1948; 8:50 a. m.; 13 F. R. 5793, Oct. 2, 1948.]

#### Termination of Approvals

A notice regarding the proposed termination of Approval No. 162.-001/57/0, Type S, Coale marine pop safety valve, Approval No. 162.-001/58/0, Type M, Coale heavy duty marine safety valve, and Approval No. 162.001/59/0, Type M, Coale heavy duty marine safety valve granted to the Coale Muffler & Safety Valve Co. was published in the **FEDERAL REGISTER** dated August 11, 1948, 13 F. R. 4638, and a public hearing was held by the Merchant Marine Council on September 28, 1948, at Washington, D. C.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by R. S. 4405, 4417a, 4429-4433, 4491, 49 Stat. 1544, and sec. 5 (e), 55 Stat. 244, as amended, 46 U. S. C. 367, 375, 391a, 407-411, 489, 50 U. S. C. 1275, and section 101, Reorganization Plan No. 3 of 1946, 11 F. R. 7875, the following termination of approvals of equipment is prescribed:

#### SAFETY VALVES

Termination of Approval No. 162.-001/57/0, Type S, Coale marine pop safety valve, cast steel body, exposed spring, single relieving lever, maxi-

mum working pressure 300 pounds per square inch, maximum temperature 750° F., suitable for superheated steam, Dwg. No. 815 Revised October 7, 1941, material, construction and capacities to conform to Coast Guard Marine Engineering Regulations and Material Specifications, 51.17 and 52.14, approved for sizes 1½", 2", 2½", 3" diameters, manufactured by Coale Muffler & Safety Valve Co., 325 East Oliver Street, Baltimore 2, Md.

Termination of Approval No. 162.-001/58/0, Type M, Coale heavy duty marine pop safety valve, bronze body, enclosed spring, single lifting lever, maximum working pressure 300 pounds per square inch, maximum temperature 450° F., Dwg. No. 818 dated November 27, 1941, material, construction and capacities to conform to Coast Guard Marine Engineering Regulations and Material Specifications, 51.20 and 52.14, approved for sizes 2", 2½" diameters, manufactured by Coale Muffler & Safety Valve Co., 325 East Oliver Street, Baltimore 2, Md.

Termination of Approval No. 162.-001/59/0, Type M, Coale heavy duty marine pop safety valve, cast steel body, enclosed spring, single lifting lever, maximum working pressure 300 pounds per square inch, maximum temperature 450° F., Dwg. No. 817-A dated November 17, 1941, material, construction and capacities to conform to Coast Guard Marine Engineering Regulations and Material Specifications, 51.17 and 52.14, ap-

proved for sizes 3", 3½", 4", 4½" diameters, manufactured by Coale Muffler & Safety Valve Co., 325 East Oliver Street, Baltimore 2, Md.

#### CONDITIONS OF TERMINATION OF APPROVALS

The termination of approvals of equipment 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 in use on merchant vessels on the effective date of termination of approval may be continued in service so long as it is in good and serviceable condition.

Dated: October 11, 1948.

[SEAL] J. F. FARLEY,  
Admiral, U. S. Coast Guard,  
Commandant.

[F. R. Doc. 48-8105; Filed, Oct. 14, 1948; 8:50 a. m.; 13 F. R. 6066, October 15, 1948]

#### AFFIDAVITS

The following affidavits were accepted during the period from September 15 to October 15, 1948:

*Marine Repairs, Inc.*, 505 Seventy-third Street, Houston 11, Tex. Fabricated Pipe Fittings.

*Sun Shipbuilding & Dry Dock Co.*, Chester, Pa. Valves.

*Wiley Mfg. Co.*, Mountville, Pa. Valves and Fittings.

#### 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	
The Dayton Mfg. Co., Dayton, Ohio: Bracket lighting fixture No. B-5250-C, nonwater-tight, 1 1/4-watt lamp maximum, drawing No. 963, Rev. C	X				9/17/48
Bulkhead lighting fixture for mounting over pump room bulkhead dead light, watertight, 1 1/4-watt lamp maximum, drawing No. 481438, Rev. O	X	X	X		9/17/48
Ceiling lighting fixture No. C-10840, 12", nonwater-tight, 2 1/4-watt lamps maximum, drawing No. 48D144, Rev. O	X				9/20/48

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	
<b>The Dayton Mfg. Co., Dayton, Ohio—Continued:</b>					
Ceiling lighting fixture No. C-10839, 12", nonwatertight, 2 100-watt lamps maximum, drawing No. 48D428, Rev. 0	X				9/20/48
Exit light fixture No. B-5642, nonwatertight, 1 50-watt lamp maximum, drawing No. 48D425, Rev. A	X				9/20/48
<b>Henshel Corp., Amesbury, Mass.:</b>					
Vibrating bells, 6", 8", 10" and 12", 6, 12, 20, 24, and 115 volts D. C. and 115 volts 60 cycles A. C., watertight, drawing No. 20-103, Alt. 2	X	X	X		9/24/48
Vibrating bells for mounting on telegraph, 6", 8", 10", and 12", 115 volts 60 cycles A. C., watertight, drawing No. 20-103-1, Alt. 2	X	X	X		9/24/48
Vibrating fire alarm bell with supervising resistor, 10", watertight, drawing No. 20-103-2, Alt. 1	X	X	X		9/24/48
<b>Lennan Lights, Inc., Burbank, Calif.:</b>					
Safety flashlight, Model K-2, explosion-proof				X	9/23/48
<b>Lovell-Dressel Co., Inc., Arlington, N. J.:</b> Deck lighting fixture, catalog No. M-5351, and bulkhead lighting fixture, catalog No. M-5352, watertight, 1 60-watt lamp maximum, drawing No. M-5351/M-5352, Alt. 0	X	X	X		8/30/48
<b>Murlin Mfg. Co., Philadelphia, Pa.:</b>					
Exit light, A. T. S. Type 11-A, nonwatertight, 1 25-watt lamp maximum, drawing No. 1200, Alt. 2	X				8/30/48
Edgelit exit sign, 1 25-watt lamp maximum, nonwatertight, drawing No. 1310-2, Alt. 0	X				8/30/48
<b>Oceanic Electric Products Corp., New York, N. Y.:</b>					
Bulkhead lighting fixture, watertight, 1 100-watt lamp maximum, cat. No. 865, drawing No. 4123-1, Alt. 0	X	X	X		9/10/48
Gage illuminator, pendent type, watertight, 1 25-watt lamp maximum, Cat. No. 290, drawing No. 4070, Rev. 0	X	X	X		9/22/48
Steering light for jack staff, watertight, 1 15-watt lamp maximum, Cat. No. 6090, drawing No. 4120, Rev. 0	X	X	X		9/22/48
Blinker telegraph light, watertight, 1 50-watt lamp maximum, Cat. No. 835, drawing No. 4119, Rev. 0	X	X	X		9/22/48
<b>Pounds Equipment Co., New York, N. Y.:</b>					
Ceiling lighting fixture, nonwatertight, 1 100-watt lamp maximum, Luminator, Inc. drawing No. 8257, Rev. 2	X				9/9/48
Berth light fixture, nonwatertight, 1 40-watt lamp maximum, Luminator, Inc. drawing No. 8272, Rev. 1	X				9/9/48
Berth light fixture, fluorescent, nonwatertight, 1 14-watt lamp maximum, Luminator, Inc. drawing No. 8284, Rev. 1	X				9/9/48
Wall lighting fixture, fluorescent, nonwatertight, 1 15-watt lamp maximum, Luminator, Inc. drawing No. 8289, Rev. 1	X				9/9/48
Ceiling lighting fixture, fluorescent, nonwatertight, 1 15-watt lamp maximum, Luminator, Inc. drawing No. 8297, Rev. 1	X				9/9/48
Ceiling lighting fixture, fluorescent, nonwatertight, 1 15-watt lamp maximum, Luminator, Inc. drawing No. 8298, Rev. 1	X				9/9/48
Ceiling lighting fixtures Nos. L-8353 and L-8354, fluorescent, nonwatertight, 1 15-watt lamp maximum, drawing No. 8353, Rev. 0	X				9/22/48
Ceiling lighting fixtures Nos. L-8360, L-8361 and L-8362, fluorescent, nonwatertight, 1 15-watt lamp maximum, drawing No. 8360, Rev. 0	X				9/22/48
Ceiling lighting fixtures Nos. L-8337, L-8338, and L-8339, fluorescent, nonwatertight, 1 15-watt lamp maximum, drawing No. 8337, Rev. 0	X				9/22/48
Aisle lighting fixtures Nos. L-8393 and L-8394, nonwatertight, 1 25-watt lamp maximum, drawing No. 8393, Rev. 0	X				9/22/48
<b>The Simes Co., College Point, Long Island, N. Y.:</b>					
Double writing desk lamp, nonwatertight, 6 40-watt lamps maximum, drawing No. 44001, Alt. 0	X				9/17/48
Show case lighting fixture, type OS-4, nonwatertight, 16 15-watt lamps maximum, drawing No. 43887, Alt. 1	X				9/21/48
<b>Sperry Gyroscope Co., Division of The Sperry Corp., Great Neck, L. I., N. Y.:</b>					
Selenium rectifier, 110/220 V A. C., single phase, 60 cycle input; 115 V D. C., 25 amperes continuous output; drip-proof; drawing No. 662680, Alt. 0	X	X			9/14/48
Selenium rectifier, 110/220 V A. C., single phase 60 cycle input; 115 V D. C., 5 amperes continuous output; drip-proof; drawing No. 662681, Alt. 0	X	X			9/14/48
Selenium rectifier, 110/220 V A. C., three phase 60 cycle input; 115 V D. C., 25 amperes continuous output; drip-proof; drawing No. 662682, Alt. 0	X	X			9/14/48

## Termination of Approval

### PRESSURE VACUUM RELIEF VALVE

By virtue of the authority vested in me as Commandant, United States Coast Guard, by R. S. 4405, 4417a, 4491, and section 5 (e), 55 Stat. 244, as amended (46 U. S. C. 375, 391a, 489, 50 U. S. C. 1275), and section 101 of Reorganization Plan No. 3 of 1946 (11 F. R. 7875), I find that the following valve has been replaced by two types of pressure vacuum relief valves designated by Coast Guard approval Nos. 162.017/56/0 and 162.017/57/0 and, therefore, the following approval is terminated, which shall be effective upon the thirty-first day after the date of publication of this document in the FEDERAL REGISTER, but notwithstanding this termination of approval any valves manufactured before the effective date of this termination of approval may be used so long as they are in good and serviceable condition:

Termination of Approval No. 162-017/4/0, Butterworth Type H pressure vacuum relief valve, triplex enclosed pattern in solid manifold, spring loaded, fitted with spring lifting levers, bronze valves and manifold, vitaulic flanged openings, Dwg. No. PV-114 dated November 2, 1936, approved for 3", 4", and 6" valve sizes, for use with inflammable or combustible liquids of Grade A or lower in closed venting system where vent headers are fitted with flame arrester at outlet to atmosphere, manufactured by Butterworth System, Inc., Bayonne, N. J. (This approval is replaced by approvals Nos. 162.017/56/0 and 162-017/57/0 covering types 2H-1 and 3H-1 valves.) (Approval No. 162-017/4/0 was published in the FEDERAL REGISTER of July 31, 1947.)

Dated: August 23, 1948.

[SEAL] MERLIN O'NEILL,  
Rear Admiral, U. S. Coast Guard,  
Acting Commandant.

[F. R. Doc. 48-7723; Filed, Aug. 27, 1948; 8:46 a. m.; 13 F. R. 5027, August 28, 1948.]

### FUSIBLE PLUGS

The Marine Engineering Regulations and Material Specifications require that manufacturers submit samples from each heat of fusible plugs to the Commandant for test prior to plugs manufactured from the heat being used on vessels subject to inspection by the Coast Guard. A list of approved heats which have been tested and found acceptable during the period from June 15 to October 15, 1948, is as follows:

H. B. Sherman Mfg. Co., 22 Barney Street, Battle Creek, Mich. Heat Nos. 654 through 666, 668, and 669.

# Merchant Marine Personnel Statistics

## MERCHANT MARINE LICENSES ISSUED DURING SEPTEMBER 1948

### DECK OFFICERS

	REGION	Atlantic coast		Gulf coast		Great Lakes and rivers		Pacific coast		Total	
		O	R	O	R	O	R	O	R	O	R
Master	Ocean	21	94	11	20	1	15	40	47	155	
	Coastwise	5	5	2	2		2	1	9	8	
	Great Lakes					4				4	
	B. S. & L.	4	33	2	5		1	9	7	47	
	Rivers	1	1	1	6	1	16		3	23	
Chief mate	Ocean	30	15	7	1			11	9	48	25
	Coastwise										
	Great Lakes										
	B. S. & L.	1	4	1				1	1	3	5
	Rivers			2	3	12			3	14	
Second mate	Ocean	45	16	6	6			22	20	73	42
	Coastwise		1		2						3
Third mate	Ocean	13	18	6	7			10	12	29	37
	Coastwise										
Pilots	B. S. L. & R.	50	89	9	29	11	26	14	39	84	183
Uninspected vessels	Master							2		2	
	Mate							4		4	
Total		170	276	45	80	15	59	82	131	312	546
Grand total			446		125		74		213		858

### ENGINEER OFFICERS

		Atlantic coast		Gulf coast		Great Lakes and rivers		Pacific coast		Total	
		O	R	O	R	O	R	O	R	O	R
Steam	Chief engineer:										
	Unlimited	36	121	5	34		4	17	53	58	212
	Limited	6	43	1	6	2	15		10	9	74
	First assistant engineer:										
	Unlimited	23	25	4	10		1	15	14	42	50
	Limited	2				2	9	1	3	5	12
	Second assistant engineer:										
	Unlimited	44	58	9	11	1	1	11	23	65	93
	Limited										
	Third assistant engineer:										
	Unlimited	6	33		6	1	1	8	17	15	57
	Limited										
Motor	Chief engineer:										
	Unlimited	2	32		4			2	14	4	50
	Limited	8	31	1	5	3	12	5	7	17	55
	First assistant engineer:										
	Unlimited	1	5		1			2		3	6
	Limited	4	1	1	1	1		2	1	8	3
	Second assistant engineer:										
	Unlimited	2	1	1	1			3	1	6	3
	Limited		1	1						1	1
	Third assistant engineer:										
	Unlimited	4	23		4		1	1	21	5	49
	Limited										
Uninspected vessels	Chief engineer										
	Assistant engineer			1						1	
Total		138	374	24	83	10	44	67	164	239	665
Grand total			512		107		54		231		904

## ORIGINAL SEAMEN'S DOCUMENTS ISSUED MONTH OF SEPTEMBER 1948

REGION	(1) Staff officer	(2) Contin- uous dis- charge book	(3) U. S. mer- chant marin- er's docu- ments	(4) AB any waters un- limited	(5) AB any waters 12 months	(6) AB Great Lakes 18 months	(7) AB tugs and tow- boats any waters	(8) AB bays and sounds	(9) AB seagoing barges	(10) Lifeboat- man	(11) Q. M. R. D.	(12) Radio opera- tors	(13) Certifi- cate of service	(14) Tanker- man
Atlantic coast.....	122	0	858	434	229	6	0	2	0	475	207	13	723	7
Gulf coast.....	8	3	232	164	55	7	0	0	0	153	81	2	178	22
Pacific coast.....	21	0	574	81	66	2	0	0	0	273	93	11	520	4
Great Lakes and rivers.....	0	1	696	19	92	42	0	0	0	94	57	22	630	19
Total.....	151	4	2,360	698	442	57	0	2	0	995	438	48	2,051	52

† 12 months, vessels 500 gross tons or under not carrying passengers.

NOTE.—Columns 4 through 14 indicate endorsements made on U. S. merchant mariner's documents.

## WAIVERS OF MANNING REQUIREMENTS FROM 1 SEPTEMBER TO 30 SEPTEMBER 1948

REGION	Number of vessels	Deck offi- cers substituted for higher ratings	Engineer officers substituted for higher ratings	Able sea- men 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.....	28		4		26	1		15		46
Gulf coast.....	2				1					1
Pacific coast.....	33				1			3		4
Great Lakes.....	2		2					1		3
Total.....	65		6		28	1		19		54

NOTE.—In addition individual waivers were granted to permit the employment of 20 able seamen holding certificates for "Any waters—12 months" in excess of the 50 percent authorized by general waiver.

## CREW SHORTAGE REPORTS FROM 1 SEPTEMBER TO 30 SEPTEMBER 1948

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	10				1	5	5			1		2	1	15
Gulf coast	3					1			1			3		5
Pacific coast	1											1		1
Great Lakes	190	4	5	35		42	10	1	10	21	38	94	21	281
Total	204	4	5	35	1	48	15	1	11	22	38	100	22	302

### Distribution (SDL 35):

A: a, b, c (2 ea.); remainder (1 ea.).

B: c (14 ea.); g, l (5 ea.); e, f, h (3 ea.); d (2 ea.); remainder (1 ea.).

C: All (1 ea.).

D: All (1 ea.).

List 141M.