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The Merchant Marine Council of the United States Coast Guard

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The Cover: Somewhere in the Atlantic a sick seaman rides through the air from a cargo vessel to a Coast Guard combat cutter via a litter.

COUNCIL ACTIVITIES

THE specifications for repairing, recovering, and cleaning of life preservers; processed and reprocessed kapok; and deck coverings, to be included in a new Subchapter Q-Specifications, were recommended for approval to the Commandant. This new Subchapter Q-Specifications in chapter 1 of title 46. Code of Federal Regulations, will eventually contain all specifications for merchant vessels for equipment (lifesaving and fire fighting), certain materials, and methods of fabrication required to be either approved or used in approved items by the navigation and vessel inspection laws and regulations. At present many specifications are included with the regulations that set forth the mandatory requirements for the operation, maintenance, or construction of merchant vessels and such specifications will be transferred to this new subchapter. At present two new parts are established; Part 160-Lifesaving Equipment and Part 164—Materials.

The repairing, re-covering, and cleaning of the various types of life preservers will be subject to the specification in Subpart 160.003. The repairing and re-covering of life preservers have been permitted for a long while. This specification generally requires that such life preservers repaired or re-covered shall meet the same requirements as for new life preservers of the same type. Life preservers furnished on board vessels soon become unsanitary and dirty when worn continuously. Special cleaning processes for kapok life preservers were developed during the war so that they could be cleaned without removing the covers. The cleaning of life preservers, such as the cork and balsa wood types, where the buoyant fillers are removed from the covers and the covers laundered separately, has been practiced for a number of years. In these cases there were no standards and this specification sets forth the requirements which have to be met.

The supply of kapok is still critical and it will be some time before adequate supplies will be available from Java. Considerable work has been done on both the east and west coasts in reclaiming kapok from used life preservers, reprocessing it, and mixing it with new kapok in a 50-50 ratio for use in making new life preservers. To efficiently utilize available supplies of kapok on hand, the specifications in Subparts 164.003 and 164.004 for proccessed and reprocessed kapok for use in life preservers were established. These specifications are more detailed than the requirements formerly contained in the general rules and regulations for kapok. The emergency buoyancy standard of 48 pounds per cubic foot will be maintained in effect for the present. The requirements for reclaimed or reprocessed kapok are not new inasmuch as the same buoyancy is required as for new kapok and the specification for this product is in harmony with the best practices now being followed.

Passenger vessels of over 100 gross tons built or converted to passenger service since July 1940 have been reguired to have deck coverings of incombustible material. In order to provide a reasonable safety standard. the regulations in section 144.4 (d) of Subchapter M-Construction or Material Alteration of Passenger Vessels of the United States of 100 Gross Tons and Over Propelled by Machinery was amended to set forth the mandatory requirements for deck coverings, overlays, and insulations, and how deck areas shall be classified. To establish a standard for deck coverings, the interim specification in Subpart 164.006 was adopted. This interim specification has been developed with the assistance of the National Bureau of Standards and the United States Maritime Commission. The proper specification will take a considerable length of time to develop since testing methods have to be devised and tried.

The procedure for issuance of certificates of award of number to undocumented vessels in the cases of sales of vessels by citizens to aliens has been changed by amending section 29.8 (e) (2) of the motorboat regulations to agree with the Revised General Order No. 58 of the United States Maritime Commission. The citizen selling an undocumented vessel to an alien will not be required to obtain a certified copy of the transfer order of the United States Maritime Commission approving the sale or transfer of the vessel except when the vessel is 1,000 gross tons or over or when the vessel is, or has been, previously documented under the laws of the United States before a certificate of award of number may be issued to the alien purchaser.

The effective date for the automatic electric water lights required for tank vessels by section 37.9–1 of the tank vessel regulations was extended from 1 January 1946, to 1 July 1946.

The western rivers panel of the Merchant Marine Council held a meeting in St. Louis on 27 November 1945, and considered proposed amendments and revisions of the rules and regulations governing marine inspection on the western rivers. At this meeting there was also discussed the recent change in section 115.17 in the general rules and regulations regarding persons allowed in the pilothouse and on the navigator's bridge while the vessel is under way (see page 172 of November 1945 proceedings of Merchant Marine Council for amendment). This regulation does not prohibit owners, managers, and their official representatives from being present in the pilothouses of their own vessels while such vessels are under way.

New Commandant, United States Coast Guard

Rear Admiral Joseph F. Farley assumed office as Commandant of the United States Coast Guard on 1 January 1946, with the rank of admiral, succeeding Admiral R. R. Waesche who retired on 31 December 1945, because of illness. Admiral Farley is 55 years old and a native of Oxford, Ohio. Prior to his appointment as Commandant he was serving as chief personnel officer.

The Commandant entered the Coast Guard as a cadet on 10 May 1909, and after receiving his commission as an ensign on 10 June 1912, served in many vessels and stations throughout the country. During the first World War he was on convoy duty in the Mediterranean. From 1937 to 1942 he was chief communications officer at Coast Guard headquarters. As such he represented the United States at international communications conferences held at Cairo, Switzerland, and Poland.

In June 1942, he became district Coast Guard officer of the Eighth Naval District, New Orleans, La. Returning to Coast Guard headquarters in December 1943, he served as assistant chief operations officer until December 1944, when he was assigned to duty as chief personnel officer.



Admiral Farley, Commandant, U. S. Coast Guard.

Running Lights on Navy and Coast Guard Vessels

An act was passed on 3 December 1945, which exempts Navy and Coast Guard vessels of special construction from the requirements as to the number, position, range, or arc of visibility of lights.

The law, Public Law 293, 79th Congress, provides that any requirement as to the number, position, range of visibility, or arc of visibility of lights required to be displayed by vessels by the international rules, inland rules, and Great Lakes rules, shall not apply to any vessel of the Navy or of the Coast Guard, where the Secretary of the Navy, or the Secretary of the Treasury in the case of the Coast Guard vessels operating under the Treasury Department, shall find or certify that, by reason of special construction, it is not possible for such vessel or class of vessels to comply with the above statutory provisions. It is required that any such exempted vessel or class of vessels comply as closely to the requirements of the applicable statutes as the Secretary shall find to be feasible.

When any finding or certification as prescribed above is made by either secretary, notice of such finding and the character and position of lights to be displayed on such vessel shall be published in "Notice to Mariners." The act expires on June 30, 1948.

The act expires on suite 30, 1340.

Suspension of International Load Lines Convention Revoked

Effective 1 January 1946, the President of the United States revoked Proclamation 2500 which suspended

During the war many emergency situations arose during convoy operations which had to be handled differently than would be the case had these emergencies arisen during peacetime movements. Because of the dangers to be expected from lurking submarines it was against convoy procedure for a vessel to stop or to straggle except where it was unavoidable. Consequently it became necessary to devise methods of handling situations such that it was not necessary to stop a vessel, or to have the vessel leave the protection of the escort screen.

Among the new practices developed were those of fueling the escorts while underway and transferring of personnel from one ship to another.

In the latter case the normal peacetime procedure was for both vessels to stop while a boat was lowered and the person was transferred to the other the International Load Lines Convention in ports and waters of the United States by signing Proclamation 2675 on 21 December 1945. The International Load Lines Convention and the regulations in parts 43 to 46, inclusive, of the Code of Federal Regulations, title 46, will apply to vessels engaged in foreign trade.

The load line regulations for foreign voyages during the national emergency in part 48 become inoperative on and after 1 January 1946. These regulations were wartime emergency measures and allowed United States Merchant vessels and foreign vessels of the United Nations, while in United States' ports, to load one mark deeper than the convention rules permitted while in a summer or tropic zone. This additional cargo involved certain dangers to the vessel and its crew. It added greatly to the upkeep of the vessel by causing many extra rivets to be sheared, plates smashed, etc., and it lessened the prospective life of the vessel. However, these dangers were far outweighed by the fact it permitted more cargo, especially vital oil, to be delivered to our fighting forces when they needed this material most.

By the action of President Truman in revoking Proclamation 2500 it will be necessary to follow the peacetime requirements for loading of vessels.

Waiver Power Extended

On 28 December 1945, the President signed Public Law 269 which law, among other things, extends Title V of the Second War Powers Act until 30 June 1946. Under the authority contained in title V, waivers of the navigation and vessel inspection laws may be granted when such waivers are found to be necessary in the conduct of the war.

Electronic Navigational Aids

A new pamphlet entitled "Electronic Navigational Aids" has been published by the Coast Guard for the information of the United States Maritime Industry and the United States commercial airlines interested in the application of electronic navigational aids. This pamphlet deals mainly with loran and radar.

The information in this pamphlet has been prepared largely to answer many inquiries received regarding electronic aids as applied for commercial use.

The description of electronic aids is made in a nontechnical manner and presents sufficient facts for an evaluation to be made in determining the benefits to be derived in applying this type of equipment to the safeguarding of life and property at sea.

PROCEEDINGS MAILING LIST REVISED

Card notices were sent to all addressees on the mailing list to see which ones desired to receive the Proceedings of the Merchant Marine Council. As the funds for printing this publication have been cut, it is necessary to reduce the distribution of these copies. In accordance with the responses received, the mailing list will be revised, starting with the February issue.

Transfer of Sick Men at Sea

vessel. Obviously, this could not be done while traveling in convoy for the vessels would become "sitting ducks" for any submarine lying back for stragglers.

The principal reason for the transfer of personnel from ship to ship while underway was to render medical aid. This was accomplished either by transferring a doctor from an escort vessel to the ship requiring his services or by transferring the patient to the escort.

The method developed by Navy and Coast Guard vessels was to effect the transfer by means of a breeches buoy, or where the vessel was not supplied with a breeches buoy, by a boatswain's chair.

The transfer was made while both vessels were running at convoy speed, and at times when the sea was other than smooth. Many such exchanges were made between merchant ships and escort vessels. The latter had on board all the equipment that goes with the standard breeches buoy outfit. The merchant vessels had a placard posted in the pilothouse, which placard contained instructions for making fast the hawser on which the breeches buoy was to ride. These instructions were supplemented by a blinker message from the naval vessel.

The most important part that the merchant vessel had to play was to maintain her course and speed. This was vital to the success of the maneuver. Once the hawser was made fast on the merchant ship her sole responsibility was to hold her course and speed. All the tending of lines which is so necessary is done by the escort vessel. As the ships are only from 50 to 75 feet apart the strain on the commanding officer of the naval ship is considerably lessened if he is assured that the other ship is holding steady.

Prior to running the line, it is essential that the vessels run alongside each other on parallel courses to synchronize courses and speeds. Once this is done the hauling line and hawser are passed by means of a shot line, and the line and hawser are made fast on the merchant ship. On board the escort vessel the hawser is led through a snatch block located well above the weather deck and then through one on deck. In order to keep a constant strain on this trolley hawser it was tended on deck by a number of seamen. This manner of tending the line proved more effective than attempting to do so with a winch.

With the "trolley" hawser made fast and kept taut, the breeches buoy is hauled back and forth and the transfer effected.

On one vessel which made a number of such transfers the fastest time recorded for the transfer of one person from the time the gunner's mate fired the shoulder gun until all lines were back on board was $6\frac{1}{2}$ minutes.

In cases where the patients had broken bones, or were unconscious, a stretcher was substituted for the breeches buoy. These transfers presented more difficulties than in the ordinary transfer. Special care had to be taken to insure that the patient was well balanced in the stretcher before any attempt to haul away was made.

It is realized that merchant vessels do not carry breeches buoy equipment, and for that reason the likelihood of a transfer from merchant ship to merchant ship by this method is a slim one. However, those who have had occasion to transfer personnel by breeches buoy are sold on it and much prefer to effect the transfer in that fashion than by means of a boat.

If a service vessel approaches for the purpose of removing a sick mem-



Ship-to-ship transfer of an injured merchant seaman in a breeches buoy.

ber of your crew, the chances are that the breeches buoy will be broken out and used. If so, the master of the merchant vessel has but one responsibility, that of maintaining course and speed as set by the aiding vessel.

Improvements in Line-Throwing Devices

The Research and Development Division of the Office of Engineering at the request of the Merchant Marine Council has conducted a number of tests within the past few months on line-throwing devices. The objects of these tests were to obtain greater distances with existing approved devices and also to examine the possibilities of other appliances for use on merchant vessels.

Present regulations require that the shoulder gun be capable of throwing a projectile and line a distance of not less than 250 feet and that the mounted type gun be capable of obtaining a distance of not less than 1.050 feet. It was thought that by substituting a nylon line for the flax or cotton lines now required for the shoulder gun that greater distance could be obtained. Accordingly tests were made with different types of shoulder guns using the standard propelling charges and projectiles as are supplied with the guns.

The expectations of greater distances with the nylon were realized and ranges exceeding 500 feet were obtained. During these tests it was found that the greatest range was obtained when the shoulder gun was fired at an angle of 30° from the horizontal. Some difficulties were encountered in the use of the nylon lines with respect to winding of the line so that snarling would not occur. These difficulties were met by making modifications in the winding machine.

One of the shoulder guns tested was modified by the installation of a muzzle brake. 'Test firings with this modified gun resulted in a 20 percent increase in distance, a 50 percent decrease in blast effect, and a lessening in recoil of the gun.

No tests were made with the mounted type gun as it was felt that the distances obtainable with this type of gun are sufficient. However, tests were made of other devices developed



Firing a bazooka with line throwing attachment installed.

during the war for other purposes. It was believed that by converting some of these for use as line-throwing appliances distances approaching those obtainable with the mounted type gun could be reached.

One of the first of the war devices to be tested was the bazooka which was used so effectively in antitank warfare. The bazooka was modified by installing a comfortable shoulder rest and by mounting a canister on the barrel.

The tests proved very satisfactory. It was determined that the bazooka, as modified, could be loaded and fired by a single operator. The maximum range obtained was 900 feet using a nylon line. Ranges exceeding 850 feet were reached consistently and the rocket projectiles were very accurate in their flights with very little drift down wind.

Another fire arm which was modified for testing is the .50 caliber machine gun barrel. This device, developed by a chief gunner's mate in the Coast Guard, consists of a .50 caliber machine gun barrel which, in its present stage of development cannot be fired from the shoulder but must be braced against a solid foundation and held to the proper elevation by the operator. Using standard .50 caliber machine gun ammunition distances in excess of 1.200 feet were attained with only a very slight drift from the target.

An interesting test was that made with a modification of a velocity power rivet remover to adapt it for line-throwing purposes. A maximum distance of 475 feet was obtained with a good degree of accuracy. However, as this cannot be fired from the shoulder, and as the distance obtained with the shoulder gun is greater, no practical use for this device as a linethrowing appliance can be seen at present.

A rocket pistol approved for use on British merchant ships was tested for observation purposes. The results were not satisfactory in that the rockets proved to be erratic in flight.

The final device tested was a rocket device developed in this country. This device consists of a barrel extension which can be fitted to the flare pistol carried in the lifeboats of ocean vessels. The canister for holding the line is attached to this barrel extension.

The pistol fires a line-carrying rocket. Upon firing, the rocket is propelled about 5 feet by a cartridge. At that point the rocket is ignited and the main propellant drives the rocket on. A maximum distance of 750 feet was attained with only a 5foot deviation to leeward of the target.

With the conclusion of the tests in the near future, it is expected that there will be a bigger field of selection of line-throwing devices for use on merchant vessels with no curtailment in the use of presently approved devices.

Reemployment of Merchant Seamen

On 31 August 1945, 150,488 merchant seamen were employed on foreign voyages of United States merchant vessels of 100 gross tons and over. Of these 26,913 or 17 percent were licensed personnel and 123,575 or 83 percent were unlicensed personnel. In order to obtain some information about the reemployment habits of these seamen a study has been made which covers the reemployment records of 417 of these seamen, all of whom signed off 10 vessels between the period 1 September 1945 and 10 September 1945. Of these 10 vessels, 3 were tankers and 7 were dry cargo ships. The duration of the voyages of these 10 vessels were as follows:

Number of vessels:	Duration of voyages (months)
3	14
1	
1	
2	
1	anna 4
1	
- International and the second	

The 417 seamen whose records were studied were qualified as follows:

69 or 16 percent were licensed.

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- 132 or 32 percent were able seamen or qualified members of engine department.
- 87 or 21 percent were specialists, e. g., radiomen, cooks, pursers, etc.
- 129 or 31 percent were in entry ratings, e. g., ordinary seamen, wiper, messmen, coalpasser, utilitymen.

The Coast Guard records of these seamen were checked in order to determine their reemployment on United States merchant vessels of 100 gross tons and over.

The sample study shows that 145 of the 417 seamen who were signed off shipping articles during the period from 1 September 1945 through 10 September 1945 were employed as of 1 December 1945 on foreign voyages of United States merchant vessels of 100 gross tons and over and 272 seamen were not employed. However, 237 seamen or 57 percent have been reemployed since signing off vessels early in September and only 180 have not been reemployed. Of the 237 seamen who were reemployed 145 or 35 percent were reemployed in September, 71 or 17 percent were reemployed in October, and 21 or 5 percent were reemployed in November. Age does not seem to have been a significant factor in determining reemployment since 57 percent of all seamen were reemployed and 56 percent of all seamen under 26 years of age reemployed. It is noted, however, that there was marked difference in the reemployment record of seamen in each of the four classifications as is indicated by the following:

- 61 percent of the licensed personnel were reemployed.
- 55 percent of the able seamen and qualified members of engine department were reemployed.
- 65 percent of the miscellaneous specialists were reemployed.
- 50 percent of seamen in entry ratings were reemployed.

It was noted also that 75 percent of the seamen who were not reemployed during the period were originally certificated by the Coast Guard during the years 1943, 1944, and 1945 while only 59 percent of the seamen who were reemployed were certificated during those years.

Since this sampling represents only 26 percent of the personnel employed on United States merchant vessels as of 1 September 1945, and since the Coast Guard records only cover employment on United States merchant vessels of 100 gross tons and over, it cannot be said that this study presents a valid picture of the reemployment habits of all merchant seamen. However, it is at least 90 percent accurate for the 417 seamen whose records were studied.

LESSONS FROM CASUALTIES

Explosion of Turbo-Generator; Disregard of Starting Instructions

The first assistant engineer on a Victory ship was killed because starting instructions for a turbo-generator were not followed. This accident illustrates very graphically the need for knowing and observing the starting instructions for a turbo-generamakers of machinery used on board vessels.

In the case in question the first assistant engineer of the vessel, assisted by the third assistant engineer, the unlicensed junior engineer, and an oller was attempting to start a turbine driven electric generating unit. On the make of the machine under discussion a hand operated lubricating oil pump is fitted. This pump supplies oil to the bearings and governor until the direct connected oil pump begins delivering oil after the machine starts. As part of the governor mechanism, a small pin is fitted in the oil relay valve. Unless this pin is in place, increased oil pressure caused by the turbine getting under way tends to close the operating valve, thus making it impossible to hold the valve lifting fork open by the use of any ordinary force. The pin is mechanically linked to the lever operated by the overspeed governor in such a manner as to cause the latter to be inoperative when it is not in place.

On this occasion the first assistant engineer opened the exhaust valve, drained the turbine, assigned the oiler to operate the hand oil pump, and opened the combination trip and throttle valve wide open. He then ordered the junior engineer to lift the operating valve by means of the valve lifting fork mounted on the oil cylinder cover. The machine started rolling but stopped shortly thereafter. presumably because the oil pressure developed by the direct connected pump overcame the pressure on the valve lifting fork which was applied by the junior engineer. The oil pressure would so act as set forth above when the pin on the oil relay valve was not reset for starting the turbine. The first assistant engineer ordered the junior engineer to apply increased pressure to the lifting fork indicating that he was to stand on it for this purpose. The turbine was started three times in the manner described but always stopped when the oil pressure overcame the force the junior engineer was able to apply. When the first assistant engineer again ordered increased force to be applied to the starting lever, the junior engineer placed his back against some piping fitted immediately overhead and forced it down with both feet. Immediately thereafter and while the junior engineer was in this position the turbine overspeeded and destroyed itself.

The bolts securing the halves of the turbine casing ruptured and the top half lifted approximately 20 inches. The rotor shaft was broken and bent in several places to an angle of approximately 40°. The coupling between rotor and pinion shaft was destroyed and many other minor parts of the assembly were damaged or destroyed.

The first assistant engineer was standing on the inboard side of the generator, leaning over the hand rail that was fitted around the machine. He was struck in the left chest by part of a broken diaphragm and was thrown over the inboard generator onto the grating surrounding the main turbine. He was instantly killed. Luckily no one else was seriously injured.

In the case of accidents it is always easy to blame the man who was killed and for this reason some hesitation might be felt in blaming the first assistant engineer for this wholly needless tragedy. However, the facts seem quite plain and they all indicate that he acted in a manner totally contrary to good engineering practice. Tt seems apparent from the description of the accident that the governing mechanism acted in exactly the way that it was supposed to. In other words, as the governor pin had not been inserted, thus actuating the governor valve, the increasing oil pressure caused by the starting of the turbine tended to shut the lever actuated operating valve. As shown by the several false starts, the tendency of the valve to close was strong enough to overcome any ordinary effort that could be exerted by a person attempting to move the valve lifting fork. It was even strong enough to overcome the whole weight of the man's body. but when, in addition to his weight, the junior engineer placed his back against an overhead beam and exerted his full strength, it was too much for the governor oil pressure and the valve remained open with disastrous results.

Investigation of the casualty indicates that three mistakes were made by the first assistant engineer:

1. The pin was not inserted in the

governor valve, thus leaving the governor inoperative.

 The steam valve was opened wide open before starting the machine, thus making a runaway certain in case the governor failed to act.

3. Most inexcusable of all, the junior engineer was ordered to stand on the hand starting lever.

The first mistake could have been made by anyone in a careless moment and, provided he was warned by the action of the starting lever, no harm would result. The second mistake is considerably less excusable and represents a serious error in judgment. Opening the steam valve to any steamdriven machine wide open before it is under the control of the governor is a proceeding which, as stated above, renders a runaway inevitable in case the governor fails to act. It is bad engineering practice to throw away a single one of the safeguards which are provided against accident by the designers of modern machinery. As the vessel in question was comparatively new, it seems probable that there was an instruction booklet on board. This booklet states very clearly that in starting this type of machine, the steam valve should only be cracked until the machine is running and then the throttle should be gradually opened until the governor takes charge. If the machine had been started in this manner no accident would have occurred. In any case the engineer had had the starting procedure explained to him on the day before by the chief engineer.

For the third mistake there is absolutely no excuse to offer. It represents pure ignorance in its most dangerous form. The fact that the man holding the second highest engineering position on the ship should have made an error of this character shows why the Coast Guard requires a certain period of experience before allowing anyone to sit for an engineer's license.

When starting any steam machinery, always obey every instruction found in the maker's rules. If these instructions are unobtainable, seek information from someone already familiar with the machinery in question and if no such person is available, take it easy, crack the throttle, get the machine rolling slowly and make sure the governor is operating before opening the throttle wide and, above all, if any unusual resistance, peculiar noises, or other untoward incidents develop, stop the machine, investigate, and be safe—rather than dead.

APPENDIX

Amendments To Regulations

TITLE 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard: Department of the Navy

PART 6—SECURITY OF PORTS AND THE CONTROL OF VESSELS IN THE NAVIGA-BLE WATERS OF THE UNITED STATES

RESCISSION OF REGULATIONS

Pursuant to the authority contained in section 1, Title II of the Espionage Act, approved June 15, 1917, 40 Stat. 220, as amended by the act of November 15, 1941, 55 Stat. 763 (50 U.S.C. 191, 191a), Proclamation No. 2412 (3 CFR Cum. Supp.), and Executive Order No. 8929 (3 CFR Cum. Supp.), the regulations are amended, effective upon publication in the Federal Register, as follows:

Section 6.1 Definitions is amended by rescinding paragraphs (b) and (c).

Section 6.14 Identification requirements is rescinded.

Section 6.15 Departure license; when required is rescinded.

Section 6.16 Special license for local waters is rescinded.

Section 6.17 Application for and granting of individual license is rescinded.

Section 6.18 General license is rescinded.

Section 6.19 Departure permits for certain vessels is rescinded.

Section 6.20 Crew lists required on certain voyages is rescinded.

Section 6.21 Restricted areas in waters proximate to bridges is rescinded.

Section 6.37 Harbor entrance restriction is rescinded.

Section 6.79 Personnel engaged in loading explosives on board vessels is amended by rescinding paragraph (a).

Pursuant to the authority vested in the Commandant, United States Coast Guard, by §§ 6.14 and 6.18 of Subpart A, the regulations are amended, effective upon publication in the Federal Register, as follows:

Section 6.201 General License No. 1 is rescinded.

Section 6.210 Classification of vessels is rescinded. (10 F.R. 14450-14451, 27 November 1945.)

TITLE 46-SHIPPING

Chapter I—Coast Guard: Inspection and Navigation

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

Subchapter C—Motorboats, and Certain Vessels Propelled by Machinery Other Than by Steam More Than 65 Feet in Length

PART 28-SPECIFICATIONS AND PROCE-DURE FOR APPROVAL OF EQUIPMENT

Section 28.4–3 Buoyant materials is amended by deleting paragraph (c) Kapok.

PART 29-ENFORCEMENT

Section 29.8 (e) (2) is amended to read as follows:

§ 29.8 Procedure relating to numbering of motorboats. * * * (e) * * *

(2) In cases of sale or transfer by a citizen to a noncitizen, the purchaser shall submit an application for a certificate of award of number to the district Coast Guard officer having jurisdiction over the district in which the vessel is owned. If the vessel is 1.000 gross tons or over, or if the vessel is or has been previously documented under the laws of the United States, there shall be filed with the application a certified copy of the transfer order of the United States Maritime Commission approving such sale or transfer. The district Coast Guard officer shall indorse upon the certificate of award of number how the sale was approved by the United States Maritime Commission.

Subchapter D-Tank Vessels

PART 31—INSPECTION AND CERTIFICATION

MANNING OF TANK VESSELS

Section 31.4-2 is amended to read as follows:

§ 31.4-2 - Tank barges—B/LBR. Tank barges operating on inland waters or on the Great Lakes or rivers need not be manned unless in the judgment of the officer in charge, marine inspection, such manning is necessary for the protection of life and property and for the safe operation of the vessel: Provided, however, That towing vessels, while towing barges which are not required to be manned, shall carry in the regular complement of the towing vessel and shall have on board at all times while towing at least one licensed officer or certificated tankerman.

PART 32-REQUIREMENTS FOR HULLS, MACHINERY, AND EQUIPMENT

HULLS AND HULL FITTINGS; GENERAL

Section 32.1-3 (c) is amended to read as follows:

§ 32.1-3 Name of vessel. * * * (c) B/ALL. Every undocumented tank barge shall have its name or number carved, punch-marked, or welded on the main beam, inside the cargo hatch, or other suitable permanent part of the vessel's structure for the purpose of identification. The vessel's name or number shall be so displayed at the highest part of the vessel's hull or permanent structure that the name or number can be seen from either side.

PART 35-OPERATION

GENERAL

Section 35.1-4 (b) is amended to read as follows:

§ 35.1-4 Watchman. * * (b) Unmanned barge-B/LBR. On each normally unmanned barge in tow a strict watch shall be kept at all times from the towing vessel while the vessel is under way, and the same shall apply at all times while the barge is moored at a dock unless the barge is gas free or watchman service is provided or unless reasonable precaution is taken to prevent unauthorized persons from boarding the barge. These watchmen may be members of the regular complement of the towing vessel. (10 F. R. 14905, 11 December 1945)

PART 37-SPECIFICATIONS FOR LIFE-SAVING APPLIANCES

LIFE PRESERVERS

Section 37.6-3 Buoyant materials-TB/ALL is amended by deleting paragraph (c) Kapok.

ELECTRIC WATER LIGHTS

Section 37.9-1 Automatic electric water lights-TB/ALL is amended in the second sentence by changing the date "January 1, 1946" to "July 1, 1946." (For text of regulation see Federal Register of August 23, 1945, 10 F. R. 10365), (10 F. R. 15174-15175, 19 December 1945.)

Subchapter G-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 subparagraph (3) Kapok under paragraph (e) Buoyant materials.

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

Section 60.48 Life preservers is amended by deleting subparagraph (3) Kapok under paragraph (e) Buoyant materials.

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 subparagraph (3) Kapok under paragraph (e) Buoyant materials. Subchapter 1—Bays, Sounds, and Lakes Other Than the Great Lakes: General Rules and Regulations

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

Section \$4.52 Life preservers is amended by deleting subparagraph (3) Kapok under paragraph (e) Buoyant materials.

Subchapter J-Rivers: General Rules and Regulations

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

Section 113.44 Life preservers is amended by deleting subparagraph (3) Kapok under paragraph (e) Buoyant materials.

- Subchapter M-Construction or Material Alteration of Passenger Vessels of the United States of 100 Gross Tons and Over Propelled by Machinery
- PART 144—CONSTRUCTION OR MATERIAL ALTERATION OF PASSENGER VESSELS OF THE UNITED STATES OF 100 GROSS TONS AND OVER PROPELLED BY MACHINERY

Section 144.4 (d) is amended to read as follows:

§ 144.4 Structural strength, fire control, materials of construction. * *

(d) Deck coverings, overlays and insulations, (1) All deck areas shall be classified as "A-1", "B-1", "B", or "A" depending upon the nature of the space and the space below it. The location requirements for the various classes of decks shall be as noted in figure 144.4 (d) (1).

(2) Decks of the various classes as noted below, while subject to the standard fire test reaching 1.700° F., at the end of one hour, shall be capable of withstanding the passage of flame for the one-hour period. In addition, the average temperature on the unexposed surface shall not rise more than 250° F., above the original temperature nor shall the temperature at any point rise more than 325° F., above the original temperature within the times listed below:

Class	A-1	60 minutes.
Class	B-1	30 minutes.
Class	B	15 minutes.
Class	Α	0 minute.

ABOVE DECK	ACCOMMODATIONS COMBUSTIBLE FURNITURE	ACCOMMODATIONS IN COMBUSTIBLE FURNITURE	CONTROL STATION	PASSAGE	TOILET OR SHOWER SPACES SERVICE, MACHINERY OR CARGO (EXCEPT WHERE OVER SIMILAR SPACE)	OPEN DECI
DECK	CLASS A-I-	CLASS B-1-	CLASS A-I	CLASS A-I	CLASS A	CLASS A
TYPE OF SPACE	CA	RGO , SERVIC	E OR MA	CHINERY	SPACES	
BELOW DECK						1.721

TYPE OF SPACE ABOVE DECK	ACCOMMODATIONS COMBUSTIBLE FURNITURE	ACCOMMODATIONS INCOMBUSTIBLE FURNITURE	CONTROL STATION	PASSAGE	TOILET OR SHOWER SPACES SERVICE, MACHINERY OR CARGO	OPEN DECK
DECK	CLASS B-1	CLASS B	CLASSA-I	CLASS B-I	CLASS A	CLASS AT
TYPE OF SPACE	AC	COMMODATIO	NS, COM	BUSTIBLE	FURNITURE	

TYPE OF SPACE	ACCOMMODATIONS COMBUSTIBLE FURNITURE	ACCOMMODATIONS INCOMBUSTIBLE FURNITURE	CONTROL STATION	PASSAGE	TOILET OR SHOWER SPACES SERVICE, MACHINERY OR CARGO	OPEN DECK
DECK	CLASS 8	GLASS A	CLASS B-I	CLASS B	CLASS A	CLASS AT
TYPE OF SPACE BELOW DECK	AC	COMMODATIC	ONS, INC	OMBUSTIB	LE FURNITURE	

FIGURE 144.4 (d)(1)

LOCATIONS FOR VARIOUS TYPES OF DECKS (3) Insulation to produce the values in subparagraph (2) may be obtained by means of an approved deck covering, approved insulation under the deck, approved bulkhead or sheathing material as a ceiling or any combination of the above.

(4) Decks within accommodation spaces may have an overlay in general not exceeding $\frac{3}{6}$ inch in thickness. Greater thicknesses may be separately approved by the Commandant for specific locations. This overlay need not meet the specifications for an approved deck covering, and will not be considered as giving any insulating value.

(5) Decks in toilet spaces or washrooms, service, cargo, and machinery spaces, and open decks may have an overlay in any thickness. This overlay need not meet the requirements for an approved deck covering.

(6) Rugs and carpets may be used on any deck with the exception of decks within passageways or stairway enclosures.

(7) Spaces containing incombustible furniture will be considered as those spaces in which the frames of all furniture are made of metal or approved incombustible materials.

(8) Overlays within operating rooms shall be of a type which is acceptably electrically conductive in nature.

Subchapter P-General Provisions

PART 157-ENFORCEMENT

Part 180 is hereby redesignated as Part 157 with the title, "Enforcement."

Section 180.1 is redesignated as section 157.1 with the heading, "Reports of Violations."

Subchapter Q-Specifications

PART 160-LIFESAVING EQUIPMENT

SUBPART 160.006-LIFE PRESERVERS; RE-PAIRING, RE-COVERING AND CLEANING

- 160.006-1 Applicable specifications.
- 160.006-2 Repairing.
- 160.006-3 Re-covering.
- 160.006-4 Cleaning life preserver envelopes or covers.
- 160.006-5 Cleaning life preservers (where buoyancy fillers are not removed from envelope covers during cleaning process).

§ 160.006-1 Applicable specifications. (a) There are no other specifications applicable to this subpart.

§ 160.006-2 Repairing. (a) General. No repairs, except in emergency, shall be made to an approved life preserver without advance notice to the officer in charge, marine inspection, of the district in which such repairs are to be made. Emergency repairs shall be reported as soon as practicable to the officer in charge, marine inspection. (b) Kind of repairs. Except in emergency, tapes or straps may not be repaired, but may be renewed, and small holes, tears, or rips in the envelope cover fabric may be repaired, at the discretion of the officer in charge, marine inspection.

§ 160.006-3 Re-covering. (a) General. Life preservers of approved types may be re-covered in accordance with the requirements for new life preservers of the same type in effect at the time the re-covering is done, i. e., the buoyant inserts may be removed and inserted into new envelope covers, provided that all the materials and construction meet the requirements and tests for new life preservers of its type.

(b) Marking. In addition to the marking provided for new life preservers of the same type, re-covered life preservers shall be plainly marked in waterproof ink with the words "Re-Covered By" to appear immediately before or above the name and address of the manufacturer.

(c) Inspections and tests. Recovered life preservers shall be subjected to the same inspections and tests as are provided for new life preservers of the same type.

(d) Procedure for approval. The procedure for obtaining approval to re-cover life preservers shall be the same as for obtaining approval to manufacture new life preservers of the same type.

§ 160.006-4 Cleaning life preserver envelopes or covers. (a) General. The envelopes or covers of life preservers of the removable filler type, i. e., cork, balsa wood, and removable pad fibrous filler types, may be cleaned or laundered by removing the buoyant fillers during the cleaning or laundering process and reinserting them into the envelopes or covers.

(b) Procedure for approval. No formal approval is required, but application for permission to clean or launder life preserver envelopes or covers where the buoyant fillers are removed during the cleaning process, shall be made to the district Coast Guard officer of the district in which the work is to be done, and the district Coast Guard officer may grant such permission at his discretion.

§ 160.006-5 Cleaning life preservers (where buoyancy fillers are not removed from envelope covers during cleaning process). (a) General. Only life preservers of approved types shall be admitted to cleaning. Neither the formula for the cleaning solution nor the time and temperature limits are prescribed or restricted by this subpart, except that the strength of the tapes and fabric shall not be unduly lessened by the cleaning and the cleaned life preservers shall be in good condition and satisfactorily pass the buoyancy requirements specified below.

(b) Inspections and tests. (1) General. An inspector shall examine all cleaned life preservers at the place the work is done. Life preservers having tears, rips, weakened or broken straps, excessive weight, or other abnormalities as compared to new life preservers, shall be eliminated. He shall select from each lot of 250 or less cleaned life preservers, at least five life preservers to be tested for buoyancy. If the specimen life preservers all pass the buoyancy test described in paragraph 160.006-5 (b) (2), the lot shall be acceptable as to buoyancy. If any one of the specimen life preservers fails the buoyancy test. 10 additional specimen life preservers shall be selected at random from the lot and tested for buoyancy. If all of the 10 additional specimen life preservers pass the test, the lot shall be acceptable as to buoyancy. If any one of the 10 additional specimen life preservers fails the buoyancy test, the lot shall be rejected. Rejected lots may be tested 100 percent by the cleaner 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, 10 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 are of approved types, are in good condition, and are satisfactory as to buoyancy as shown by the tests of representative specimens, they shall be plainly marked in waterproof ink with the word "Passed (inspector's initials), (port), (date)."

(2) Buoyancy test. The specimen cleaned life preserver shall be tested for buoyancy by placing it in a weighted wire cage which shall be submerged 2 hours in a tank of water so the top is approximately 2 inches below the surface. The weights shall be more than sufficient to submerge the cage with the inclosed life preserver. The buoyancy shall be determined to equal the weight of the weighted cage in water less the weight of the weighted cage in water with the life preserver inside. The adult life preserver shall support not less than 161/2 pounds net weight, and the child life preserver shall support not less than 11 pounds net weight.

(c) Marking. Each life preserver cleaned or laundered shall be plainly marked in waterproof ink at or near the center of the jacket with the words "Cleaned By (name and address of company), (date)."

(d) Procedure for approval. Approval for cleaning or laundering life preservers as a unit, with the buoyancy fillers inside the covers, the whole being subjected to the cleaning or laundering process, is granted only by the Commandant, United States Coast Guard, Washington 25, D. C. Correspondence pertaining to the subject matter of this subpart shall be addressed to the district Coast Guard officer of the district in which the factory is located. In order for a company to obtain approval, an inspector will be detailed to select at random not less than four specimen life preservers from among used, soiled life preservers offered for cleaning and will observe the specimens selected during the cleaning process in order to ascertain that they are cleaned in accordance with the company's stated description of the process. The cleaned specimen life preservers, together with four copies of the complete description of the procedure, including the formula for the cleaning solution and time and temperatures for various operations, shall then be forwarded through the district Coast Guard officer to the Commandant.

PART 164-MATERIALS

SUBPART 164.003-KAPOK, PROCESSED

164.003-1	Applicable specifications.
164.003-2	Grades.
164.003-3	Materials and workmanship.
164.003-4	Inspection and tests.
164.003-5	Procedure for approval.

§ 164.003-1 Applicable specifications. (a) There are no other specifications applicable to this subpart.

§ 164.003-2 Grades. (a) Processed kapok shall be of but one grade as hereinafter specified.

§ 164.003-3 Material and workmanship. (a) The raw kapok fiber shall be long, clean, creamy white in color, lustrous, free from discoloration and adulteration with other fiber, and of a quality equal to that grown in Java.

(b) Kapok shall be processed by teasing in a machine using the airblow method. Mechanical separation of fiber masses is permitted, but machines using violent beating which breaks down the fibers or causes undue powdering or pulverizing are not permitted. Provision shall be made for trapping seeds and heavy objects in gravity traps and the dust or powder in an efficient dust collector.

(c) Processed kapok shall have a buoyancy in fresh water of at least 48 pounds per cubic foot when tested in accordance with paragraph 164.003-4 (d). Rejected kapok shall not be used in lifesaving products inspected by the Coast Guard.

(d) The processed kapok shall contain not more than 5 per cent by weight of sticks, seeds, dirt or other foreign material and shall be free from objectionable odor and from adulteration with other fibers.

§ 164.003-4 Inspections and tests. (a) Kapok fibers to be used in a finished product subject to inspection by the Coast Guard shall be subject to inspection and tests at the plant of the manufacturer of such product, who shall furnish the necessary testing tank, test cages, and scales.

(b) Acceptance of kapok prior to being incorporated into finished products, or during the course of manufacture, shall in no case be construed as a guarantee of the acceptance of the finished product.

(c) Not less than a 1-pound sample from each 1,000 pounds of kapok shall be tested for buoyancy by the inspector. At his discretion, the inspector may select additional samples for tests if deemed advisable.

(d) The buoyancy test shall be made with 16 ounces of processed kapok uniformly packed in a rigid wire box or cage with metal reinforced edges, and submerged by weights in a tank of fresh water to a depth of 12 inches below the surface of the water, measurement made to the top of box. for 48 hours. The test box shall be cylindrical in shape, and as nearly as practicable 1/3 cubic foot in volume, 4 inches deep, 13.54 inches diameter, all inside measurements; constructed of about 0.065-inch galvanized iron wire with about 1/4-inch mesh, and lined with about 0.007-inch copper wire screen about 18 meshes to the inch, to prevent the kapok from pushing out through the larger wire meshes. At the end of 48 hours' submergence, the buoyancy shall be determined by subtracting the submerged weight of the box, accessory weights and kapok from the submerged weight of the box and weights without the kapok, and dividing the remainder by the volume of the kapok expressed in cubic feet.

(e) Kapok fiber shall, at the option of the inspector, be subjected to a microscopic examination to detect adulteration with other fiber.

(f) Processed kapok shall, at the option of the inspector, be subjected to separation of kapok fibers from foreign matter by hand, the portions of each weighed, and percentage of foreign matter computed for compliance with paragraph 164.003-3 (d).

§ 164.003-5 Procedure for approval. (a) Processed kapok is not subject to formal approval, but will be accepted by the inspector on the basis of this subpart for use in the manufacture of lifesaving equipment utilizing it.

SUBPART 164.004—KAPOK, REPROCESSED 164.004–1 Applicable specifications. 164.004–2 Grades. 164.004-3 Material and workmanship. 164.004-4 Inspections and tests. 164.004-5 Procedure for approval.

§ 164.004-1 Applicable specifications. (a) There are no other specifications applicable to this subpart.

§ 164.004-2 Grades. (a) Reprocessed kapok shall be of but one grade as hereinafter specified.

§ 164.004-3 Material and workmanship. (a) Kapok taken from life preservers is suitable for reclaiming and reprocessing; except that all soiled, discolored, powdered, oilsoaked, badly damaged and badly lumped portions, or parts showing other abnormalities as compared to new kapok, shall be discarded.

(b) Kapok taken from pillows, mattresses, hassocks, or other such articles is not suitable.

(c) Reclaimed kapok shall be reprocessed by teasing in a machine using the air-blow method. Mechanical separation of fiber masses is permitted, but machines using violent beating which breaks down the fibers or causes undue powdering or pulverizing are not permitted. Provision shall be made for trapping seeds and heavy objects in gravity traps and the dust or powder in an efficient dust collector.

(d) Reprocessed kapok, when mixed with new kapok, shall have a buoyancy in fresh water of at least 48 pounds per cubic foot when tested in accordance with paragraph 164.004-4 (d). Rejected reprocessed kapok shall not be used in lifesaving products inspected by the Coast Guard.

(e) Reprocessed kapok shall be thoroughly mixed in the airblow teasing machine with new kapok in the ratio of one part reprocessed kapok to one part new kapok.

(f) Reprocessed kapok shall contain not more than 5 per cent by weight of sticks, seeds, dirt or other foreign material and shall be free from objectionable odor and from adulteration with other fibers.

§ 164.004-4 Inspections and tests. (a) Reprocessed kapok to be used in a finished product subject to inspection by the Coast Guard shall be subject to inspection and tests at the plant of the manufacturer of such product, who shall furnish the necessary testing tank, test cages, and scales.

(b) Acceptance of reprocessed kapok prior to being incorporated into finished products, or during the course of manufacture, shall in no case be construed as a guarantee of the acceptance of the finished product.

(c) Not less than a 1-pound sample from each 1,000 pounds of reprocessed kapok shall be tested for buoyancy by the inspector. At his discretion, the inspector may select additional samples for tests if deemed advisable.

(d) The buoyancy test shall be made with 16 ounces of reprocessed kapok uniformly packed in a rigid wire box or cage with metal reinforced edges, and submerged by weights in a tank of fresh water to a depth of 12 inches below the surface of the water, measurement made to the top of box, for 48 hours. The test box shall be cylindrical in shape, and as nearly as practicable 1/3 cubic foot in volume, 4 inches deep, 13.54 inches diameter, all inside measurements; constructed of about 0.065-inch galvanized iron wire with about 1/4-inch mesh, and lined with about 0.007-inch copper wire screen about 18 meshes to the inch. to prevent the reprocessed kapok from pushing out through the larger wire meshes. At the end of 48 hours' submergence, the buoyancy shall be determined by subtracting the submerged weight of the box, accessory weights and reprocessed kapok from the submerged weight of the box and weights without the reprocessed kapok, and dividing the remainder by the volume of the reprocessed kapok expressed in cubic feet.

(e) Reprocessed kapok shall, at the option of the inspector, be subjected to a microscopic examination to detect adulteration with other fiber.

(*f*) Reprocessed kapok shall, at the option of the inspector, be subjected to separation of kapok fibers from foreign matter by hand, the portions of each weighed, and percentage of foreign matter computed for compliance with paragraph 164.004-3 (f).

§ 164.004-5 Procedure for approval. (a) Reprocessed kapok is not subject to formal approval, but will be accepted by the inspector on the basis of this subpart for use in the manufacture of lifesaving equipment utilizing it.

SUBPART 164.006-DECK COVERINGS (INTERIM SPECIFICATIONS)

164.005-1	Applicable specifica	tions.
164.006-2	Grades.	
164.006-3	Construction, mat	erials, and
164 006-4	workmanship.	ina

164.006-5 Procedure for approval.

§ 164.006-1 Applicable specifications. (a) There are no other specifications applicable to this subpart.

§ 164.006-2 Grades. (a) Deck coverings shall be of but one grade as hereinafter specified, and shall be known as "an approved deck covering."

§ 164.006-3 Construction, materials, and workmanship. (a) It is the intent of this specification to obtain a deck covering made largely of incombustible materials with low heat transmission qualities which will produce a minimum of smoke when exposed to high temperatures.

(b) Deck coverings shall be of such a quality as to successfully pass all of the tests set forth in Section 164. 006-4.

§ 164.006-4 Inspection and testing. (a) All tests shall be conducted at the National Bureau of Standards or other laboratories designated by the Coast Guard.

(b) Smoke tests: (1) Samples covering the range of thicknesses desired to be used shall be tested for smoke emission. Samples shall be laid on $\frac{1}{4}$ - by 12- by 27-inch steel plates. Normal protective coatings and deck attachments shall be incorporated in the samples.

(2) The samples shall be heated in a furnace whose temperature is limited to the standard decking curve reaching $1,325^{\circ}$ F. at the end of 1 hour. Smoke observations shall be made at intervals not greater than 5 minutes during the 1-hour period of test.

(3) Instantaneous values of the percent of light transmission shall be calculated from the observations noted in subparagraph 164.006-4 (b) (2). A plot of light transmission values shall be made using straight lines between instantaneous values.

(4) Any instantaneous value of 10 percent light transmission or less shall be considered sufficient cause for rejection of a deck covering.

(5) Average values of light transmission shall be calculated for 15, 30, and 60 minutes. Averages shall be an arithmetic mean with values taken at 1 minute intervals from the plotted curve noted in subparagraph 164.006-4 (b) (3). If any of the three average values of light transmission is less than any of the values set forth below, it will be considered sufficient cause for rejection of a deck covering:

15 minutes-90 percent light transmission.

30 minutes—60 percent light transmission.

60 minutes—50 percent light transmission.

(c) Fire resistance and integrity tests: (1) Samples of representative deck constructions not less than 41/2 feet wide and 81/2 feet long finished with deck coverings in the thicknesses as noted in subparagraph 164.006-4 (b) (1) shall be heated in a furnace whose temperature is controlled according to the standard fire exposure curve reaching 1,700" F. at the end of one hour. Temperature of the unexposed side as indicated by not less than 5 thermocouples under 0.40 inch asbestos pads shall be observed at in-, tervals not greater than 5 minutes during the 1-hour period of test.

(2) Data from these tests shall be analyzed to determine the thicknesses necessary to limit the average temperature rise on the unexposed surface to 250° F. above the original temperature or the maximum rise at any thermocouple location to 325° F. above the original temperature at the end of 15, 30, and 60 minutes.

(3) A total load of 150 pounds shall be applied to the deck coverings during the fire resistance tests. This load shall be applied by means of an indenting tool having three flat areas each having a diameter of 1 inch. At the end of the 1-hour period, the depth of the depression shall be noted.

(4) Excessive cracking, buckling, or disintegration may be considered cause for rejection.

(d) Organic carbon content test: (1) The organic carbon content shall be determined and shall not exceed 0.12 grams per cubic centimeter of the molded deck covering.

§ 164.006-5 Procedure for approval (a) If a manufacturer desires to have a deck covering approved, a request shall be presented to the Commandant of the Coast Guard, together with the following information:

(1) A complete list of ingredients for the deck covering giving the percentages of each by weight. A sample of each ingredient shall be submitted in such a quantity as to make approximately 2 pounds of the deck covering mixture.

(2) The range of thicknesses in which it is proposed to lay the deck covering together with any information the manufacturer may have as to maximum or minimum thicknesses.

(3) The trade name and designation of the deck covering.

(4) Description of method of attachment to or protection of the steel deck. If an adhesive or protective coating is used, a liberal sample shall be supplied.

(5) A sample of the molded deck covering at least 6 inches square and $\frac{1}{4}$ inch thick.

(b) The above information will be submitted by the Coast Guard to the National Bureau of Standards for consideration. If the organic carbon content is below the specified maximum and the decking is otherwise suitable, the manufacturer will be so advised. The number and thicknesses of samples to be submitted will be specified at this time.

(c) If the deck covering is indicated as being suitable, the manufacturer shall then submit the following:

(1) Two samples of each thickness to be tested each laid on a $\frac{1}{4}$ by 12 by 27 inches steel plate for the purpose of the smoke tests noted in paragraph 164.006-4 (b).

(2) Sufficient bulk material (unmixed) to lay a sample 1 inch thick on an area of 12 by 27 inches. (3) One sample $4\frac{1}{2}$ by $8\frac{1}{2}$ feet of each thickness to be subjected to the fire resistance test. Plate to be $\frac{1}{4}$ inch thick with beams spanning the long dimension of the plate.

(4) A check for \$50 made payable to the National Bureau of Standards for each set of two samples submitted for smoke tests. The cost of the fire resistance test will be borne by the government.

(d) The above material will be submitted to the National Bureau of Standards by the Coast Guard for testing. The tests noted in section 164.006-4 will be conducted and a report submitted to the Coast Guard.

(e) The manufacturer will then be advised if his material is approved under this specification, and if it is, in what thicknesses it may be laid, and in what thicknesses it must be laid to meet the requirements for class A-1, class B-1 and class B decks, without the use of any other insulating material. If approved, this information, together with the weight per square foot per 1 inch thick, will be published in the Federal Register. (F. R. 3 January 1945.)

Navigation and Vessel Inspection Circular No. 64

Provisions, or Rations, for Lifeboats and Life Rafts on Ocean and Coastwise, Passenger, Freight, and Tank Vessels

> UNITED STATES COAST GUARD, WASHINGTON' 25, D. C.

1 October, 1945.

Provisions consisting of: (a) Seven ounces of biscuits known as type C, type I, or type IV (without salt topping) rations covered by United States Army specification;

(b) Seven ounces of pemmican covered by specifications for United States Navy aircraft emergency ration pemmican;

(c) Seven ounces of chocolate tablets in waterproof packages or containers, or an additional 7 ounces of biscuits "type C" rations covered by United States Army specifications; and

(d) Seven ounces of milk tablets in waterproof packages or containers; which are contained in a hermetically sealed can of an approved type, are hereby declared equivalent to the two pounds of hard bread required by sections 33.3-1 (u), 33.3-5 (h), 59.11(w), 59.52 (g), 60.9 (w), and 60.45 (g) of the regulations, as amended by the Federal Register issues of 5 and 28 September 1945, and may be substituted in lieu of the hard bread specified.

> (Signed) L. T. CHALKER, Acting Commandant.

No. 65

Warning Passengers of Dangerous Conditions

UNITED STATES COAST GUARD WASHINGTON 25, D. C.

23 November, 1945.

1. Section 26 of the Merchant Marine Act of 1920 relating to the carriage of passengers on other than passenger vessels in full compliance with the law and regulations, provides that the owner, agent, or master of the vessel shall first notify the passengers of the presence on board of any dangerous articles, or of any other condition or circumstance which would constitute a risk of safety for the passengers or crew.

2. In accordance with this statute all persons other than members of the crew and military personnel carried on vessels either under waiver or otherwise, which are not in full compliance with statutes and regulations applicable to passenger vessels, must be given the notice as above indicated. Failure on the part of the owner, agent, or master of the vessel to give such notice renders the vessel subject to a penalty of \$500, which may be mitigated or remitted by the Commandant, United States Coast Guard, upon a proper presentation of the facts or extenuating circumstances.

> (Signed) L. T. CHALKER, Acting Commandant.

Equipment Approved by the Commandant

BUOYANT CUSHIONS

12" x 20" x 2" tufted rectangular kapok buoyant cushion for use on motorboats of Classes A, 1, and 2, not carrying passengers for hire, Approval No. B-274, manufactured by Cluff Fabric Products, 457-467 East 147th Street, New York, N.Y.

14" x 18" x 2" tufted rectangular kapok buoyant cushion for use on motorboats of Classes A, 1, and 2, not carrying passengers for hire, Approval No. B-275, manufactured by Cluff Fabric Products, 457-467 East 147th Street, New York, N. Y.

14" x 24" x 2" tufted rectangular kapok buoyant cushion for use on motorboats of Classes A, 1, and 2, not carrying passengers for hire, Approval No. B-276, manufactured by Cluff Fabric Products, 457-467 East 147th Street, New York, N. Y.

14" x 45" x 2" tufted rectangular kapok buoyant cushion for use on motorboats of Classes A, 1, and 2, not carrying passengers for hire, Approval No. B-277, manufactured by Cluff Fabric Products, 457-467 East 147th Street, New York, N. Y.

14" x 20" x 2" Fisherman's Pad kapok buoyant cushion for use on motorboats of Classes A, 1, and 2, not carrying passengers for hire, Approval No. B-278, manufactured by Cluff Fabric Products, 457-467 East 147th Street, New York, N. Y.

Street, New York, N. Y. 19" x 22" x 2" Bar Harbor kapok buoyant cushion for use on motorboats of Classes A, 1, and 2, not carrying passengers for hire, Approval No. B-279, manufactured by Cluff Fabric Products, 457-467 East 147th Street, New York, N. Y.

12" x 14" x 2" seat; 12" x 18" x 2" back, double kapok buoyant cushion for use on motorboats of Classes A, 1, and 2, not carrying passengers for hire, Approval No. B-280, manufactured by Cluff Fabric Products, 457-467 East 147th Street, New York, N, Y.

15" x 15" x 2" seat; 15" x 15" x 2" back, double kapok buoyant cushion (come apart style) for use on motorboats of Classes A, 1, and 2, not carrying passengers for hire, Approval No. B-281, manufactured by Cluff Fabric Products, 457-467 East 147th Street, New York, N. Y.

15" x 15" x 2" seat; 15" x 20" x 2" back, double kapok buoyant cushion (come apart style) for use on motorboats of Classes A, 1, and 2, not carrying passengers for hire, Approval No. 282, manufactured by Cluff Fabric Products, 457-467 East 147th Street, New York, N. Y.

15" x 15" x 2" buoyant cushion filled with 24 ounces of Typha (processed Cattail Floss), for use on motorboats of Classes A, 1, and 2, not carrying passengers for hire, for the duration of the National Emergency and six months thereafter, Approval No. B-283, manufactured by W. L. Dumas Manufacturing Company, 14 A Street, N. W., Miami, Oklahoma (10 F. R. 14944, 11 December 1945).

15" x 20" x 2" Tufted rectangular style kapok buoyant cushion, Approval No. B-284, manufactured by Cluff Fabric Products, 457-467 East 147th Street, New York, N. Y. (For use on motorboats of Classes A, 1, and 2, not carrying passengers for hire.) Aluminum gravity davit, Type 33A (General Arrangement Dwg. No. 2893, dated 20 August, 1945) (Working load of 32,000 pounds per set), submitted by Welin Davit and Boat Corporation, Perth Amboy, N. J. (10 F.R. 15160, 18 December 1945).

FIRING ATTACHMENT FOR LINE-THROWING GUN

Mechanical firing attachment for 2½" bore line-throwing guns, Model F-100A, Dwg. No. F-100A, dated 30 September 1945, manufactured by Naval Company, Doylestown, Pa.

FIRE RETARDANT MATERIALS FOR VESSEL CONSTRUCTION: PANELS FOR CLASS B BULKHEAD CONSTRUCTION

U. S. G. Marine Board, composition board with aluminum veneer on both sides (Dwg. No. CR-914, dated 16 July, 1945), minimum thickness $\frac{7}{8}$ ", approximate weight 4.16 pounds per sq. ft., submitted by United States Gypsum Company, Chicago, Ill. (10 F.R. 14944, 11 December 1945).

FIRE-INDICATING AND ALARM SYSTEM

Zonit system test station (Assembly Dwg. No. 66818A, Rev. A; Installation, Dwg. No. L-62353-D, Rev. D; Switch, Dwg. No. 33413-B, Rev. B), submitted by Walter Kidde & Co., Inc., 675 Main Street, Belleville, N. J. (The drawings listed above replace the drawings of the same items in all Zonit systems approved.) (10 F.R. 14944, 11 December 1945.)

LIFEBOATS

24' x 8' x 3.58' metallic motor-propelled lifeboat (36-person capacity) (Construction and Arrangement Dwg. No. 3009, dated 14 June, 1945, revised 16 October 1945), submitted by Welin Davit and Boat Corporation, Perth Amboy, N. J.

14' x 5' x 2' metallic oar-propelled lifeboat (8-person capacity) (General Arrangement Dwg. No. 1416, dated 14 November 1945), submitted by Lane Lifeboat and Davit Corporation, Foot of 40th Road, Flushing, N. Y. (Supersedes approval 25 October, 1945, 10 F.R. 13298.) (10 F.R. 14944, 11 December 1945.)

22' x 6.9' x 2.8' metallic oar-propelled lifeboat (25-person capacity) (General Arrangement Dwg. No. 2220, dated 29 October 1945), submitted by Lane Lifeboat and Davit Corporation, Foot of 40th Road, Flushing, Long Island, N. Y. (10 F.R. 15160, 18 December 1945.)

22' x 7.5' x 3.167' steel oar-propelled lifeboat, 31-person capacity, General Arrangement Dwg. No. G-240-C, dated 5 November 1945, submitted by C. C. Galbraith & Son, Inc., 99 Park Place, New York 7, N. Y. (Supersedes approval 8 December 1944, 9 F.R. 14416, insofar as new construction is concerned.)

24' x 7.75' x 3.33' steel oar-propelled lifeboat, 37-person capacity, General Arrangement Dwg. No. G-126-K, dated 16 October 1945, submitted by C. C. Galbraith & Son, Inc., 99 Park Place, New York 7, N. Y. (Supersedes approval 24 March 1945, 10 F.R. 3162, insofar as new construction is concerned.)

24' x 8' x 3.5' steel oar-propelled lifeboats, 40-person capacity, General Arrangement Dwg. No. G-126-M, dated 23 October 1945, submitted by C. C. Galbraith & Son, Inc., 99 Park Place, New York 7, N. Y. (Supersedes approval 24 March 1945, 10 F.R. 3162, insofar as new construction is concerned.)

ITEMS SUITABLE FOR MERCHANT MARINE USE

ACCEPTABLE FUSIBLE PLUGS

For the information of all parties concerned, a list of approved heats which have been found acceptable during the period from 16 Nov. 1945 to 15 Dec. 1945, is as follows:

The Lunkenheimer Co., P. O. Box 360, Annex Station, Cincinnati 14. Ohio, heat Nos. 228 to 237, plug Nos. 275 to 416, inclusive.

AFFIDAVITS

The affidavits accepted during the period from 16 Nov. 1945 to 15 Dec. 1945 are as follows:

American Manganese Bronze Co., Holmesburg, Philadelphia, Pa., castings.

Kinney Iron Works, Los Angeles, Calif., castings.

CERTIFICATION OF ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of Ships' Stores and Supplies certificated for use on board vessels are as follows:

Letholol, A. P. Schrock Chemical Co., 215 North 86th Street, Seattle 3, Wash. Certification No. 190, 30 November 1945.

Kilbug, West Disinfecting Co., 42–16 West Street, Long Island 1, N. Y. Certification No. 191, 30 November 1945.

Kilsall Residual Spray, West Disinfecting Co., 42-16 West Street, Long Island 1, N. Y. Certification No. 192, 30 November 1945.

Chemical Solvent, Ellis Solvents Co., Inc., Walpole, Mass. Certification No. 193, 20 December 1945.

ELECTRICAL APPLIANCES

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

	Locati	on appara	tus may	be used	
Manufacturer and description of equipment	Passen- ger and crew quarters and public spaces	Machin- ery cargo and work spaces	Open decks	Pump rooms of tank vessels	Date of action
Lovell-Dressel Co., Inc. Arlington, N. J.: Receptacle fitting, 3-wire, 10 amperes, 125 volts, catalog No, 1712, drawing No. 1712, alteration 0.					11-19-45
Receptacle, 3-wire, waterproof, 10 amperes, 125 volts, eatalog No. 1770, drawing No. 1770, alteration 0. Oceanic Electric Products Corp., New York, N. Y.:	x	x	x		11-19-45
Electrical fittings: Connection box, waterproof, catalog No. 2112, drawing No. 4017, revision 0 Indicating switch panel, 4 gang switch; pilot light	x	x	x		11-27-45
combination; nonwatertight, 10 amperes, 125 volts, 2-wire, single pole, catalog No. 3834T, drawing No. 3834T, alteration 0 Receptacle, single, nonwatertight, 10 amperes, 125	x				12-3-45
volts, catalog No. 275, drawing No. 2571, altera- tion 0	x				12-14-45

Merchant Marine Personnel Statistics

MERCHANT MARINE LICENSES ISSUED DURING NOVEMBER 1945

DECK O	FFIC	ERS
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	Master									Chief mate									Second mate											
Region	Oci	Ocean		ast- ise				. S. & I		Rivers		Ocean		Coast- G wise L		ireat B, S akes L		3. &	Rivers		Oct	cau	Const- wise		Great Lakes		B. S. & L.		Rivers	
	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	O R	
Atlantic coast. Gulf coast. Great Lakes and rivers. Pacific coast.	36 3 1 18	39 19 1 44	2	9			7	18 3 4 7	1 2 1	21517	66 10 44	72	1	3	1 1 1		2	4	 	1	69 22 1 70	12 4 3 7			· + · · · · · · · · · · · · · · · · · ·					
Total	58	103	2	19		1	-13	32	4	14	120	17	1	4			5	8	1	5	162	26							+ ** ***	
1.5.1		Third mate						-51	Pilots						Master mate Total															
Region	Ocean Coast- wise				Great B. S. & Lakes L.			Rivers		Great Lakes		ireat B. S. &		& Rivers			Uninspected vessels, high seas					Origi- Re-		Grand						
	0	I	2	0	R	0	R	0	P.	R	0	R	C	,	R	0	R	0	1	R	0	R	0	H	C (1.27)	nal	ney	wal	total	
Atlantic coast Gulf coast Great Lakes and rivers		0	62		1				111			1 1 1		111		30 4 3	73 24 11		7	2.		21			1.1.1	467 60 27		178 61 40	64 13 6	
Pacific const Total	35	1.1.1	4	1	1	-										17	42	-	17	11	2	4				271	-	124 403	39	

ENGINEER OFFICERS

and the second	CI	hief engin	eer, stea	m	First a	assistant	engineer.	steam	Second	assistant	enginee	r, steam	Third assistant engineer, steam					
Region	Qe	can	ı Inland		1 Oce		Inl	and	Oe	ean	Inl	and	Oct	an	Inl	and		
	0	R	0	R	0	R	0	. R	0	R	0	R	0	R	0	R		
Atlantic coast Gulf coast Great Lakes and rivers Pacific coast	54 17 27	101 19 7 41	$\begin{array}{c} 4\\3\\1\end{array}$	25 3 8 5	89 17 37	87 9 2 11		3 7	$\begin{array}{c}132\\31\\2\\68\end{array}$	16 2 3	2		357 19 5 111	12 2 2 8				
Total	98	168	8	41	143	59	6	15	233	21	2		492	24		*******		
1.1.45 (1970)	22		-50	24	Motor	vessels	24			U	ninspec	ted vesse	ls		Totals			
Region		Chief er	ngineer	First as		Second s	issistant neer		assistant neer	Chief e	ngineer	Assistant en-		Orig-	Re-	Grand		
		0	R	0	R	0	R	0	R	o	R	0	R	inal	newal	total		
Atlantic coast		21 3 4	56 12 6	14 1 2	17 3 3	9 2	3	311 7	5	1				992 100 21	277 53 36	1, 260 153 55		
Pacific coast		4	4 27		7	1	3	5	3		i	2	· · · · · · · · ·	256		36		

Total_

1,844

1, 369

ORIGINAL SEAMEN'S DOCUMENTS ISSUED, MONTH OF NOVEMBER 1945

Region	Contin- uous dis- charge book	Certifi- cate of iden- tity	A. B., green, 3 years 1	A. B., green, 9 months emer- gency 1		A. B., blue, 6 months emer- gency ³	A. B., blue, 6 months emer- gency ¹	Life- boat, 12-24 months 4	U. S. MER. MAR. DOC.	Q.M.E.D., 6 months	Q.M.E.D., emergency	Radio oper- ators	Certifi- cate of service	Tanker man	Staff officer	Total
Atlantic coast Gulf coast Pacific coast Great Lakes and rivers	1 26 2 379	478 324 3,409 97	83 18 38 5	124 39 106 4	102 7 59 16	2 0 2 11	0 0 0 0	1, 422 95 981 14	4, 542 1, 152 1, 594 657	193 80 238 50	433 225 461 48	28 6 9 1	4,430 1,472 4,595 1,086	8 18 2 4	152 21 88	11, 998 3, 483 11, 584 2, 373
Total	408	4, 308	144	273	184	15	0	2, 512	7, 945	561	1, 167	44	11, 583	32	262	29,438

Unlimited.

¹ Ornimited.
² Great Lakes, lakes, bays, and sounds.
³ Trugs and towboats and freight vessels under 500 tons (miscellaneous).
⁴ 12 months deck or 12 months other departments.
⁶ months deck or 12 months other departments.

NOTE .- There were 107 Panamanian Employment Cards issued.

WAIVERS OF MANNING REQUIREMENTS FROM 1 NOVEMBER TO 30 NOVEMBER 1945

Authority for These Waivers Contained in Navigation and Vessel Inspection Circular No. 31, Dated 13 March 1945

Region	Number of vessels	Deck offi- cers sub- stituted for higher ratings	Engineer officers sub- stituted for higher ratings	Able sea- men sub- stituted for deck officers	Ordinary seamen sub- stituted for able seamen	partment	Wipers or coal passers substituted for qualified members of engine de- partment	Wipers, coal passers or cadets substituted for engineer officers	Ordinary seaman or cadets sub- stituted for deck officers	Total
Atlantic coast Gulf Coast Pacific coast Great Lakes	610 219 336 203	87 70 91	205 101 176 5	11 2 20	1, 234 534 972 537	18 16 51	301 132 459 1	7 3 22 127	4 4 18	1, 867 862 1, 809 670
Total	1, 368	248	487	33	3, 277	85	893	150	26	5, 205

CREW SHORTAGE REPORTS FROM 1 NOVEMBER TO 30 NOVEMBER 1945

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

Region	Num- ber of vessels		Ratings in which shortages occurred											
		Chief	Second mate	Junior third mate	Radio	Able sea- men	Ordinary seamen	Chiefen- gineer	First en- gineer	Second engineer	Third en- gineer	Qualified member engine de- partment	coal	Total
Atlantic const Gulf coast Pacific coast Great Lakes	32 35 9 151	1 2 1	13	3 3 8	······	22 39 6 71	11 7 1 51		1	3 5 1 1	2 3 17	23 13 4 134	6 7 98	70 82 16 382
Total	227	4	4	14		138	70	- 1	2	10	22	174	111	55