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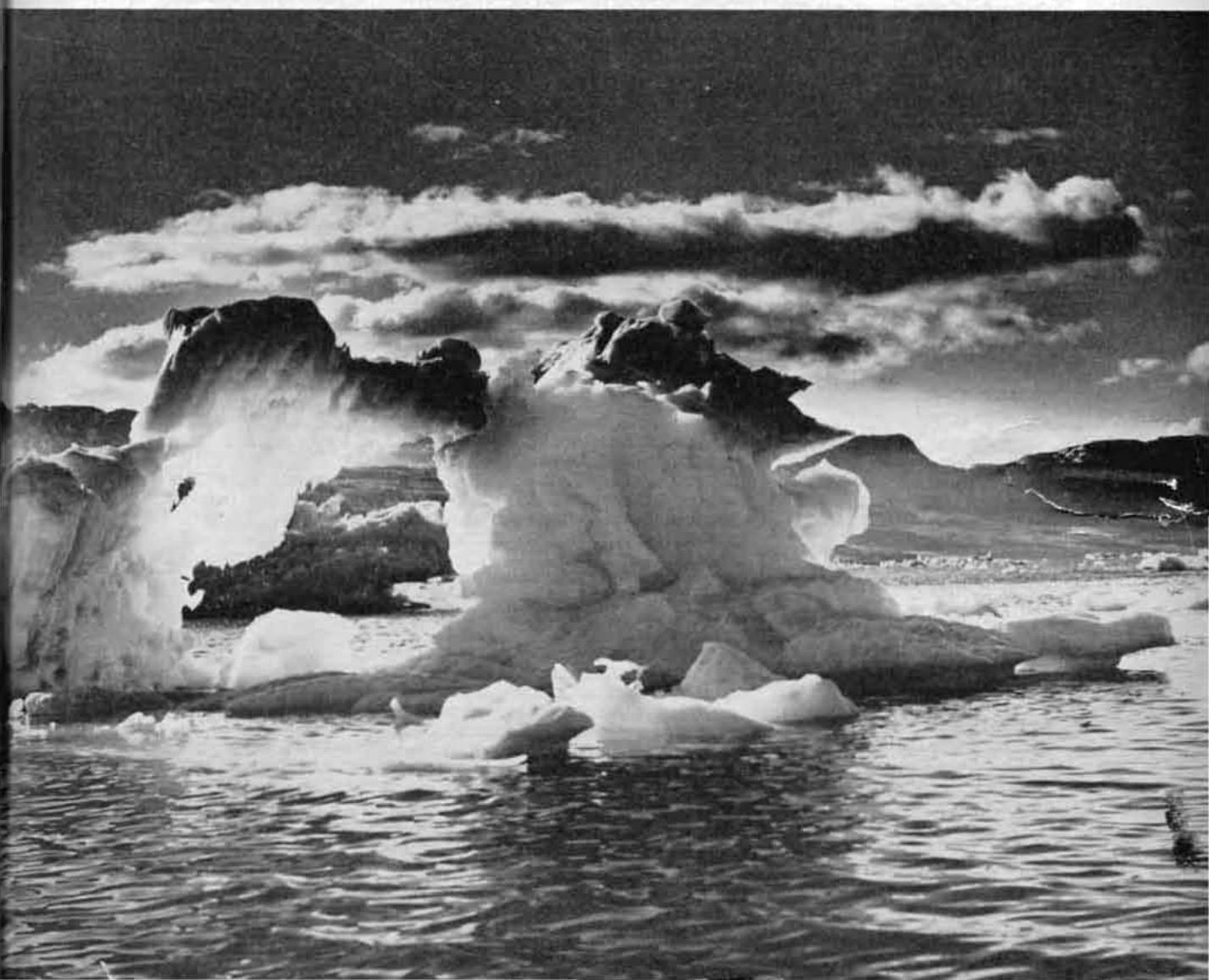


Proceedings of the

MERCHANT MARINE COUNCIL

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

CONTENTS

The Cover: The Last of an Iceberg. With the end of hostilities the resumption of Ice Patrol will be a Coast Guard duty.

COUNCIL ACTIVITIES

THE authority of the Commandant of the Coast Guard to waive compliance with navigation laws, where such waiver is necessary in the war effort, stems from a grant of power by Congress which is presently limited to the period which expires on December 31, 1945. Unless this period is extended, the Coast Guard will have no authority after its expiration to waive strict compliance with existing law. Regulations established by the Coast Guard can be modified if requisite but no such authority extends to the statutes.

It is obvious that within the time available many vessels cannot physically be brought into full compliance with law. The problem of returning personnel on cargo vessels will become insurmountable if such vessels are either obliged to comply with passenger ship requirements or are limited to the carriage of 12 persons outside of the crew. Because of the seriousness of this situation the Coast Guard held public hearings on October 4 in New York City and in San Francisco which all interested organizations were invited to attend. The situation was outlined at these hearings for the purpose of setting forth the difficulty and in the hope that action might be initiated to cope with the problem.

On October 18 the Council appeared before the American Merchant Marine Conference in New York with a program intended to inform the maritime industry of the possible improvements in safety and in accuracy of navigation which might be expected to flow from the commercial use of certain wartime developments. Chief among these were radar, loran, and long range direction finders. A short movie showing the navigation of a vessel into New York Harbor by radar was exhibited. At the conclusion of the meeting specifications of recommended radar equipment were distributed and those interested were advised that a further discussion of the subject would be held at Coast Guard Headquarters on October 29 and 30. There is no thought at this time of making any such equipment mandatory on board vessels as it is felt that such a step should await a further development and commercial production of the necessary equipment.

At the request of the Western Rivers Panel the prohibition of unauthorized persons from being in the pilot houses on river vessels, previously applying only to passenger vessels, was extended to apply to other river craft.

As the result of considerable study by the Merchant Marine Technical, Research and Development, Naval Engineering, and Merchant Marine Inspection Divisions, regulations covering the installation of gasoline motors in motorboats and motor vessels over 15 gross tons carrying passengers for hire were adopted. These regulations prescribe the conditions which must be met before a certificate of inspection will be issued and appear in the Appendix of this issue of the *Proceedings*.

On October 23, 1945, there was published in the Federal Register amendments to the Great Lakes; Lakes, Bays and Sounds; Rivers; and Motorboat Regulations providing that passenger barges in tow of motorboats and

motor vessels shall carry the same number of life preservers and fire extinguishers as are required for passenger vessels of the same lengths.

A Navigation and Vessel Inspection Circular declaring that 7 ounces each of the emergency provisions required to be carried during the war in the lifeboats and life rafts of ocean and coastwise vessels shall be considered as being equivalent to the 2 pounds of hard bread required by the peacetime regulations was issued. These instructions will make it unnecessary to replace the type C biscuits, pemmican, chocolate tablets, and milk tablets now carried in the lifeboats of ocean and coastwise vessels.

Discussion on Merchant Ship Radar

A general conference on the question of radar for merchant vessels was held at Coast Guard Headquarters on October 29, 1945. A large group of representatives of Army, Navy, Coast Guard, other Government agencies, commercial ship operators and electronic manufacturers was present. Commodore E. M. Webster opened the conference with a general discussion of radar, explaining that the conference was held solely on a voluntary basis and that any agreement reached at the conference would not be binding in any way. He further explained that the Coast Guard was primarily interested in assisting commercial operators to obtain information and to crystallize the question as to what a commercial radar should be in order that both manufacturers and ship operators might proceed with the program.

A set of minimum specification briefs was presented as a basis for opening the discussion. In general all parties agreed with the specifications with a few specific exceptions. The tendency was to lower the requirements of a class A radar and to increase the requirements of a class B. Most parties believed that the specifications for a class C, particularly as regard to range requirements, were too high and there was a general feeling that specifications for a class D, to be used on yachts and fishing vessels, should be prepared. Manufacturers challenged the requirement for a 50-mile maximum range sweep recommending that it be lowered to 30 on the grounds that there were manufacturing difficulties in obtaining both a 2-mile and a 50-mile sweep. A large group favored the suggestion that the range scales be adjustable so that at the time of installation they might be set to the tastes of the navigator and to match as closely as possible the charts, scales, and conditions prevalent in the area where the ship will operate.

It was unanimously agreed that a target alarm would be more hazardous than useful. There was considerable discussion as to specifying methods used to accomplish desired features. The general feeling seemed to be that a standard target should be evolved with a definite set of test requirements specified, leaving the way that the requirements are met to the individual manufacturer. This is desirable but at the present stage of the art such a method is not reliable. It is, however, definitely known that if a specific set of building blocks is used and interconnected by standard means, then a reliable radar will result. There is no doubt but that at some future date test requirements on a standard target rather than specific method requirements will be accepted.

Manufacturers were particularly free in giving technical information as were ship operators in stating their requirements. In some cases actual cost estimates and estimated times of delivery were given. It is believed that the conference was a complete success and that all attending representatives derived considerable benefit from the discussions.

The specification briefs as submitted at New York are given below. These are being rewritten in the light of the discussion and the suggestions made. New briefs, together with a summary of the conference, will be issued to those interested, in the near future.

DESIGNATION

Class A—Surface Search and Navigating Radar.

GENERAL DESCRIPTION

This is to be a 3-cm. surface search radar primarily designed for ocean-going vessels to provide early warning of approaching vessels and navigational dangers in the open sea as well as high resolution for navigation in restricted waters.

OPERATIONAL REQUIREMENTS

Designed for operation by bridge personnel with little or no technical training. The equipment is to take power from a source of 115-volt, 60 c. p. s., single phase, with a regulation of ± 10 volts and ± 2 c. p. s.

PERFORMANCE

Range:
Maximum, 50 miles.
Minimum, 100 yards.
Resolution:
Range, 100 yards.
Bearing, 3°.

INDICATION AND DATA OUTPUT

Range—at least 7" PPI scope. Range scales 2–10–50 miles; variable range marker with range of 500 yards to 10 miles and accuracy of 2% or ± 50 yards whichever is greater.

Bearing—True bearing display; bearing cursor and variable asimuth illumination; ships head indicator. Bearing accuracy to be $\pm 1°$.

Alarm—Flashing light target alarm.

ANTENNA

Reflector—Truncated parabola.
Feed—Wave guide.
Beam width:
Horizontal 2° maximum.
Vertical 15° minimum.
Mounting—Navy standard flange; 360° clearance to horizon.
Polarization—Horizontal.
Scan—Continuous, 360° in azimuth, speed of rotation 6 to 15 r. p. m., push-button control on main on-off switch.
Side lobes—25 db. down.
Elevation—0°.

TRANSMITTER

Frequency—9,320 to 9,430 recommended.
R. F. source—Magnetron.
Modulator—Hydrogen thyratron or equivalent.
Main transmission line—Wave guide.
Peak power—15-kw. minimum.
Pulse repetition rate—800 to 1,500 c. p. s.
Pulse lengths (microseconds)—0.25 to 0.5.
Trigger—Positive 10 to 50 volts.

RECEIVER

Intermediate frequency—30 mc. requested.
R. F. band pass—Optimum for pulse length chosen.
Video output—positive 2.5 volts and optimum band width.
Noise, db. above kt $\triangle$ f—15.
Features—AFC, FTC, and STC.

OPERATOR CONTROLS

1. On-off pushbutton control (all power).
2. Bearing cursor knob.
3. Range marker knob.
4. Continuous gain control.
5. Limited intensity control; intensity to be absolutely independent of focus.
6. Range selector.
7. STC and FTC selector switch for varying degrees of either or both.
8. Azimuth scale light control.

CONSTRUCTION FEATURES

Replaceable units with chassis type assembly.
Fuse alarms.
Shock and vibration mounting of all electronic assemblies.
Transmitter to be separate assembly to facilitate flexibility of installation.
Weather proof.

SPECIAL PROVISION FOR FUTURE MODIFICATION

Sufficient space is to be allowed in the modulator unit to permit modification for shifting to a 2 miscrosecond pulse to provide a signal for future use with navigational beacon. Likewise sufficient space is to be provided in the oscillator unit to permit the installation of a separate tunable oscillator for shifting frequency to receive such beacon signals. The operation of this radar must not cause interference with other aids to navigation.

REMARKS

Standard Navy flange for antenna mounting, standard trigger output and standard video output are specified to facilitate ease of conversion for military use. For the same reason, 30-mc. intermediate frequency is requested. This should not work as a hardship on any manufacturer.

DESIGNATION

Class B—Surface Search and Navigation Radar.

GENERAL DESCRIPTION

This is to be a 3- or 10-cm, surface search radar primarily designed for oceangoing vessels to provide early warning of approaching vessels and navigational dangers in the open sea as well as fair resolution for navigation in restricted waters.

OPERATIONAL REQUIREMENTS

Designed for operation by bridge personnel with little or no technical training but with some training in scope interpretation. The equipment is to take power from a source of 11 volts, 60 c. p. s., single phase, with a regulation of ± 10 volts and ± 2 c. p. s.

PERFORMANCE

Range:
Maximum—50 miles.
Minimum—400 yards.
Resolution:
Range—200 yards.
Bearing—6°.

INDICATION AND DATA OUTPUT

Range—at least 7" PPI scope. Range scales 5–25–50 miles with 1–5–10 mile markers; accuracy of 2% or ±100 yards whichever is greater.

Bearing—True or relative bearings on azimuth scale. Bearing accuracy ±2°.

Alarm—Flashing light target alarm.

ANTENNA

Reflector—Truncated parabola.

Feed—Wave guide or coaxial line.

Beam width:

Horizontal 4° maximum.

Vertical 15° minimum.

Mounting—Navy standard flange; 360° clearance to horizon.

Polarization—Horizontal.

Scan—Continuous, 360° in azimuth, speed of rotation 6 to 15 r. p. m.; push-button control on main on-off switch.

Side lobes—20 db. down.

Elevation—0°.

TRANSMITTER

Frequency—Recommended 2,900 to 3,246 mcs. or 9,320 to 9,600 mcs.

R. F. source—Magnetron.

Modulator—Hydrogen thyratron or equivalent.

Main transmission line—Wave guide or coaxial.

Peak power—15-kw. minimum.

Pulse repetition rate—800 to 1,500 c. p. s.

Pulse Length—1 microsecond maximum.

Trigger—Positive 10 to 50 volts.

RECEIVER

Intermediate frequency—30-mc. requested.

Band pass—Optimum for pulse length chosen.

Video output—positive 2.5 volts and optimum band width.

Noise, db. above kt△f—15.

Features—AFC required; STC and FTC optional.

OPERATOR CONTROLS

1. On-off pushbutton control (all power).
2. Continuous gain control.
3. Limited intensity control, intensity to be independent of focus.
4. Range selector.

CONSTRUCTION FEATURES

Replaceable units with chassis type assembly.

Fuse alarms.

Shock and vibration mounting of all electronic assemblies.

Weather proof.

SPECIAL PROVISION FOR FUTURE MODIFICATION

a. Required.—Sufficient space is to be provided in the oscillator unit to permit modification for shifting frequency to receive microwave beacon signals. The operation of this radar must not cause interference with other aids to navigation.

b. Optional (for use when radar operates on 9,320 to 9,430 mcs. only).—Sufficient space is to be allowed in the modulator unit to permit modification for shifting to a 2-microsecond pulse to provide a signal for future use with navigational beacon. Likewise sufficient space is to be provided in the oscillator unit to permit the installation of a separate tunable oscillator for shifting frequency to receive such beacon signals. The operation of this radar must not cause interference with other aids to navigation. If this feature is provided, (*a*) above not required.

REMARKS

Standard Navy flange for antenna mounting, standard trigger output and standard video output are specified to facilitate ease of conversion for military use. For the same reason, 30 mc. intermediate frequency is requested. This should not work as a hardship on any manufacturer.

DESIGNATION

Class C—Anticollision radar.

GENERAL DESCRIPTION

This is to be a surface search radar primarily designed as an anticollision device.

OPERATIONAL REQUIREMENTS

Designed for operation by pilot house personnel with little or no technical training but with specialized operational training in the interpretation of equipment data.

PERFORMANCE

Range:

Maximum—Equipment must be capable of absolute indication of the presence of a C2 type cargo vessel or equivalent at a distance of 10 miles.

Minimum—500 yards.

Accuracy—±5% or ±500 yards whichever is greater.

Bearing—Equipment must be capable of giving a bearing accuracy of ±5° using as a target a C2 type of cargo vessel or equivalent at a distance of 10 miles.

INDICATION AND DATA OUTPUT

Range—"A" scope or equivalent.

Bearing—Mechanical dial or equivalent.

ANTENNA

The antenna must provide for continuous and complete search of the horizon through 360°. A motor driven train is to be provided with arrangements for shifting to manual train for bearing determination. Maximum speed of rotation 5 r. p. m. Should a PPI scope be used, the provision for hand train may be eliminated and the speed of rotation may be increased to 15 r. p. m. The beam width in the vertical must be at least 20°.

TRANSMITTER

Frequency—Any channel authorized by FCC for use of commercial radar. If operated within the frequency range of radar beacon stations, the pulse length must be such that it will not continuously trigger such stations. The operation of this radar must not cause interference with other aids to navigation.

REMARKS

This brief is intended to cover the minimum requirements of all types of seagoing anticollision devices, exclusive of class A and B radar, operating on the principle of pulsed electromagnetic waves using directional antennas.

Necessity for Fire and Boat Drills on Coastwise and Inland Vessels

THE rules and regulations for vessel inspection require that fire and boat drills be held weekly on all passenger vessels, on all self-propelled tank vessels, and on all other vessels of over 500 gross tons. The records show that this regulation is complied with quite consistently on ocean-going vessels, although even here there is considerable room for improvement. However, there is a very strong tendency on the part of vessels navigating coastwise and inland waters to neglect this rule, possibly with the idea that as the vessels concerned are close to shore it would be comparatively easy to abandon the ship without any great difficulty in the case of necessity.

This impression is very far from the truth. It is too late to teach effective fire fighting to a crew after the fire breaks out and it is generally much too late to teach correct abandon ship practices after an emergency arises. There is very little, if any, difference in degree of difficulty in extinguishing a ship fire whether the vessel is 1 mile from land or a thousand. It is true that in some instances fireboats are available to aid in extinguishing the blaze, but, on the other hand, a vessel may be in the middle of one of the Great Lakes or in a lonely stretch of one of the rivers where no outside aid whatsoever is available. Under these circumstances skill in fighting the fire and, if necessary, in abandoning ship is just as necessary as it would be in the middle of the Atlantic Ocean.

These remarks are emphasized by two recent casualties with which the Coast Guard had to deal. The first was described in detail in the April 1944 number of the Proceedings of the Merchant Marine Council. In this case a small tanker was rammed and one tank set on fire. The starboard lifeboat and life raft were consumed in the blaze and without hesitating an instant the master and the crew attempted to abandon the vessel. Just prior to the collision, the helm had been put hard right in an endeavor to avoid the other ship and with the rudder in this position and the engines proceeding full speed ahead the remaining lifeboat, which was located on the port side of the after house, was launched. By some miracle it was not swamped or smashed when it hit the water but was successfully cast off with all but five of the crew on board. Of these five, one man had jumped overboard in his panic and was drowned and the other four upon finding themselves marooned on the ship calmed down and attempted to fight the fire. Their efforts were unsuccessful but they remained on the vessel in comparative safety for a considerable length of time and were finally taken off by a Coast Guard boat. The fire was extinguished shortly thereafter by a Navy fireboat. The vessel concerned was a coastwise tanker and the incident described occurred in one of the large bays on the Atlantic Coast.

Upon investigation it was found that fire drills had not been held as required by the regulations and, as a consequence, when the emergency arose nobody on board was familiar with his first duty which should have been to trip the CO2 lever in order to discharge the smothering gas into the burning and adjacent tanks and the second duty which was to get the fire hoses into commission. All anyone could think about was to get away from the ship. Assuming the latter to be necessary, the crew attempted to launch a lifeboat located on the port side of the vessel when the ship was traveling full speed and under the influence of a right rudder. Under these circumstances it is, as stated above, a miracle that the boat was not smashed in the act. If these men had had a thorough training in fire drills it is probable that they could have extinguished the fire themselves without calling for help from anyone. Also if they had been well trained under oars and in handling small boats and it became necessary to abandon they would have put the helm amidship and slowed or stopped the vessel so that an orderly abandonment could have been carried out.

The second case represents an almost equally futile tragi-comedy and an even greater neglect in the matter of fire drills. The vessel in question was loaded with benzol and had returned to port on a freezing winter night because of heavy weather. About midnight the weather moderated and the voyage was resumed. The ship was just getting under way when there was a dull thud and simultaneously fire was seen on deck and on the water in way of the after starboard tanks, indicating that one of those tanks was ruptured. A subsequent investigation did not disclose the cause of the explosion. As the anchor had just been secured an attempt was made to re-anchor the vessel. During the short time since getting under way the hawse pipes had frozen over and it was impossible to drop the anchors. The engines were being maneuvered under various signals, the final bell being a full speed astern signal.

On this vessel, as well as on the former one, no effort was made to fight the fire. Steam was not turned into the cargo tanks nor were the fire hoses used. No formal orders were given to abandon ship. However, as soon as it was seen to be impossible to drop the anchors, the men on deck launched the port life raft and a donut raft. Two of the ship's officers leaped overboard and swam to the life raft. About this time the burning oil from No. 8 tank, influenced by the astern motion of the ship, had drifted forward and surrounded the bow of the vessel. The blazing oil in the water heated the forward tanks so that they exploded also. After this, various members of the crew jumped overboard. At this time the master and several crew members were still on board and were attempting to launch the port lifeboat. No one had a jackknife or any other means of cutting the lashings which held the canvas cover of the boat. Finally the boat was launched with the cover in place. The master and four others jumped on board the canvas cover of the boat and all of these except one man were washed overboard.

In all this confusion it apparently occurred to no one to stop the engines or to notify the chief engineer who was handling the engines that the ship was being abandoned. He finally came up on deck and saw that he and the 1st assistant engineer were the only persons left on board and also that the blazing vessel was backing straight for an ammunition loading pier. At about this time a Navy tug rammed the stern of the vessel, sheered it away from the dock and then returned and picked off the two engineers. Out of the 16 men on board this vessel 10 were drowned.

None of these men received fatal or even serious injuries from the fire. They were all of them either drowned or frozen to death and it is a sad commentary on the state of affairs aboard this vessel to realize that a moderate amount of skill in handling the lifesaving equipment would probably have saved every man on board.

As stated previously no organized effort was made to fight the fire. After the abortive attempt to reanchor the vessel, the men on deck apparently oblivious of the engineers below and the fact that the vessel was going astern and aiming toward a dock crammed with high explosives, launched a lifeboat and a life raft in such a manner that they were practically useless from a lifesaving standpoint. As a probable explanation of this fiasco it was found that no fire drills had been held on this vessel for over 3 months instead of the once a week required by the rules and regulations.

A fire on shipboard is a terrifying experience whether the vessel is an oil tanker or a dry cargo vessel and unless officers and men have been trained in the proper procedure to the extent that they react in the correct way, automatically, a panic as in these two cases is quite likely to occur. The officers as well as the men need instruction and practice in all lifesaving procedures and they should, by virtue of their position, act as leaders and set an example for the crew in diligent and enthusiastic participation in these exercises.

Fire drills should be held at least weekly on all inspected vessels and they should be made as realistic as possible. The old-fashioned fire drill where an announcement was made that the drill would be held at one bell in the afternoon and the boatswain and his gang went around ahead of time laying out the hoses is practically useless. About all this type of exercise teaches is where each man's station is.

The fire drill should be held unexpectedly and instead of leading each fire hose out and turning the water on for a few minutes and then securing, a specific location for the fire should be specified as, for instance, the after quarters, No. 1 hold or the galley. The exercise should consist of bringing as many streams as possible to bear in this location. The men should be instructed in the use of the fire extinguishing systems (CO_2, foam, etc.).

On large vessels, a special firefighting detachment under the boatswain or one of the ship's officers should be organized. This group should be equipped with axes, special fog spray nozzles, fire extinguishers, oxygen-breathing apparatus and any other special fire-fighting equipment on board. This group should take the lead in fighting the fire. Fire drills should be held occasionally at night as well as in the daytime, particularly after the crew becomes adept.

Boat drills should be held by lowering the boats into the water and exercising the crews under oars. The occasional fatalities which occurred during the war when boat crews actuated the releasing gear prematurely, let go of boat falls on the run and did other dangerous things demonstrate that a great improvement is possible and necessary in the ability of many seamen to handle lifeboats. Complaints have justly been made that inspectors will show up to conduct a boat drill to find most of the officers and crew absent. Remember you can not learn to fight a fire or handle a boat while ashore. If the foregoing program seems too stiff to you, you should remember that when you shirk fire and boat drills you are endangering your own life and those of your shipmates just as surely as if you paid no attention to traffic lights on a busy city street.

Undesirable Lubricating System Features

Many vessels now plying the seas have lubricating systems containing features which experience shows are unsatisfactory. This was found true in a recent casualty where certain of these features caused failure of the lubricating system and considerable damage to a Kingsbury-type thrust bearing. In this particular case, the thrust was lubricated through a ½-inch oil line from a gravity tank. This oil line was fitted immediately above the bearing with a sight glass, which was installed horizontally and in such manner that when the oil flow was interrupted, sufficient oil remained within the glass to cover the entrance spigot of the sight glass. This system was such that lubricating oil was dropped onto the thrust collar which was fitted with an oil distributor and was then carried by the thrust collar and the oil distributor to the shoes, falling into the base of the thrust and then returning to the main sump tank through a return line connected at the bottom of the thrust. Prior to the installation of this system, the thrust bearing had been lubricated by a self-contained system in which the oil was maintained at a sufficient level in the thrust so that the thrust collar was immersed in the oil and, as it revolved, carried over sufficient oil for lubrication. The excess heat developed was removed by means of a cooling coil served by salt water which was immersed in the oil in the base of the thrust. This system had been removed because serious trouble had developed from electrolysis in the cooling coil.

In this particular casualty it was found, upon investigation, that the engineering personnel had been lax in not testing the thrust bearings by hand at the time of taking over the watch, and that the oiler, who admitted that he did not understand the functioning of the sight glass, had incorrectly assumed that the maintenance of oil level in the glass indicated that the oil system was functioning.

Following the casualty, it was found that the sight glass was stopped up. Due to the installation of this glass in a horizontal position, it was extremely difficult for any observer to ascertain whether oil was passing through the glass since the oil level covered the spigot by which the oil entered the sight chamber, and the detection of any flow depended upon the observance of turbulence or air bubbles in the oil. It was also found that the thrust bearing thermometer well was located in the oil reservoir of the thrust bearing, but at a point so high it was not in direct contact with the oil in normal operation and, therefore, its indication of the thrust temperature involved considerable time lag and was probably inaccurate. The examination further revealed that the oil drain line from the thrust to the main sump was connected at a point so low in the oil reservoir that when the oil was at the level of the connection, the thrust collar was insufficiently immersed in the lubricant.

As a result of this casualty, engineering officers are warned of the need for thoroughly instructing their personnel in the operation and care of lubricating systems. Thrust bearing lubricating systems should be examined to see that they do not contain any of the following undesirable installation features. There should be no valve between the source of oil supply and the thrust bearing which can be closed oil-tight. The oil line installation should have no orifice in it less than one-fourth inch in diameter. A sight glass should be properly installed with such provision for lighting that the personnel on watch can easily determine whether or not oil is flowing through the sight glass. In thrusts fitted with the particular type of lubricating system under discussion, care should be taken that the following features are incorporated therein. The provision for draining oil should be so arranged that if the oil supply to the thrust is interrupted or stopped, the oil drainage will cease

Marine Inspector checking propeller shaft liner.

when the oil level is such that a sufficient part of the collars will still be immersed in oil for the purpose of lubricating the shaft. The vent pipe in the thrust should be fitted with a gooseneck and proper wire screen so that there will be no possibility of any foreign matter being introduced into the thrust. And finally, the thermometer well should be so installed that it is immersed in the oil at all working levels.

By having the lubricating system to thrust bearings correctly installed, the possibility of burned-out bearings will be considerably reduced.

The Dangers of Ill-Conceived Repairs to Pressure Parts

Recently there came to the attention of the Coast Guard a casualty wherein one man lost his life and three men were badly burned due to a particularly poorly conceived repair made on the bottom blow valve of a boiler.

The blow valve in question was made of cast iron and the neck contained ample material for strength in accordance with the rules obtaining at the time it was made. The valve was rather peculiarly constructed in that the pressure of the boiler was on top of the disc and in order to open the valve the stem was screwed in.

Sometime in the past the seat had become corroded to a considerable extent and some person, not now identifiable, decided to insert a brass sleeve in the valve and form the seat on the inner edge of this sleeve. This was done by means of counterboring the whole valve and inserting a heavy sleeve which was pinned in place with a ¾-inch threaded brass stud. The seat of the valve was now on the sleeve instead of the flange. (See illustration.)

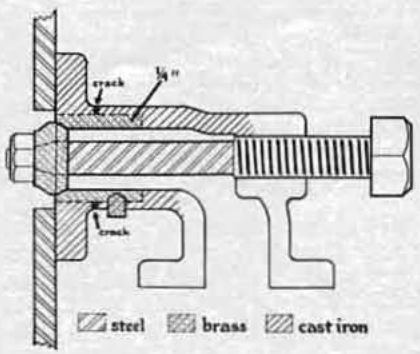
What apparently was not taken into account by the person making the repair was the fact that by counterboring the throat of the valve, the thickness and consequently the strength of the throat was reduced to below the required thickness at all points and in one spot was further weakened by the ¾-inch stud used to pin the sleeve in place.

In spite of the amateurish nature of the repair made on the valve no accident happened for a considerable period, long enough in fact for all record of the insertion of the bronze sleeve to be lost.

One morning, however, while getting the ship under way the frail neck of cast iron, which was all that held the valve together, cracked all the way around. The brass sleeve was instantly forced out of the base of the valve releasing the contents of the boiler into the fireroom. The two firemen on watch managed to escape as they left by separate routes, thus not hindering one another. The coalpasser, however, miscalculated and tried to leave the fireroom through the thickest part of the discharging steam and water. He was forced back and left the fireroom by another exit, in the meantime receiving fatal injuries. The engineer on watch received minor burns while attempting to secure the plant.

This accident illustrates the dangers of attempting to overhaul valves or any other pressure containing part of any steam plant without first ascertaining whether the proposed repair will weaken the part. In the case in question the person overhauling the valve evidently thought that by putting a heavy bronze sleeve in the old cast iron valve he was improving matters. If he had taken the trouble to look at the blue print of the valve, then draw in the proposed repair he would have seen instantly that the repair was not feasible.

In another instance of an attempted repair of a bronze globe valve with an integral seat the engineer on a merchant vessel was reseating the valve in a lathe. During the course of the operation he actually cut through the side wall of the valve. This, of course, ruined the valve. Luckily, this incident took place while the valve was under repair in the lathe. It needs little imagination to visualize what would have happened if the reseating operation had not gone entirely through the valve but had weakened it to the extent that when steam was turned on the valve burst.



These two incidents point out the necessity for all engineers and other personnel on vessels responsible for the maintenance of equipment, such as valves and fittings, to make absolutely sure that repair operations which they propose to perform will not leave the valve in a worse and more dangerous condition than when they started.

Remote Control for Aids to Navigation

AS a wartime measure, it was found necessary to extinguish certain lighted aids to navigation except when absolutely necessary for friendly use, to prevent their being helpful to possible enemy craft. In the case of unattended aids, such as buoys, this involved a considerable effort and consumed time, so long as each buoy had to be attended to manually and individually. The solution was finally reached by devising a method in which the operation of the light, whether gas or electric, was controlled from shore by radio.

This system is now being extended to the control of foghorns, electric bell-strikers and other features of unattended aids, so that they operate only when necessary. Lights can be extinguished in daytime and controllable fog signals need only sound in thick weather. The advantages to be gained are economy in men and in power and the reduction in some measure of the annoyance of continuous sound signals to residents in the vicinity.

The system consists of a control station transmitting ultra high-frequency signals, and special receivers on buoys and other aids. The radio waves emanating from the control station transmitting antenna travel cut to the aid, where the receiving equipment converts the signal to direct current pulses which open or close electric relays or gas valves, to extinguish or relight lanterns, or control the other types of aids.

The Research and Development Division is actively working on a project to carry this remote radio control even further and through it to operate aids which otherwise would be manned, such as lightships on which the expense of the crew is an item of some magnitude.

Merchant Marine Personnel

THE shipping commissioner in New York reports that, because of the sudden influx of applicants for original seamen's papers since VJ-day, it has been necessary to establish a so-called priority system to insure the adequate manning of merchant vessels. A policy has been adopted whereby priorities are granted to applicants presenting immediate commitments of employment, letters from steamship companies, the WSA, and the various seamen's unions certifying that the applicant in question is needed immediately for employment. Honorably discharged servicemen are granted equivalent priority. Coast Guard Headquarters concurs in this policy.

Coast Guard Merchant Marine Hearing Units and Details investigated a total of 4,623 cases during the month of August 1945. From this number hearings resulted involving 142 officers and 928 unlicensed men. In the case of officers, 2 licenses were ordered revoked, 45 were suspended, 74 were suspended on probation, 33 were voluntarily surrendered, 3 hearings were closed with admonitions, and 14 cases were dismissed. Of the unlicensed personnel, 47 certificates were revoked, 373 were suspended, 465 were suspended on probation, 383 were voluntarily suspended, 13 hearings closed with admonitions and 61 cases were dismissed after hearing.

The new and the old: a helicopter flying over Boston Light—the oldest lighthouse in the United States.

APPENDIX

Amendments To Regulations

TITLE 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of the Navy

PART 6—REGULATIONS FOR SECURITY OF PORTS AND THE CONTROL OF VESSELS IN THE NAVIGABLE WATERS OF THE UNITED STATES

INLAND WATERWAY FROM CAPE COD BAY TO BUZZARDS BAY, MASS., CAPE COD CANAL; PILOT REQUIREMENTS

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) and by virtue of Proclamation 2412 dated June 27, 1940 (3 CFR Cum. Supp.) and Executive Order 8929, dated November 1, 1941 (3 CFR Cum. Supp.), the regulations relating to the control of vessels in the navigable waters of the United States, are amended as follows, effective upon publication in the FEDERAL REGISTER:

Section 6.1–23 *Inland Waterway from Cape Cod Bay to Buzzards Bay, Massachusetts, Cape Cod Canal; Pilot Requirements* (formerly § 7.21, 7 F. R. 4547), is hereby rescinded (10 F. R. 12560, 5 October 1945).

TITLE 46—SHIPPING

Chapter I—Coast Guard: Inspection and Navigation

AMENDMENTS TO REGULATIONS

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

PART 24—GENERAL PROVISIONS

Part 24 is amended by adding a new § 24.2a to follow § 24.2 reading as follows:

§ 24.2a *Application of regulations relating to life preservers and fire extinguishers to barges carrying passengers towed by motorboats or motor*

vessels. The regulations requiring life preservers and fire extinguishers on motorboats and motor vessels shall apply to any uncertificated barge carrying passengers which is regularly operated with a motorboat or motor vessel. Where length or gross tonnage is significant in determining the application of the requirements it shall be measured by the length or gross tonnage of the barge. The placing of life preservers or fire extinguishers on the barge shall not exempt the towing or pushing motorboat or motor vessel from the regulations applicable to it (10 F. R. 13130, 23 October 1945).

PART 27—REQUIREMENTS FOR MOTORBOATS AND MOTOR VESSELS OF MORE THAN 15 GROSS TONS CARRYING PASSENGERS FOR HIRE

FIRE EXTINGUISHING EQUIPMENT

Section 27.3–3 *Machinery spaces* is amended by changing the section heading to read as follows:

§ 27.3–3 *Machinery spaces and tank spaces.* * * *

Section 27.3–3 (c) is amended to read as follows:

§ 27.3–3 *Machinery spaces and tank spaces.* * * *

(c) All vessels using fuel having a flash point of 110° F. and lower and all vessels of more than 300 gross tons regardless of the flash point of the fuel used shall be fitted with an approved carbon dioxide fixed system in the machinery space. In addition all vessels using a fuel having a flash point of 110° F. and lower shall be fitted with an approved carbon dioxide fixed system in the fuel tank space.

The center heading over § 27.4–1 "Carburetor Backfire Flame Arrestor" is deleted and the following is substituted therefor:

INSTALLATION REQUIREMENTS FOR VESSELS USING LIQUID FUELS STORED AT ATMOSPHERIC PRESSURE AND TEMPERATURE AND HAVING FLASH POINTS OF 110° F. OR LOWER

Section 27.4–1 *Where required* is deleted and new §§ 27.4–1 to 27.4–4 inclusive are substituted therefor, reading as follows:

§ 27.4–1 *Machinery and exhaust pipe.* All installations shall be of marine type engines designed for rugged service. The following requirements shall govern all installations and be effective on new vessels or vessels converted to passenger service for the first time, construction of which is commenced on or after December 1, 1945, and to all existing vessels in so far as practicable:

(a) *Drip collectors under carburetors.* All carburetors, except the down draft type, shall have integral therewith or properly connected thereto, a drip collector of adequate capacity which shall be so arranged as to permit ready removal of fuel leakage and to prevent such leakage from reaching the bilge. Drip collectors shall be covered with flame screens.

(b) *Backfire flame arrestors.* All carburetors of every engine installed on all motorboats and motor vessels after April 25, 1940, shall be fitted with approved backfire flame arrestors and air intakes shall be so directed that backfire cannot blow down into the bilge.

(c) *Exhaust manifold.* The exhaust manifold shall either be water jacketed and cooled by discharge from a pump which operates whenever the engine is running or woodwork within 9 inches shall be protected by ⅛ inch asbestos board covered with not less than #22 USSG galvanized sheet iron or non-ferrous metal. A dead air space of ¼ inch shall be left between the protecting asbestos and the wood, and a clearance of not less than 2 inches maintained between the manifold and the surface of such protection.

(d) *Exhaust pipe.* The exhaust pipe shall be gas tight and the installation shall comply with one of the following requirements:

(1) All of the engine cooling water shall be discharged through the exhaust pipe and this water shall enter the exhaust pipe at a point as near to the manifold as practicable.

(2) A length of not less than 12 diameters of the exhaust pipe adjacent to the manifold shall be water jacketed and cooled in the same manner as the manifold. The remainder of the pipe shall be kept clear of internal woodwork at least 1½ inches.

(3) Woodwork within 6 inches of any part of the exhaust pipe shall be protected by ⅛ inch asbestos board covered with not less than #22 USSG galvanized sheet iron or non-ferrous metal. A dead air space of ¼ inch shall be left between the protecting asbestos and the wood, and a clearance of not less than ½ of its diameter shall be maintained between the pipe and the surface of such protection.

In all of the above cases the exhaust pipe shall be properly supported by non-combustible hangers or blocks and protective gratings shall be provided at such locations where persons or gear might come in contact therewith. Arrangements shall be made to provide access to the exhaust pipe throughout its length.

(e) *Exhaust pipe bends, packing at bulkheads.* Where exhaust lines pass through watertight bulkheads, noncombustible packings shall be installed. Exhaust piping shall be led to the point of escape without traps and with a minimum number of bends and elbows. 90° elbows or bends of less than 5 diameters radius are not permitted.

(f) *Flexible exhaust pipe.* Where flexibility is desirable a section of flexible metallic hose, or suitably reinforced rubber pipe, may be used in the exhaust line.

§ 27.4–2 *Fuel tanks and piping.* The following requirements shall govern all fuel tank and piping installations and be effective on new vessels or vessels converted to passenger service for the first time, construction of which is commenced on or after December 1, 1945, and to all existing vessels in so far as practicable:

(a) *Fuel tanks, location.* Fuel tanks shall be located in watertight compartments separate from but adjacent to the engine room, and accessible for exterior examination. The fuel tank installation shall be such that the tank or tanks may be lifted for periodic examinations.

(b) *Portable fuel tanks.* Portable fuel tanks are not permitted.

(c) *Construction of fuel tanks.* Construction of fuel tanks shall comply with the following:

(1) Materials shall consist of copper of thickness not less than #18 USSG or of iron or steel of thickness not less than #14 USSG. Non-corrosive alloys or other non-ferrous metals may be used subject to approval. Steel or iron tanks shall be galvanized both inside and outside by the hot dipped process after completion.

(2) Seams of fuel tanks shall be rivited, welded, or brazed, except that rolled and soldered joints may be used on small tanks of 20 gallons or less capacity provided the solder has a melting point of not less than 450° F.

(3) Tanks shall be designed with a factor of safety of not less than 4 based on the test head. Tanks shall be tested by static head above tank top of 10 feet of water without showing leakage or permanent deformation.

(4) Swash plates of the same material as the tank shall be fitted where necessary.

(5) Gauge glasses or try cocks are prohibited.

(d) *Outlets and drains.* Outlets in fuel lines for drawing loose gasoline for any purpose are prohibited. Drains or any openings in the bottom of fuel tanks are prohibited.

(e) *Connections at tank, fuel suctions.* All outlets shall pass through the top of fuel tanks and connections shal be fitted into spuds. These spuds shall either be riveted and soldered, welded, or brazed to the tank. Fuel suction lines shall run inside to near the bottom of the tank.

(f) *Filling pipes and sounding tubes.* Filling pipes and sounding tubes shall be so arranged that vapors or possible overflow when filling cannot escape to the inside of the hull

but will run overboard. A pipe made tight to the tank and to the filling plate on deck clear of any coamings, etc., meets this requirement. Filling and sounding pipes shall extend to within ½ their diameter from the bottom of the tank or from the surface of the striking plate in case of a sounding pipe. A flame screen of non-corrodible wire mesh shall be fitted in the throat of the fill pipe. Sounding tubes shall be kept closed at all times except during the act of sounding.

(g) *Vent pipes.* The net area of the vent pipe shall equal that of the fill pipe. Two vents or reliefs having a combined area equivalent to that specified above may be used in place of a single vent. Terminations of vent pipes shall be at least two feet above the deck and not less than three feet from any opening into living quarters or other below deck space. These terminations shall be fitted with flame screens.

(h) *Flame screens.* The term "flame screen" as used in paragraphs (f) and (g) means a single screen of corrosion resistant wire of at least 30 x 30 mesh, or two screens, both of corrosion resistant wire of at least 20 x 20 mesh, spaced not less than ½ inch nor more than 1½ inches apart.

(i) *Auxiliary feeds.* Auxiliary machinery shall either be suplied by branches from the main fuel line or from auxiliary fuel tanks which shall also meet the requirements previously outlined for main fuel tanks regarding location, construction, outlets, fill pipes, and vent pipes.

(j) *Shut-off valves.* A shut-off valve shall be installed in the fuel line as close to each tank as practicable and one as close to each carburetor as practicable. Arrangements shall be provided for operating all shut-off valves from outside the compartments in which they are located, preferably from on deck. The operating gear for the shut-off valves shall be accessible and in efficient working condition at all times. In addition a heat actuated device shall be located in the fuel line near the tank to automatically shut off the fuel supply in event of fire.

(k) *Strainers.* A suitable twin strainer shall be fitted in the fuel suction line within the engine compartment and this strainer shall be supported to take its weight off the line. Strainers shall be of the type opening on top for cleaning screens. A drip pan shall be fitted under the strainer.

(l) *Materials, sizes, and workmanship of piping, valves and fittings.* (1) Seamless drawn annealed copper tubing or iron pipe size copper pipe shall be used for all fuel lines. They shall be run in sight whenever practicable, protected from mechanical injury, and effectively secured against vibration by neat fitting soft non-ferrous metal clips with no sharp edges in contact with tubing. Where passing through steel decks or bulkheads, fuel lines shall be protected by close fitting ferrules of non-abrasive material or stuffing boxes. A short length of suitable flexible tubing or a loop of copper tubing shall be installed in the fuel line at or near the carburetor to prevent damage by vibration.

(2) Tubing wall thicknesses shall be not less than the following:

Outside diameter of tubing	Thickness	
	B. W. G.	Inches
⅛, 3/16, ¼	#21	0.032
5/16, ⅜	#20	.035
7/16, ½	#19	.042

(3) Tube fittings shall be of non-ferrous drawn or forged metal and of the flared type and at least equal to the "S. A. E. Standard Practice Code for Refrigeration and Marine." Tubing shall be cut square and truly flared by tools designed for these purposes. Tube ends shall be annealed before flaring. Pipe fittings shall be of non-ferrous metal standard pipe threaded. Pipe thread joints shall be made tight with a suitable compound.

(4) Valves for fuel line shall be of non-ferrous metal of the union bonnet type with ground seats and they shall be installed to close against the flow. Cocks of any type are not permitted for use in fuel lines.

§ 27.4–3 *Bulkheads.* Machinery and fuel tank spaces shall be separated from accommodation spaces and from each other by vaportight bulkheads (double diagonal wood, plywood, steel plate, or equivalent construction). These bulkheads shall extend completely to the bottom of the vessel and shall be effectively secured to the frames or the vessel's hull so as to efficiently seal off engine room and tank space bilges from accommodation spaces. These requirements shall be effective on new vessels or vessels converted to passenger service for the first time, construction of which is commenced on or after December 1, 1945, and to all existing vessels in so far as practicable.

§ 27.4–4 *Ventilation.* Every compartment in which an engine or fuel tanks are fitted shall be provided with adequate inlet ventilation ducts and induced exhaust blowers in accordance with these regulations. The following ventilation requirements shall govern all installations and be effective on new vessels or vessels converted to passenger service for the first time, construction of which is commenced on or after December 1, 1945, and to all existing vessels in so far as practicable:

(a) Requirements for power operated exhaust blowers shall be as follows:

Size and Space Ventilated and Maximum Time for Complete Air Change

	Minutes
Less than 500 cu. ft	2
500–1,000 cu. ft	3
1,000–1,500 cu. ft	4
Over 1,500 cu. ft	5

Exhaust blower motors shall be outside of the ducts and if mounted in the compartment ventilated the motors shall be of the "explosion proof" type. Blower blades shall be non-sparkling with reference to their housing. Exhaust blower switches shall be located outside the compartment ventilated and shall be of the type interlocked with the ignition switch so that the blowers are started before the engine ignition is switched on. A red warning sign at the switch shall state that the blowers shall be operated prior to starting the engines a sufficient period of time to insure one complete air change in the compartments ventilated.

(b) *Size and shape of ducts.* The area of ducts shall be such as to limit air velocity to a maximum of 2,000 feet a minute. Ducts may be of circular, rectangular, oval, or other regular section: *Provided,* That in no case shall one dimension exceed twice the other.

(c) *Location and lead of ducts.* The two inlet ducts shall be located at one end of the compartment and they shall lead to the lowest part of compartment or bilge on each side. Ducts shall lead to the exhauster from the lowest part of compartment or bilge on each side of the compartment at the end opposite from that at which the inlet ducts are fitted.

(d) *Construction of ducts.* Ducts shall be constructed of non-ferrous metal or galvanized ferrous metal not less than #22 USSG, intact and gas tight from end to end and shall be of substantial construction. The ducts shall lead as direct as possible and be properly fastened and supported.

(e) *Cowls, scoops, and screening.* All inlet ducts shall be provided with cowls or scoops having a free area not less than twice the required duct area. When cowls or scoops are screened the mouth area shall be increased to compensate for the area of the screen wire. Dampers shall not be fitted. Cowls or scoops are to be kept open at all times except when the stress of weather is such as to endanger the vessel if these openings are not temporarily closed. Inlet and exhaust openings shall not be located where the natural flow of air is unduly obstructed or adjacent to possible sources of vapor ignition, nor shall they be so located that ex-

haust air may be taken in the inlet vents.

The center heading over § 27.5–1 "Ventilation" is deleted and the following is substituted therefor:

INSTALLATION REQUIREMENTS FOR VESSELS USING LIQUID FUELS STORED AT ATMOSPHERIC PRESSURE AND TEMPERATURE AND HAVING FLASH POINTS ABOVE 110° F.

Section 27.5–1 *Where required* is deleted and new §§ 27.5–1 to 27.5–5 inclusive are substituted therefor, reading as follows:

§ 27.5–1 *Machinery and exhaust pipe.* All installations shall be of marine type engines designed for rugged service. The following requirements shall govern all installations and be effective on new vessels or vessels converted to passenger service for the first time, construction of which is commenced on or after December 1, 1945, and to all existing vessels in so far as practicable.

(a) *Exhaust pipes.* The requirements of § 27.4–1 (d), (e), (f), and (g) shall apply with the exception that ¼ inch asbestos board is required where ⅛ inch thickness is specified.

(b) *Starting torches.* In engines of the semi-Diesel or hot-bulb type, woodwork within three feet of starting torches shall be protected by ¼ inch asbestos board covered with sheet metal and a dead air space of ¼ inch left between the protecting asbestos and the wood.

§ 27.5–2 *Fuel tanks and piping.* The following requirements shall govern all fuel tank and piping installations and be effective on new vessels or vessels converted to passenger service for the first time, construction of which is commenced on or after December 1, 1945, and to all existing vessels in so far as practicable:

(a) *Fuel tanks.* Fuel tanks shall be constructed with a factor of safety of 4 based on a test head of 10 feet of water or the highest level to which liquid may rise under service conditions.

(b) *Drip pans.* Tanks shall have drip pans under any draw-off connections.

(c) *Gage glasses.* The use of gage glasses and try cocks is prohibited.

(d) *Fill pipes.* Tank filling pipes shall be tight to the vessel's exterior structure with outside connections for filling hose. Connections shall be blanked off when not in use.

(e) *Vent pipes.* Vent pipes shall be of sizes called for in § 27.4–2 (g).

(f) *Shut-off valves.* A shut-off valve shall be installed in the fuel line as close to each tank as practicable and one as close to each engine fuel pump as practicable.

(g) *Piping.* Fuel delivery piping on engines shall be of seamless steel or annealed seamless brass or copper tubing and tested to not less than one and one-half times the maximum working pressure. Connections shall be made up with ground joints or on continuous metallic gaskets in counterbores.

§ 27.5–3 *Ventilation.* The following ventilation requirements shall govern all installations and be effective on new vessels or vessels converted to passenger service for the first time, construction of which is commenced on or after December 1, 1945, and to all existing vessels in so far as practicable:

(a) At least two ventilators fitted with cowls or their equivalent for the purpose of properly and efficiently ventilating the bilges of every engine and fuel tank compartment shall be provided.

(b) Motorboats and motor vessels coming under the requirements of this section and so constructed that the greater portion of the bilges under the engine and fuel tanks are open and exposed to the natural atmosphere at all times are not required to be fitted with ventilators.

§ 27.5–4 *Auxiliaries.* Installations of auxiliary machinery using liquid fuels stored at atmospheric pressure and temperature and having flash points of 110° F. or lower shall comply with all provisions of §§ 27.4–1 to 27.4–4, inclusive.

§ 27.5–5 *Starting.* Machinery on vessels coming under the provisions of this part which use fuels stored at atmospheric pressure and temperatures and having flash points of 110° F. or lower for starting shall comply with the applicable provisions of §§ 27.4–1 to 27.4–4, inclusive.

ELECTRICAL INSTALLATIONS

A new § 27.6–1 is added, reading as follows:

§ 27.6–1 *Electrical installations.* The requirements for electric equipment and installation shall be in accordance with the current regulations contained in the general rules and regulations applicable to the waters on which the vessels operate.

LICENSED OPERATORS

Section 27.6–1 *Requirements* is redesignated as § 27.7–1 *Requirements.*

PART 29—ENFORCEMENT

Section 29.8 (f) is amended to read as follows:

§ 29.8 *Procedure relating to numbering of motorboats.* * * *

(f) Every undocumented vessel that is required to be numbered shall have the number which is awarded painted or attached on each bow. The number shall be in block characters, of good proportion, and not less than three inches in height, reading from left to right and parallel with the waterline, as near the forward end of the bow as legibility of the entire number for surface and aerial identification permits. The number shall be located as high above the waterline as practicable, but in no case less than three inches from the bottom of the numbers to the waterline. The color of the numbers shall contrast with the color of the hull so as to be distinctly visible and legible; i. e., if the hull is light the color of the numbers shall be dark, or if the hull is dark the color of the numbers shall be light (10 F. R. 13272–13275, 25 October 1945).

Subchapter D—Tank Vessels

PART 36—LICENSED OFFICERS AND CERTIFICATED MEN

LICENSED OFFICERS

Section 36.1–2 (d) is amended to read as follows:

§ 36.1–2 *Qualifications for license as engineer of steam vessels—T/ALL.* * * *

(d) The Officer in Charge, Marine Inspection, may designate upon the license of any chief or assistant engineer the maximum horsepower of the vessels upon which he may serve.

Section 36.1–12 is amended by adding a new paragraph (e), reading as follows:

§ 36.1–12 *Preparation of licenses—T/ALL.* * * *

(e) Commensurate with the experience of the applicant, the Officer in Charge, Marine Inspection, may place an appropriate limitation upon the license.

QUALIFICATIONS FOR OFFICERS: OCEANS

Section 36.3–7 is amended by adding a new paragraph (j), reading as follows:

§ 36.3–7 *Third mate of steam vessels—T/O.* * * *

(j) Evidence of satisfactory completion of the prescribed course (Deck) at a U. S. Maritime Service or other government operated training school, approved by the Commandant, may be accepted as the equivalent of sea service up to a maximum of four months: *Provided,* That the applicant has obtained a minimum of 32 months of service prior to enrollment.

Section 36.3–9 *Chief engineer of steam vessels—T/O* is amended by changing in paragraph (d) the phrase "750 gross tons" to "1000 horsepower" and by changing in paragraphs (e) and (f) the phrase "of appropriate tonnage" to "of appropriate horsepower."

Section 36.3–10 *First assistant engineer of steam vessels—T/O* is amended by changing in paragraphs (b) and (c) the phrase of "appropriate tonnage" to "of appropriate horsepower" and by changing in paragraph (e) the phrase "750 gross tons" to "1000 horsepower."

Section 36.3–11 *Second assistant egineer of steam vessels—T/O* is amended by changing in paragraphs (b) and (c) the phrase "of appropriate tonnage" to "of appropriate horsepower."

Section 36.3–12 *Third assistant engineer of steam vessels—T/O* is amended by changing in paragraphs (c) and (d) the phrase "of appropriate tonnage" to "of appropriate horsepower" and by adding a new paragraph (i), reading as follows:

(i) Evidence of satisfactory completion of the prescribed course (Engine) at a U. S. Maritime Service or other government operated training school, approved by the Commandant, may be accepted as the equivalent of sea service up to a maximum of four months: *Provided,* That the applicant has obtained a minimum of 32 months' qualifying service prior to enrollment.

Section 36.3–12a *Experience as electrician accepted for raise of grade, steam vessels—T/OC* is amended by changing in the last sentence the word "tonnage" to "horsepower limitation."

Section 36.3–13 (c) is amended to read as follows:

§ 36.3–13 *Engineers of motor vessels—T/O.* * * *

(c) The Officer in Charge, Marine Inspection, shall designate upon the license of any chief or assistant engineer the maximum horsepower of the vessels upon which he may serve.

Section 36.3–14 *Chief engineer of motor vessels—T/O* is amended by changing in paragraph (c) the phrase "750 gross tons" to "1000 horsepower" and by changing in paragraph (f) the phrase "300 gross tons" to "500 horsepower."

Section 36.3–15 *First assistant engineer of motor vessels—T/O* is amended by changing in paragraph (c) the phrase "750 gross tons" to "1500 horsepower," by changing in paragraph (e) the phrase "450 gross tons" to "750 horsepower," and by changing in paragraph (f) the phrase "750 gross tons" and "1200 gross tons" to "1000 horsepower" and "1500 horsepower," respectively.

Section 36.3–18 *Experience as electrician accepted for raise of grade, motor vessels—T/OC* is amended by changing in the last sentence the word, "tonnage," to "horsepower limitation."

QUALIFICATIONS FOR OFFICERS: COASTWISE

Section 36.4–7 is amended by adding a new paragraph (k), reading as follows:

§ 36.4–7 *Third mate of steam vessels—T/C.* * * *

(k) Evidence of satisfactory completion of the prescribed course (deck) at a U. S. Maritime Service or other government operated training school, approved by the Commandant, may be accepted as the equivalent of sea service up to a maximum of four months; *Provided,* That the applicant has obtained a minimum of 32 months' qualifying service prior to enrollment.

QUALIFICATIONS FOR OFFICERS: GREAT LAKES

Section 36.5–2 *Mate of steam vessels T/L* is amended by adding to the last sentence the phrase "or motor vessel."

Section 36.5–4 (c) is amended to read as follows:

§ 36.5–4 *Engineers of steam vessels—T/L.* * * *

(c) The Officer in Charge, Marine Inspection, shall designate upon the license of any chief or assistant engineer the maximum horsepower of the vessels upon which he may serve.

Section 36.5–5 *Chief engineer of steam vessels—T/L* is amended by changing in paragraph (e) the phrases "1500 gross tons" and "750 gross tons" to "2000 horsepower" and "1000 horsepower," respectively, and by changing in paragraph (f) the phrase "750 gross tons" to "1000 horsepower."

Section 36.5–6 *First assistant engineer of steam vessels—T/L* is amended by changing in paragraph (f) the phrase "1500 gross tons" to "2000 horsepower," and by changing in paragraph (h) the phrase "750 gross tons" to "1000 horsepower."

QUALIFICATIONS FOR OFFICERS: BAYS, SOUNDS, AND LAKES OTHER THAN THE GREAT LAKES

Section 36.6–2 *Mate of steam vessels—T/B* is amended by adding to the last sentence the phrase "or motor vessel."

Section 36.6–4 (c) is amended to read as follows:

§ 36.6–4 *Engineers of steam vessels—T/B.* * * *

(c) The Officer in Charge, Marine Inspection, shall designate upon the license of any chief or assistant engineer the maximum horsepower of the vessels upon which he may serve.

Section 36.6–5 *Chief engineer of steam vessels—T/B* is amended by changing in paragraph (e) the phrases "1500 gross tons" and "750 gross tons" to "2,000 horsepower" and "1,000 horsepower," respectively, and by changing in paragraph (f) the phrase "750 gross tons" to "1,000 horsepower."

Section 36.6–6 *First assistant engineer of steam vessels—T/B* is amended by changing in paragraph (f) the phrase "1,500 gross tons" to "2,000 horsepower," and by changing in paragraph (i) the phrase "750 gross tons" to "1,000 horsepower."

QUALIFICATIONS FOR OFFICERS: RIVERS

Section 36.7–2 *Mate of river steamers—T/R* is amended by adding to the last sentence the phrase "or motor vessel."

Section 36.7–4 (c) is amended to read as follows:

§ 36.7–4 *Engineers of steam vessels—T/R.* * * *

(c) The Officer in Charge, Marine Inspection, shall designate upon the license of any chief or assistant engineer the maximum horsepower of the vessels upon which he may serve.

Section 36.7–5 *Chief engineer of steam vessels—T/R* is amended by changing in paragraph (d) the phrase "750 gross tons" to "1,000 horsepower."

Section 36.7–6 *First assistant engineer of steam vessels—T/R* is amended in paragraph (g) by changing the phrase "750 gross tons" to "1,000 horsepower" (10 F. R. 12852–12853, 16 October 1945).

PART 37—SPECIFICATIONS FOR LIFESAVING APPLIANCES

ELECTRIC WATER LIGHTS

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

Section 37.9–1 *Automatic electric water lights—TB/ALL* is amended in the second sentence by changing the date "October 1, 1945" to "January 1, 1946." (For text of regulation see Federal Register of August 23, 1945, 10 F. R. 10365) (10 F. R. 12408, 2 October 1945).

Subchapter E—Load Lines

PART 47—TEMPORARY VARIANCE FOR COASTWISE VOYAGES BY SEA AND GREAT LAKES VOYAGES

RESCISSION OF REGULATIONS

By virtue of the authority vested in me by the Coastwise Load Line Act of 1935, as amended (49 Stat. 888, 1543; 55 Stat. 578; 46 U. S. C. 88–88i), Ex-

ecutive Order No. 9083 (7 F. R. 1609) and the order of the Acting Secretary of the Navy dated October 1, 1942, as amended (7 F .R. 7979; 10 F. R. 6848), Part 47 of Subchapter E is rescinded effective three months after publication in the Federal Register. All load line certificates issued to vessels under Part 47 are cancelled effective three months after the publication of this regulation in the Federal Register (10 F. R. 12163–12164, 27 September 1945).

Subchapter G—Ocean and Coastwise: General Rules and Regulations

PART 62—LICENSED OFFICERS AND CERTIFICATED MEN

INSPECTED VESSELS

Section 62.6 is amended by adding a new undesignated paragraph, reading as follows:

§ 62.6 *Preparation of licenses.* * * * Commensurate with the experience of the applicant, the Officer in Charge, Marine Inspection, may place an appropriate limitation upon the license.

Section 62.39 is amended by adding a new paragraph (j), reading as follows:

§ 62.39 *Third mate of ocean steam or motor vessels.* * * *

(j) Evidence of satisfactory completion of the prescribed course (Deck) at a U. S. Maritime Service or other government operated training school, approved by the Commandant, may be accepted as the equivalent of sea service up to a maximum of four months: *Provided,* That the applicant has obtained a minimum of 32 months' qualifying service prior to enrollment.

Section 62.44 is amended by adding a new paragraph (k), reading as follows:

§ 62.44 *Third mate of coastwise steam or motor vessels.* * * *

(k) Evidence of satisfactory completion of the prescribed course (Deck) at a U. S. Maritime Service or other government operated training school, approved by the Commandant, may be accepted as the equivalent of sea service up to a maximum of four months: *Provided,* That the applicant has obtained a minimum of 32 months' qualifying service prior to enrollment.

Section 62.49 is amended by changing the last undesignated paragraph to read as follows:

§ 62.49 *Qualifications required for license as engineer of steam vessels and license forms required.* * * *

The Officer in Charge, Marine Inspection, shall designate upon the license of any chief or assistant engineer the maximum horsepower of the vessels upon which he may serve.

Section 62.50 *Chief engineer of ocean steam vessels* is amended by changing in paragraph (d) the phrase "750 gross tons" to "1000 horsepower," and by changing in paragraphs (e) and (f) the phrase "of appropriate tonnage" to "of appropriate horsepower."

Section 62.51 *First assistant engineer of ocean steam vessels* is amended by changing in paragraphs (b) and (c) the phrase "of appropriate tonnage" to "of appropriate horsepower," and by changing in paragraph (e) the phrase "750 gross tons" to "1000 horsepower."

Section 62.52 *Second assistant engineer of ocean steam vessels* is amended by changing in paragraphs (b) and (c) the phrase "of appropriate tonnage" to "of appropriate horsepower."

Section 62.53 *Third assistant engineer of ocean steam vessels* is amended by changing in paragraphs (c) and (d) the phrase "of appropriate tonnage" to "of appropriate horsepower," and by adding a new paragraph (i), reading as follows:

(i) Evidence of satisfactory completion of the prescribed course (Engine) at a U. S. Maritime Service or other government operated training school, approved by the Commandant, may be accepted as the equivalent of sea service up to a maximum of four months: *Provided,* That the applicant has obtained a minimum of 32 months' qualifying service prior to enrollment.

Section 62.53a *Experience as electrician accepted for raise of grade, steam vessels,* is amended by changing in the last sentence the word "tonnage" to "horsepower limitation."

Section 62.54 is amended by changing the second undesignated paragraph to read as follows:

§ 62.54 *Engineers of motor vessels.* * * *

The Officer in Charge, Marine Inspection, shall designate upon the license of any chief or assistant engineer the maximum horsepower of the vessels upon which he may serve.

Section 62.55 *License as chief engineer of motor vessels* is amended by changing in paragraph (c) the phrase "750 gross tons" to "1000 horsepower," and by changing in paragraph (f) the phrase "300 gross tons" to "500 horsepower."

Section 62.56 *License as first assistant engineer of motor vessels* is amended by changing in paragraph (c) the phrase "750 gross tons" to "1000 horsepower;" by changing in paragraph (e) the phrase "450 gross tons" to "750 horsepower;" and by changing in paragraph (f) the phrases, "750 gross tons" and "1200 gross tons" to "1000 horsepower" and "1500 horsepower," respectively.

Section 62.58 is amended by adding a new paragraph (h), reading as follows:

§ 62.58 *License as third assistant engineer of motor vessels.* * * *

(h) Evidence of satisfactory completion of the prescribed course (Engine) at a U. S. Maritime Service or other government operated training school, approved by the Commandant may be accepted as the equivalent of sea service up to a maximum of four months: *Provided,* That the applicant has obtained a minimum of 32 months' qualifying service prior to enrollment.

Section 62.58a *Experience as electrician accepted for raise of grade, motor vessels,* is amended by changing in the last sentence the word "tonnage" to "horsepower limitation."

UNINSPECTED VESSELS

Section 62.103 *Licenses issued* is amended in the second sentence of paragraph (a) by deleting the word "tonnage," and by changing paragraph (b) to read as follows:

(b) A license to act as master, mate, or engineer of inspected vessels will in all cases entitle the holder to act under the limitations of his license on uninspected vessels.

LICENSED MASTERS, MATES AND ENGINEERS

Section 62.117 is amended to read as follows:

§ 62.117 *Lifting of limitations.* (a) If any Officer in Charge, Marine Inspection, is satisfied by the documentary evidence submitted that an applicant is entitled by experience and knowledge to an increase in the scope of his license, he may change any limitations which he may have previously placed upon the license if the applicant has passed the examination for such license.

(b) No Officer in Charge, Marine Inspection, may change on any license any limitation which he did not place thereon before full information regarding the reason for the limitation is obtained from the Officer in Charge, Marine Inspection, responsible for the same and the applicant has made up any deficiency in the experience required for the limitation desired and has passed any necessary examination. No limitation on any license may in any case be changed before the applicant has made up any deficiency in the experience prescribed for the license desired and passed any necessary examination (10 F.R. 12853–12854, 16 October 1945).

Subchapter H—Great Lakes: General Rules and Regulations

PART 78—LICENSED OFFICERS AND CERTIFICATED MEN

INSPECTED VESSELS

Section 78.6 is amended by adding a new undesignated paragraph, reading as follows:

§ 78.6 *Preparation of licenses.* (See § 62.6 of this chapter, as amended, which is identical with this section.)

Section 78.33 *Mate of inland steamers* is amended by adding to the last sentence the phrase "or motor vessel."

Section 78.42 is amended by changing the second undesignated paragraph to read as follows:

§ 78.42 *General provisions as to licenses.* * * *

The Officer in Charge, Marine Inspection, shall designate upon the license of any chief or assistant engineer the maximum horsepower of the vessels upon which he may serve.

Section 78.43 *License as chief engineer of steam vessels* is amended by changing in paragraph (e) the phrases "1500 gross tons" and "750 gross tons" to "2000 horsepower" and "1000 horsepower," respectively, and by changing in paragraph (f) the phrase "750 gross tons" to "1000 horsepower."

Section 78.44 *License as first assistant engineer of steam vessels* is amended by changing in paragraph (f) the phrase "1500 gross tons" to "2000 horsepower" and by changing in paragraph (h) the phrase "750 gross tons" to "1000 horsepower."

Section 78.47 is amended by changing the third undesignated paragraph to read as follows:

§ 78.47 *Engineers of motor vessels; general provisions as to licenses.* * * *

The Officer in Charge, Marine Inspection, shall designate upon the license of any chief or assistant engineer the maximum horsepower of the vessels upon which he may serve.

Section 78.48 is amended to read as follows:

§ 78.48 *License as chief engineer of motor vessels.* (See § 62.55 of this chapter, as amended, which is identical with this section.)

Section 78.49 *License as first assistant engineer of motor vessels* is amended by changing in paragraph (c) the phrase "750 gross tons" to "1000 horsepower;" by changing in paragraph (e) the phrase "450 gross tons" to "750 horsepower;" and by changing in paragraph (f) the phrases "750 gross tons" and "1200 gross tons" to "1000 horsepower" and "1500 horsepower," respectively.

Section 78.51 is amended by adding a new paragraph (h), reading as follows:

§ 78.51 *License as third assistant engineer of motor vessels.* (See § 62.58 of this chapter, as amended, which is identical with this section.) (10 F.R. 12854, 16 October 1945)

PART 82—BARGES

Part 82 is amended by adding a new § 82.5 to follow § 82.4 reading as follows:

§ 82.5 *Fire extinguishers on barges carrying passengers.* Every barge carrying passengers while in tow of a steamer shall be equipped with portable fire extinguishers in the same manner as required for passenger steam vessels of the same type and length. (10 R. R. 13130, 23 October 1945)

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

PART 96—LICENSED OFFICERS AND CERTIFICATED MEN

Section 96.6 is amended by adding a new undesignated paragraph, reading as follows:

§ 96.6 *Preparation of licenses.* (See § 62.6 of this chapter, as amended, which is identical with this section.)

Section 96.32 is amended to read as follows:

§ 96.32 *Mate of inland steamers.* (See section 78.33 of this chapter, as amended, which is identical with this section.)

Section 96.41 is amended by changing the second undesignated paragraph to read as follows:

§ 96.41 *General provisions as to licenses.* * * *

The Officer in Charge, Marine Inspection, shall designate upon the license of any chief or assistant engineer the maximum horsepower of the vessels upon which he may serve.

Section 96.42 *License as chief engineer of steam vessels* is amended by changing in paragraph (e) the phrases "1500 gross tons" and "750 gross tons" to "2000 horsepower" and "1000 horsepower," respectively, and by changing in paragraph (f) the phrase "750 gross tons" to "1000 horsepower."

Section 96.43 *License as first assistant engineer of steam vessels* is amended by changing in paragraph (f) the phrase "1500 gross tons" to "2000 horsepower" and by changing in paragraph (i) the phrase "750 gross tons" to "1000 horsepower."

Section 96.46 is amended by changing the third undesignated paragraph to read as follows:

§ 96.46 *Engineers of motor vessels; general provisions as to licenses.* (See § 78.47 of this chapter, as amended, which is identical with this section.)

Section 96.47 is amended to read as follows:

§96.47 *License as chief engineer of motor vessels.* (See § 62.55 of this chapter, as amended, which is identical with this section.)

Section 96.48 *License as first assistant engineer of motor vessels* is amended by changing in paragraph (c) the phrase "750 gross tons" to "1000 horsepower;" by changing in paragraph (e) the phrase "450 gross tons" to "750 horsepower;" and by changing in paragraph (f) the phrases "750 gross tons" and "1200 gross tons" to "1000 horsepower" and "1500 horsepower," respectively.

Section 96.50 is amended by adding a new paragraph (h), reading as follows:

§ 96.50 *License as third assistant engineer of motor vessels.* (See § 62.58 of this chapter, as amended, which is identical with this section (10 F. R. 12854, 16 October 1945).

PART 100—BARGES

Part 100 is amended by adding a new § 100.5 to follow § 100.4 reading as follows:

§ 100.5 *Fire extinguishers on barges carrying passengers.* (See § 82.5 of this chapter, which is identical with this section.) (10 F. R. 13130, 23 October 1934)

Subchapter J—Rivers: General Rules and Regulations

PART 115—LICENSED OFFICERS

Section 115.6 is amended by adding a new undesignated paragraph, reading as follows:

§ 115.6 *Preparation of licenses.* (See § 62.6 of this chapter, as amended, which is identical with this section.) (10 F. R. 12854, 16 October 1945)

Section 115.17 is amended to read as follows:

§ 115.17 *Persons allowed in pilothouse and on navigator's bridge.* (a) Masters and pilots of vessels shall exclude from the pilothouse and navigator's bridge of such vessels while under way all persons not connected with the navigation of the vessel or not engaged in work in those spaces: *Provided,* That inspectors of the Coast Guard, licensed officers of vessels, persons regularly engaged in learning the profession of pilot, officers of the United States Coast Guard, United States Navy, United States Coast and Geodetic Survey, and Engineer Department of the United States Army, may be allowed in the pilothouse or upon the navigator's bridge upon responsibility of the Officer in Charge.

(b) The master of every vessel carrying passengers and every ferry vessel shall keep three printed copies of this section posted in conspicuous places on such vessel, one of which shall be kept posted in the pilothouse.

(c) The Officers in Charge, Marine Inspection, shall be furnished by Headquarters printed copies of this section for distribution. (10 F. R. 13275, 25 October 1945)

Section 115.31 *Mate of inland or river steamers* is amended by adding to the last sentence the phrase "or motor vessels."

Section 115.39 is amended by changing the tenth undesignated paragraph to read as follows:

§ 115.39 *Classes of engineers; general provisions as to licenses.* * * *

The Officer in Charge, Marine Inspection, shall designate upon the license of any chief or assistant engineer the maximum horsepower of the vessels upon which he may serve.

Section 115.40 *License as chief engineer of steam vessels* is amended by changing in paragraph (d) the phrase, "750 gross tons" to "1000 horsepower."

Section 115.41 *License as first assistant engineer of steam vessels* is amended by changing in paragraph (g) the phrase "750 gross tons" to "1000 horsepower."

Section 115.47 is amended by changing the third undesignated paragraph to read as follows:

§ 115.47 *Engineers of motor vessels; general provisions as to licenses.* (See § 78.47 of this chapter, as amended, which is identical with this section.)

Section 115.48 is amended to read as follows:

§ 115.48 *License as chief engineer of motor vessels.* (See § 62.55 of this chapter, as amended, which is identical with this section.)

Section 115.49 *License as first assistant engineer of motor vessels* is amended by changing in paragraph (c) the phrase "750 gross tons" to "1000 horsepower;" by changing in paragraph (e) the phrase "450 gross tons" to "750 horsepower;" and by changing in paragraph (f) the phrases "750 gross tons" and "1200 gross tons" to "1000 horsepower" and "1500 horsepower," respectively.

Section 115.51 is amended by adding a new paragraph (h), reading as follows:

§ 115.51 *License as third assistant engineer of motor vessels.* (See § 62.58 of this chapter, as amended, which is identical with this section.) (10 F.R. 12854, 16 October 1945)

PART 119—BARGES

Part 119 is amended by adding a new § 119.5 to follow § 119.4 reading as follows:

§ 119.5 *Fire extinguishers on barges carrying pasengers.* (See § 82.5 of this chapter, which is identical with this section.) (10 F.R. 13130, 23 October 1945)

Subchapter K—Seamen

PART 138—RULES AND REGULATIONS FOR ISSUANCE OF CERTIFICATES AND CONTINUOUS DISCHARGE BOOKS

WARTIME REGULATIONS FOR ABLE SEAMEN AND QUALIFIED MEMBERS OF ENGINE DEPARTMENT

Section 138.3 (e) entitled "Wartime regulations; Able seamen" is rescinded, effective May 2, 1946, if section 501 of the Second War Powers Act (56 Stat. 180; 50 U. S. C. 635), as amended, is extended to such date; otherwise this paragraph is rescinded, effective January 1, 1946.

Part 138 is amended by adding a new § 138.3a, reading as follows:

§ 138.3a *Wartime regulations; able seamen.* Persons otherwise qualified who have been issued certificates of service under § 138.3 (e) and which are stamped "unless sooner invalidated this certificate shall expire six months after the termination of the war" shall be permitted to be employed in the capacities indicated in their certificates until such certificates are revoked or suspended or until six months after the date the President or Congress declares the present war officially terminated.

Section 138.5 (g) entitled "Wartime regulations; qualified member of the engine department," is rescinded effective May 2, 1946, if section 501 of the Second War Powers Act (56 Stat. 180; 50 U. S. C. 635), as amended, is extended to such date; otherwise this paragraph is rescinded, effective January 1, 1946.

Part 138 is amended by adding a new § 138.5a, reading as follows:

§ 138.5a *Wartime regulations; qualified member of the engine department.* Persons otherwise qualified who have been issued certificates of service under § 138.5 (g) which have been stamped or marked "unless sooner invalidated, this certificate will expire six months after the termination of the war" shall be permitted to be employed in the capacities indicated in their certificates until such certificates are revoked or suspended or until six months after the date the President or Congress declares the present war officially terminated (10 F. R. 12855, 16 October 1945).

MICELLANEOUS AMENDMENTS

By virtue of the authority vested in me by section 13 of the act of March 4, 1915, as amended by the acts of June 25, 1936, and May 22, 1937, section 1 of the act of June 16, 1938, the act of July 8, 1941, the act of September 25, 1941, R. S. 4488, as amended (sec. 13, 38 Stat. 1169, sec. 1, 7, 49 Stat. 1930, 1936, sec. 1, 2, 50 Stat. 199, sec. 1, 52 Stat. 753, 55 Stat. 579, 732; 46 U. S. C. 672, 672–2, 672b, 672b–1, 689, 481), and Executive Order No. 9083, dated February 28, 1942 (3 CFR Cum. Supp.), the following amendments to the regulations are prescribed and shall be made effective on and after January 1, 1946:

Section 138.3 (d) (2) is amended by adding the following sentence at the end thereof:

§ 138.3 *Able seaman.* * * *

(d) *General.* * * *

(2) *Training.* * * * The Commandant may approve training schools for able seamen subject to such conditions as may be deemed appropriate.

Section 138.4 (a) is amended by changing subparagraphs (1), (3), and (6) to read as follows:

§ 138.4 *Lifeboatman.* (a) * * *

(1) Not less than 12 months' sea service in the deck department, or not less than 24 months' sea service in the other departments on board vessels in ocean, lake, bay, or sound services; or

* * * * *

(3) Three years' training at the United States Naval Academy or the United States Coast Guard Academy including two training cruises.

* * * * *

(6) Successful completion of a training course approved by the Commandant, such course to include a minimum of 30 hours' actual lifeboat training: *Provided*, That the applicant produces evidence of having served a minimum of three months at sea aboard ocean or coastwise vessels (10 F.R. 12855, 16 October 1945).

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

PART 155—LICENSED OFFICERS AND CERTIFICATED MEN: REGULATIONS DURING EMERGENCY

AMENDMENT TO REGULATION

By virtue of the authority vested in me by R. S. 4405, 4417a, 4426, 4438, 4439, 4440, 4441, 4442, as amended, 49 Stat 1544 (46 U. S. C. 375, 391a, 404, 224, 226, 228, 229, 214, 376) and Executive Order No. 9083, dated February 28, 1942 (3 CFR Cum. Supp.), the following amendment to the regulations appearing in the Federal Register for September 5, 1945 (10 F.R. 11311) is prescribed:

Part 155 Licensed Officers and Certificated Men: Regulations During Emergency, is rescinded effective May 2, 1946, instead of January 2, 1946 (10 F.R. 12656, 9 October 1945).

Waivers

Appendix A—Waiver of Navigation and Vessel Inspection Laws and Regulations

WAIVER OF LOAD LINES FOR TANKERS LOADING AT PORTS IN EASTERN SEASONAL TROPICAL ZONE AND ON CALIFORNIA COAST [1]

The Acting Secretary of the Navy having by order dated October 1, 1942 (7 F. R. 7979), waived compliance with the navigation and vessel inspection laws administered by the United States Coast Guard, in the case of any vessel engaged in business connected with the conduct of the war, to the extent and in the manner that the Commandant, United States Coast Guard, shall find to be necessary in the conduct of the war; and

The War Shipping Administration having indicated that the waiver of load lines, relating to certain vessels engaged in business in the conduct of the war, dated August 26, 1944, has been found to be insufficient to take full advantage of tanker capacity in the movement of the petroleum products to the combat areas in the Pacific;

Now, therefore, upon the request of the War Shipping Administration, I hereby find it to be necessary in the conduct of the war that there be waived compliance with § 43.019 of the load line regulations administered by the United States Coast Guard, to the extent that vessels in the foreign trade which are engaged in the war effort shall be accorded the following relaxations:

Tankers loading at ports situated in the eastern seasonal tropical zone, west of Longitude 55° W. bound for Panama Canal ports, or to ports in the Pacific located in tropical or summer zone, and also tankers loading on the California coast east of Longitude 120° W., and bound for ports in the Pacific between Latitude 25° N. and Latitude 11° S., be permitted to load on departure from their loading port to their tropical fresh water load line during the entire year.

Dated: October 10, 1944.

LOAD LINES FOR TANKERS LOADING AT CARRIBBEAN PORTS OF SOUTH AMERICA [1]

The Acting Secretary of the Navy having by order dated October 1, 1942 (7 F. R. 7979), waived compliance with the Navigation and Vessel Inspection laws administered by the United States Coast Guard, in the case of any vessel engaged in business connected with the conduct of the war, to the extent and in the manner that the Commandant, United States Coast Guard, deems it necessary in the conduct of the war; and

The War Shipping Administration having indicated that the efficient prosecution of the war is impeded by the application to ocean-going vessels in the foreign trade of certain load line regulations;

Now, therefore, upon the request of the War Shipping Administration, I hereby find it to be necessary in the conduct of the war that there be waived compliance with § 43.019 of the Load Line Regulations administered by the United States Coast Guard, to the extent that vessels in the foreign trade which are engaged in the war effort shall be accorded the following relaxations:

Tankers loading at Caribbean ports of South America with cargo for Pacific combat areas may disregard the summer seasonal character of the Caribbean zone as specified in § 43.108 (e) (1) and load as if it were a tropical zone during the entire year.

Dated: August 26, 1944.

LOAD LINES FOR CERTAIN VESSELS LOADING AT TRINIDAD [1]

The Acting Secretary of the Navy having by order dated October 1, 1942 (7 F. R. 7979), waived compliance with the Navigation and Vessel Inspection laws administered by the United States Coast Guard, in the case of any vessel engaged in business connected with the conduct of the war, to the extent and in the manner that the Commandant, United States Coast Guard, shall find to be necessary in the conduct of the war; and

The War Shipping Administration having indicated that the efficient prosecution of the war is impeded by the application to ocean-going vessels in the foreign trade of certain load line regulations;

Now, therefore, upon the request of the War Shipping Administration, I hereby find it to be necessary in the conduct of the war that there be waived compliance with § 43.019 of the Load Line Regulations administered by the United States Coast Guard, to the extent that vessels in the foreign trade which are engaged in the war effort shall be accorded the following relaxations:

Trinidad shall be considered on the boundary of the seasonal tropical and tropical zones.

The waiver of June 1, 1944, stating: "When undertaking a voyage from Trinidad bound for the East or South Coast of Africa they may load and proceed from Trinidad during the period from the 16th of July to the 31st of October submerged to their tropical marks or, if certified for deeper loading, to their tropical fresh water marks" is hereby canceled.

JULY 14, 1944.

LOAD LINES FOR VESSELS IN FOREIGN TRADE FROM TRINIDAD BOUND FOR EAST OR SOUTH COAST OF AFRICA [1]

The Acting Secretary of the Navy having by order dated October 1, 1942 (7 F.R. 7979), waived compliance with the navigation and vessel inspection laws administered by the United States Coast Guard, in the case of any vessel engaged in business connected with the conduct of the war, to the extent and in the manner that the Commandant, United States Coast Guard, shall find to be necessary in the conduct of the war; and

The War Shipping Administration having indicated that the efficient prosecution of the war is impeded by the application to ocean-going vessels in the foreign trade of certain load line regulations;

Now, therefore, upon the request of the War Shipping Administration, I hereby find it to be necessary in the conduct of the war that there be waived compliance with § 43.019 of the load line regulations administered by the United States Coast Guard, to the extent that vessels in the foreign trade which are under the control or direction of the War Shipping Administration be accorded the following relaxations:

When undertaking a voyage from Trinidad bound for the East or South Coast of Africa they may load and proceed from Trinidad during the period from the 16th of July to the 31st of October submerged to their tropical marks or, if certified for deeper loading, to their tropical fresh water marks.

Dated: June 1, 1944.

LOAD LINES FOR TANKERS BOUND FOR CERTAIN EUROPEAN PORTS [1]

The Acting Secretary of the Navy having by order dated October 1, 1942 (7 F. R. 7979), waived compliance with the navigation and vessel inspection laws administered by the United States Coast Guard, in the case of any vessel engaged in business connected with the conduct of the war, to the extent and in the manner that the Commandant, United States Coast Guard, deems it necessary in the conduct of the war; and

The War Shipping Administration having indicated that the efficient prosecution of the war is impeded by the application to ocean-going vessels in the foreign trade of certain load line regulations:

Now, therefore, upon the request of the War Shipping Administration, I hereby find it to be necessary in the conduct of the war that there be waived compliance with § 43.105 of the load line regulations administered by the United States Coast

Guard, to the extent that vessels in foreign trade which are engaged in the war effort shall be accorded the following relaxations:

Section 43.105 of the load line regulations is hereby waived for those tankers engaged in the war effort which have been certified for deeper loading and are bound for European ports north of latitude 36° N. to the extent that such tankers may be loaded so that while in a winter zone they shall not submerge their winter load lines.

Dated: October 12, 1944:

ESCAPE PANELS ON VESSELS TRANSPORTING TROOPS FOR THE UNITED STATES ARMY [1]

The Acting Secretary of the Navy having by order, dated October 1, 1942 (7 F. R. 7979), waived compliance with the navigation and vessel inspection laws administered by the United States Coast Guard, in the case of any vessel engaged in business connected with the conduct of the war to the extent and in the manner that the Commandant, United States Coast Guard, shall find to be necessary in the conduct of the war; and

The Army Service Forces, Office of the Chief of Transportation, having indicated that the efficient prosecution of the war would be impeded by the application to certain ocean and coastwise vessels of certain inspection regulations requiring escape panels:

Now, therefore, upon request of the Army Service Forces, Office of the Chief of Transportation, I hereby find it to be necessary in the conduct of the war that there be waived compliance with the vessel inspection regulations administered by the United States Coast Guard, 46 CFR 153.21 (9 F. R. 5696), to the extent that, on vessels engaged in the transportation of troops for the United States Army, no escape hatches and no escape, crash, or kick-out panels need be fitted in spaces used as transient quarters or in rooms occupied by officers of the armed services: *Provided*, That hooks of a suitable "ajar" type are placed on doors to such spaces to hold them in a partially opened position.

Dated: October 30, 1944.

LOAD LINES FOR VESSELS LOADING ON ATLANTIC SEABOARD AND BOUND TO OR VIA MEDITERRANEAN SEA [1]

The Acting Secretary of the Navy having by order dated October 1, 1942 (7 F. R. 7979), waived compliance with the navigation and vessel inspection laws administered by the United States Coast Guard, in the case of any vessel engaged in business connected with the conduct of the war, to the extent and in the manner that the Commandant, United States Coast Guard, shall find to be necessary in the conduct of the war; and

The War Shipping Administration having indicated in their letter of December 8, 1944, that the efficient prosecution of the war is impeded by the application to ocean-going vessels in the foreign trade of certain load line regulations (46 CFR 43.019);

Now, therefore, upon the request of the War Shipping Administration, I hereby find it to be necessary in the conduct of the war that there be waived compliance with 46 CFR 43.019 (load line regulations) administered by the United States Coast Guard to the extent that vessels in the foreign trade which are engaged in the war effort shall be accorded the following relaxations:

Vessels loading on the Atlantic Seaboard north of Latitude 36° North and bound to or via the Mediterranean Sea shall be allowed to load to their tropical load line marks when operating as part of a convoy or singly under competent naval control and routed to proceed south so as to reach Latitude 36° North as soon after departure as practicable considering the exigencies of war.

Dated: December 9, 1944.

LOAD LINES FOR TANKERS LOADING FROM WEST COAST PORTS DURING APRIL, MAY, AND JUNE 1945 [1]

The Acting Secretary of the Navy having by order dated October 1, 1942 (7 F. R. 7979), waived compliance with the navigation and vessel inspection laws administered by the United States Coast Guard, in the case of any vessel engaged in business connected with the conduct of the war, to the extent and in the manner that the Commandant, United States Coast Guard, shall find to be necessary in the conduct of the war.

Now, therefore, I find it necessary in the conduct of the war that there shall be waived compliance with the act of March 2, 1929, c. 508, 45 Stat. 1492, as amended (46 U. S. C. 85–85g), relating to load lines for vessels making a foreign voyage by sea, to the following extent and subject to the following conditions.

During the months of April, May, and June 1945, tankers engaged in the conduct of the war and certified for deeper loading according to Part 48 of the United States Load Line Regulations, when loading from the West Coast harbor areas of San Francisco, Los Angeles, and Long Beach, and routed via the Central Pacific south of Latitude 40° N. to ports in the Pacific theater of war, may load on departure so as not to submerge their tropical fresh water load lines when at sea.

Dated: April 5, 1945.

(10 F. R. 12164–12165, 27 September 1945.)

Appendix A—Waivers of Navigation and Vessel Inspection Laws and Regulations

LOAD LINES FOR VESSELS ENGAGED IN FOREIGN, COASTWISE, OR GREAT LAKES TRADE; CANCELLATION AND MODIFICATION OF WAIVERS

The Commandant, United States Coast Guard, having by various orders issued pursuant to the authority of the order of the Acting Secretary of the Navy, dated October 1, 1942 (7 F. R. 7979), as amended by an order of the Secretary of the Navy, dated June 5, 1945 (10 F. R. 6848), found it necessary in the conduct of the war to invoke waivers of compliance with the navigation and vessel inspection laws and regulations governing load lines administered by the Coast Guard to the extent and in the manner and upon the terms and conditions set forth in the various orders, and finding that the necessity for such waivers has lapsed:

It is ordered, That all the general or specific waivers regarding load lines (whether classified or unclassified for security reasons) issued by the Commandant or Acting Commandant, United States Coast Guard, and specific waivers (whether classified or unclassified for security reasons) issued by District Coast Guard Officers, or their designated representatives, or by designated representatives of the Commandant, as the case may be, are hereby revoked or modified upon the conditions and terms set forth in the following numbered paragraphs, to be effective upon the date of publication of this order in the FEDERAL REGISTER:

1. All vessels operating under valid waivers shall be permitted to complete the particular voyage on which they have already entered and vessels operating under specific waivers for a definite period of time or for a time which may be definitely computed may operate until such expiration date. It shall be the responsibility of the vessels to be in compliance with the applicable laws and regulations on or before the expiration date of their respective waivers. Vessels meeting the conditions above outlined will not incur any penalties.

2. The order of the Commandant, dated July 1, 1943 (8 F. R. 9164), as amended by the orders dated January 12, 1945, and July 3, 1945 (10 F.R. 582, 8243), is hereby modified to the extent that no waiver regarding load lines shall be granted.

Dated: September 26, 1945.

(10 F. R. 12216–12217, 28 September 1945.)

[1] Delay in publication in the Federal Register has been due to the fact that this order was classified for security reasons. Such classification has now been removed.

AMENDMENT OF SPECIFICATION

Subchapter D—Tank Vessels

PART 37—SPECIFICATIONS FOR LIFESAVING APPLIANCE

ELECTRIC WATER LIGHTS

NOTE: The U. S. Coast Guard Specification for Lights (Water): Electric, Floating, Automatic (with Bracket for Mounting), referred to in § 37.9–1 (10 F. R. 10365), has been amended and was filed with the Division of the Federal Register as F. R. Doc. 45–14592 (N. P.) on October 24, 1945, at 9:24 a. m. (10 F. R. 13275, 25 October 1945).

Marine Inspection Memorandum No. 94

Certificate of Award of Number to an Undocumented Vessel (NAVCG 1513)

UNITED STATES COAST GUARD,
Washington 25, D. C.
20 August 1945

1. Subject form has been revised to specify more clearly the requirements which must be met by owners or operators of undocumented vessels. These revisions include:

(a) A statement on the face of the form that the number awarded must be painted or attached to each bow of the vessel or otherwise displayed in accordance with law or regulation and that it must not be permanently removed unless the certificate is surrendered for cancellation.

(b) A statement on the face of the form to the effect that the owner is subject to $10 penalty for failure to report change in ownership, destruction or abandonment of the vessel.

(c) A statement on back of the form to the effect that the owner must within 10 days report loss, abandonment, destruction or permanent removal of motor and surrender certificate to the DCGO in the District in which the vessel is owned or be subject to $10 penalty.

(d) A statement to the effect that the owner must surrender the certificate if he changes his permanent residence to another Customs or Coast Guard District.

(e) A statement to the effect that during a National emergency, a citizen is subject to heavy fine and imprisonment if he sells his vessel to an alien without the consent of the U. S. Maritime Commission.

2. The revised form also instructs that a report in writing be immediately made to the DCGO who issued the certificate in case the certificate is lost, destroyed or multilated. This will eliminate the necessity for a separate form for this purpose. This revision has been based on the practice of owners, in the vast majority of cases, of submitting a signed letter report containing sufficient detail regarding the circumstances of the loss or destruction. Any false or fradulent statements made in this letter report will subject the signer to heavy penalties under 18 USC 80. Therefore, Form NAVCG 1513–A (Rev. 10–44), entitled "Certification Regarding Loss, Destruction, or Mutilation of Certificate of Award" is unnecessary and has been canceled.

3. The revised form also deleted the space for insertion of the date and place when a certificate is surrendered. This deletion was based upon recommendations from several ports suggesting that the making of these entries could be materially speeded up if a rubber stamp were used to stamp across the face of the certificate the surrender date and other essential information. Each issuing port should secure its own rubber stamp for this purpose. The stamp should be made in the following suggested form:

[Rubber stamp]

SURRENDERED AT CLEVELAND, OHIO
DATE_____
CHANGE OF OWNERSHIP_____
CHANGE OF DESCRIPTION_____
CHANGE OF NAME_____
OTHER REASON_____

The use of this stamp with red stamp pad ink will make it evident at a glance that a certificate is one which has been surrendered and voided. The date should be entered in ink and a check mark, or appropriate notation, made after the phrase which indicates the reason for the action.

4. The revised version of the form has just been received from the printer. When the form was revised, it was contemplated that it would be printed in continuous perforated strips to facilitate typing. Accordingly, the space for fill-in of the descriptive details regarding the vessel was redesigned to provide more typing space. Due to certain technical difficulties at the printing plant, it was found impossible to provide the form in continuous strips at this printing. It is recognized that, when used on an individual forms basis, the redesigned space for fill-in does not leave enough space at the bottom of the form to allow for the highest efficiency in completing the form by typewriter. A second printing which will correct this deficiency is now on order. The next printing will also provide for paper of heavier stock.

L. T. CHALKER,
Acting Commandant.

No. 95

Marine Inspection Memorandum No. 92; Amendment of

UNITED STATES COAST GUARD,
Washington 25, D. C.,
31 August 1945.

Paragraph 7 of the subject Marine Inspection Memorandum is hereby amended by striking out the first sentence and substituting the following:

"The Senior Marine Inspector, Matériel, shall act for the Officer in Charge in his absence and in this capacity sign as 'Acting Officer in Charge, Marine Inspection.'"

L. T. CHALKER,
Acting Commandant.

Navigation and Vessel Inspection Circular No. 63

Allotments of Seamen

UNITED STATES COAST GUARD,
Washington 25, D. C.,
29 September 1945.

1. Reference is made to the notice which appeared in the Federal Register of 20 September, 1945, 10 F.R. 11943, amending Section 132.4 of Title 46, Code of Federal Regulations, effective 1 October, 1945, to read as follows:

"Allotments may be made by seamen only upon the amount of the wages for which they are signed on."

2. In view of the above-cited amendment, the 90 percentum referred to in Section 132.5 of Title 46, Code of Federal Regulations, will be computed on only the wages for which a seaman is signed on, after allowing for a deduction of 20 percentum to cover the Federal withholding tax. For example, a seaman who signs on at $140 a month on and after 1 October, 1945 will be entitled to make a maximum allotment of $100.80 a month.

3. Navigation and Vessel Inspection Circular No. 9 dated 4 June, 1942 is rescinded effective 1 October, 1945.

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

Equipment Approved by the Commandant

LIFEBOAT COMPASSES

Lifeboat compass Model 2 (Assembly Dwg. No. AA, dated 25 September 1945), manufactured by the W. M. Welch Mfg. Co., Chicago, Illinois.

Lifeboat compass, Type LMC–101D (Assembly Dwg. No. D–1, dated 18 July 1945), manufactured by John E. Hand and Sons Co., Philadelphia, Pa. (10 F.R. 12473, 3 October 1945).

BUOYANT CUSHION FOR MOTORBOATS

15" x 15" x 2" Typha filled buoyant cushion, Approval No. B–270, manufactured by Shaw Upholstery Co., 5910 N. E. 2d Avenue, Miami, Fla. (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.) (10 F. R. 12473, 3 October 1945.)

DAVITS

Sheath screw davit, size 4–CS–6–6 (General Arrangement Dwg. No. 330–D, dated 29 September 1944, Alt. 0), (Maximum working load 5,500 pounds per arm), submitted by The Landley Co., Inc., New York, N. Y. (Supersedes approval 19 November 1943, 8 F.R. 15745.)

Aluminum gravity davit, Type 28A (General Arrangement Dwg. No. 2892, revised 26 September, 1945) (Working load of 17,000 pounds per set), submitted by Welin Davit and Boat Corporation, Perth Amboy, N. J. (10 F.R. 12735, 10 October 1945.)

FIRING ATTACHMENT FOR LINE-THROWING GUN

Firing attachment for mounted line-throwing gun, Model VK–M20 (Dwg. No. VK–M20, dated 12 September 1945), manufactured by the Van Karner Chemical Arms Corporation, 202 East 44th Street, New York, N. Y. (10 F.R. 13298, 25 October 1945.)

FIRE-INDICATING AND ALARM SYSTEM

Improved Fire Detector Thermostat, Marine Type M–3F, flush mounting (Dwg. No. M–2002, Alt. 0), submitted by Improved Fire Detector Corporation, 2023 West Lexington Street, Baltimore 23, Md. (10 F.R. 13038, 19 October 1945.)

LIFEBOATS

24' x 8' x 3.73' metallic motor-propelled lifeboat, Design K–106 (35-person capacity) (General Arrangement Dwg. No. K–106–2, Alt. 5, dated 4 August 1945), submitted by Kargard Boat and Engine Co., Marinette, Wis. (Supersedes approval 15 May 1945, 10 F. R. 5569. Any lifeboats approved thereunder may be continued in service so long as in good and serviceable condition.)

24' x 8' x 3.73' metallic oar-propelled lifeboat, Design K–107 (40-person capacity) (General Arrangement Dwg. No. K–107–2, Alt. 3, dated 4 August 1945), submitted by Kargard Boat and Engine Co., Marinette, Wis.

14' x 4.8' x 2' metallic oar-propelled lifeboat (8-person capacity) (General Arrangement Dwg. No. G–360, dated 19 March 1945), submitted by C. C. Galbraith & Son, Inc., 99 Park Place, New York, N. Y. (10 F. R. 12180, 27 September 1945).

26' x 9' x 3.6' metallic oar-propelled lifeboat (50-person capacity) (General Arrangement Dwg. No. 205, dated 6 August 1945), submitted by Imperial Lifeboat & Davit Co., Inc., Athens, N. Y. (10 F. R. 12473, 3 October 1945).

28' x 9' x 3'11½" metallic motor-propelled lifeboat (55-person capacity) (General Arrangement Dwg. No. 2078, dated 9 October 1945), submitted by the Imperial Lifeboat and Davit Co., Inc., Athens, N. Y.

28' x 9' x 3'11½" metallic oar-propelled lifeboat (59-person capacity) (General Arrangement Dwg. No. 2079, dated 9 October 1945), submitted by the Imperial Lifeboat and Davit Co., Inc., Athens, N. Y.

14' x 5' x 2' metallic oar-propelled lifeboat (8-person capacity) (General Arrangement Dwg. No. 1412, dated 26 August 1943), submitted by the Lane Lifeboat and Davit Co., Foot of 40th Road, Flushing, N. Y. (10 F. R. 13298, 25 October 1945).

LINE-THROWING GUN

Shoulder line-throwing gun, "Bridger" 45–70 (Dwg. No. H–102, dated 26 September 1945), submitted by the Naval Company, Doylestown, Pa. (10 F. R. 13298, 25 October 1945).

WINCH

Aluminum lifeboat winch for gravity davits, Type A (Working load of 15,000 pounds at the drum) (General Arrangment Dwg. No. 2917, revised 10 September 1945), submitted by Welin Davit and Boat Corporation, Perth Amboy, N. J. (10 F. R. 12735, 10 October 1945).

Electric lifeboat winch, type WH–10 (Maximum working load of 2,200 pounds at the drum) (General Arrangment Dwg. No. 1189–D–1, dated 24 October 1944), submitted by the Landley Co., 15 Park Row, New York, N. Y. (10 F. R. 13298, 25 October 1945).

WITHDRAWAL OF APPROVAL

Coast Guard approval of the following items of equipment is withdrawn:

SAFETY VALVES

Ashton safety valve, submitted by Ashton Valve Co., 169–179 First Street, Cambridge, Boston, Mass. (Original approval 1872.)

Coale side outlet safety valve, submitted by Coale Muffler & Safety Valve Co., 325 East Oliver Street, Baltimore, Md. (Original approval 1917.)

Safety valve, Form DS, type 1403, submitted by Consolidated Ashcraft Hancock Co., Inc., Bridgeport, Conn. (Original approval 1924.)

Safety valve, Form D. I., type 1403, submitted by Consolidated Ashcraft Hancock Co., Inc., Bridgeport, Conn. (Original approval 1924.)

Safety valve, Form H, type FH, portable top outlet safety valve, submitted by Consolidated Ashcraft Hancock Co., Inc., Bridgeport, Conn. (Original approval 1927.)

Safety valve, Form E, type RB or 1436, bronze body, submitted by Consolidated Ashcraft Hancock Co., Inc., Bridgeport, Conn. (Original approval 1929.)

Form I, type NE or 1455, exposed spring bronze body safety valve, submitted by Consolidated Ashcraft Hancock Co., Inc., Bridgeport, Conn. (Original approval 1929.)

Type NE, 1407 pop valve, submitted by Consolidated Ashcraft Hancock Co., Inc., Bridgeport, Conn. (Original approval 1934.)

Safety valve, Type 1554, steel body, with rockershaft lever, submitted by Consolidated Ashcraft Hancock Co., Inc., Bridgeport, Conn. (Original approval 1930.)

Safety valve, Type 1413, steel body, for saturated steam, submitted by Consolidated Ashcraft Hancock Co., Inc., Bridgeport, Conn. (Original approval 1932.)

Top outlet bronze safety valve, type 1445, 1½" size (Dwg. No. C–101, dated 10 October 1941) (for maximum pressure of 150 pounds p. s. i. and maximum temperature of 366° F.), submitted by Consolidated Safety Valve Division of Manning, Maxwell & Moore, Inc., Bridgeport, Conn. (Original approval 25 October 1941, 6 F. R. 5473.)

Top outlet bronze safety valve, type 1445, 2" size (Dwg. No. C–101, dated 10 October 1941) (for maximum pressure of 150 pounds p. s. i. and maximum temperature of 366° F.), submitted by Consolidated Safety Valve Division of Manning, Maxwell & Moore, Inc., Bridgeport, Conn. (Original approval 25 October 1941, 6 F. R. 5473.)

Top outlet bronze safety valve, type 1445, 2½" size (Dwg. No. C–101, dated 10 October 1941) (for maximum pressure of 150 pounds p. s. i. and maximum temperature of 366° F.), submitted by Consolidated Safety Valve Division of Manning, Maxwell & Moore, Inc., Bridgeport, Conn. (Original approval 25 October 1941, 6 F. R. 5473.)

Crosby and Meade pop safety valve, submitted by Crosby Steam Gage & Valve Co., 10 Roland Street, Boston, Mass. (Original approval 1888.)

High efficiency pop safety valve, submitted by Crosby Steam Gage & Valve Co., 10 Roland Street, Boston, Mass. (Original approval 1917.)

Spring-loaded safety valve, model WTDE, 2½" size, submitted by J. E. Lonergan Co., 211–217 Race Street, Philadelphia, Pa. (Original approval 1931.)

F. Lunkenheimer safety valve, submitted by Lunkenheimer Co., Beekman Street and Waverly Avenue, Cincinnati, Ohio. (Original approval 1888.)

Improved pop safety valve, submitted by Lunkenheimer Co., Beekman Street and Waverly Avenue, Cincinnati, Ohio. (Original approval 1896.)

Lever safety valve, submitted by Peter Jensen & Co., 23–25 East 18th and River, New Albany, Ind. (Original approval 1932.)

Talbot combination stop and safety valve, submitted by Talbot Boiler Company, Seattle, Wash. (Original approval 1915.)

Cockburn ordinary life safety valve, submitted by Cockburn Ltd., Clydesdale Engineering Works, Cardonald, Glasgow, Scotland. (Original approval 1877.)

Cockburn-MacNicoll improved high-lift double-spring valve, submitted by Cockburn Ltd., Clydesdale Engineering Works, Cardonald, Glasgow, Scotland. (Original approval 1930.)

(Notwithstanding the withdrawals of approval, any of the foregoing safety valves now in use may be continued in service, provided such safety valves are in good and serviceable condition.) (10 F. R. 13298–13299, 25 October 1945.)

CERTIFICATION OF ARTICLES OF SHIPS' STORES AND SUPPLIES

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

Shell DDT Ship Spray #2, Shell Oil Co., Inc., Suite 1120, Shoreham Building, Washington 5, D. C. Certification No. 188, 11 October 1945.

Shell DDT Ship Spray #1, Shell Oil Co., Inc., Suite 1120, Shoreham Building, Washington 5, D. C. Certification No. 189, 11 October 1945.

CANCELLATION OF CERTIFICATION OF ARTICLES OF SHIPS' STORES AND SUPPLIES

Certification Nos. 186 and 187 listed on page 155 of the October 1945 issue of the Proceedings of the Merchant Marine Council is canceled.

AFFIDAVITS

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

Wake Manufacturing Co., Elgin, Illinois, fittings.

Zalud Marine Corp, 53 South Street, New York, N. Y., valves and fittings.

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 of 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), U. S. Coast Guard, Washington 25, D. C., duplicate copies of a detail assembly drawing, including a material list with finishes of each corrosive part, of each item. An examination of the drawings submitted will be made and, if necessary, tests conducted on such appliances to determine their suitability for marine use.

Manufacturer and description of equipment	Location apparatus may be used				Date of action
	a	*b*	*c*	*d*	
Breleo corp., New York, N. Y.:					
Mechanical engine order telegraph equipment:					
Transmitter, with reply, 12", double face, single engine, pedestal mounted, top of pilot house installation, drawing No. 1551, alteration 5	x	x	---	---	10-6-45
Transmitter, with reply, 12", double face, single engine, pedestal mounted, through lead type, drawing No. 1552, alteration 4	x	x	---	---	10-6-45
Indicator, with reply, 16", bulkhead mounted, engine room installation, drawing No. 1600, alteration 1	x	x	---	---	10-6-45
Indicator, without reply, 12", bulkhead mounted, drawing No. 1608, alteration 0	x	x	---	---	10-6-45
Murlin Manufacturing Co., Philadelphia, Pa.:					
Lighting fixtures, nonwatertight:					
Ceiling light, 2 60-watt lamps maximum, catalog No. 920, alteration 1	x	---	---	---	10-9-45
Ceiling light, 2 25-watt lamps maximum, catalog No. 919, alteration 1	x	---	---	---	10-9-45
Ceiling light, 50 watts maximum, catalog No. 866, alteration 1	x	---	---	---	10-9-45
Mirror light, 40 watts maximum, catalog No. 861, alteration 1	x	---	---	---	10-9-45
Mirror light, 40 watts maximum, catalog No. 860, alteration 1	x	---	---	---	10-9-45
Desk light, 40 watts maximum, catalog No. 868, alteration 1	x	---	---	---	10-9-45
Bracket light, 25 watts maximum, catalog No. 864, alteration 1	x	---	---	---	10-9-45
Chronometer light, 25 watts maximum, catalog No. 862, alteration 1	x	---	---	---	10-9-45
Russell & Stoll Co., Inc., New York, N. Y.:					
Lighting fixture, bracket type, vaportight, 100 watts maximum, catalog No. 6255-MC, drawing No. F-9403, alteration 6	x	x	x	---	10-8-45
Lighting fixture, bracket type, vaportight, with switch, 100 watts maximum, catalog No. 6256-MC, drawing No. F-9404, alteration 5	x	x	x	---	10-8-45
Westinghouse Electric Corp., East Pittsburgh, Pa.:					
Marine type bracket ventilating fans:					
12", nonoscillating, 115 volts, 60 cycles, model TA-12, drawing No. 24-J-309, alteration 0	x	x	---	---	10-5-45
12", nonoscillating, 115 volts, direct current, model TD-12, drawing No. 24-J-310, alteration 0	x	x	---	---	10-5-45
12", oscillating, 115 volts, 60 cycles, model 12MC-3, drawing No. 24-J-311, sub. 2	x	x	---	---	10-5-45
12", oscillating, 115 volts, direct current, model 12MC-30, drawing No. 24-J-312, sub. 2	x	x	---	---	10-5-45
16", oscillating, 115 volts, direct current, model 16MC-30, drawing No. 24-J-313, sub. 2	x	x	---	---	10-5-45

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

CORRECTION

The following listing should be substituted for that now appearing on page 45 of the March 1945 issue of the Proceedings of the Merchant Marine Council. The listing should read as follows:

	a	*b*	*c*	
Edwards & Co., Inc., Norwalk, Conn.: Mercurial thermostat, type GM, catalog No. 1752; type GS, catalog No. 1753, plan No. 6900, alteration 0; for use only with magazine fire-alarm systems	x	x	x	1-24-45

Merchant Marine Personnel Statistics

MERCHANT MARINE LICENSES ISSUED DURING SEPTEMBER 1945

DECK OFFICERS

Region	Master										Chief mate										Second mate									
	Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers		Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers		Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers	
	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R
Atlantic coast	29	38	7	6	----	----	4	27	----	7	103	9	1	1	----	----	3	2	----	----	158	13	----	----	----	----	----	----	----	----
Gulf coast	9	8	----	9	----	----	1	2	----	4	20	3	----	1	----	----	----	----	----	----	27	2	----	----	----	----	----	----	----	----
Great Lakes and rivers	----	1	----	----	----	2	1	----	3	4	----	1	----	----	----	----	----	----	2	2	----	----	----	----	----	----	----	----	----	----
Pacific coast	22	30	----	1	----	----	3	11	----	----	70	12	----	----	----	----	2	5	----	----	97	8	----	----	----	----	----	----	----	----
Total	60	77	7	16	----	2	9	40	3	15	193	25	1	2	----	----	5	7	2	2	282	23	----	----	----	----	----	----	----	----

Region	Third mate										Pilots						Master mate				Total		
	Ocean		Coastwise		Great Lakes		B. S. & L.		Rivers		Great Lakes		B. S. & L.		Rivers		Uninspected vessels, high seas				Original	Renewal	Grand total
	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R			
Atlantic coast	243	7	----	----	----	----	----	----	----	----	----	----	26	73	----	----	----	----	1	----	575	183	758
Gulf coast	31	----	----	----	----	----	----	----	----	----	----	----	10	18	----	----	----	----	----	----	98	47	145
Great Lakes and rivers	----	----	----	----	----	----	----	----	----	----	----	1	4	7	19	11	----	----	----	----	29	29	58
Pacific coast	133	2	----	----	----	----	----	----	----	----	----	----	17	39	----	----	----	7	----	----	344	115	459
Total	407	9	----	----	----	----	----	----	----	----	----	1	57	137	19	11	----	7	1	----	1,046	374	1,420

ENGINEER OFFICERS

Region	Chief engineer, steam				First assistant engineer, steam				Second assistant engineer, steam				Third assistant engineer, steam			
	Ocean		Inland		Ocean		Inland		Ocean		Inland		Ocean		Inland	
	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R
Atlantic coast	63	130	6	41	106	43	----	4	201	34	----	----	284	25	----	----
Gulf coast	15	14	4	5	23	4	----	3	32	1	----	----	19	4	----	----
Great Lakes and rivers	----	2	4	17	2	4	4	8	6	3	1	3	5	3	----	----
Pacific coast	48	51	3	4	48	12	----	----	116	11	----	----	70	4	----	----
Total	126	197	17	67	179	63	4	15	355	49	1	3	378	36	----	----

Region	Motor vessels								Uninspected vessels				Totals		
	Chief engineer		First assistant engineer		Second assistant engineer		Third assistant engineer		Chief engineer		Assistant engineer		Original	Renewal	Grand total
	O	R	O	R	O	R	O	R	O	R	O	R			
Atlantic coast	20	45	10	7	12	5	182	3	----	1	----	1	884	339	1,223
Gulf coast	6	7	4	1	2	2	3	1	----	----	----	----	108	42	150
Great Lakes and rivers	1	4	----	1	----	----	1	----	----	----	----	----	24	45	69
Pacific coast	16	25	11	9	17	5	29	1	2	4	1	----	361	126	487
Total	43	81	25	18	31	12	215	5	2	5	1	1	1,377	552	1,929

ORIGINAL SEAMEN'S DOCUMENTS ISSUED, MONTH OF SEPTEMBER 1945

Region	Continuous discharge book	Certificate of identity	A. B., green, 3 years [1]	A. B., green, 9 months emergency [1]	A. B., blue, 18 months, 12 months [1]	A. B., blue, 6 months emergency [2]	A. B., blue, 6 months emergency [2]	Lifeboat, 12-24 months [4]	Lifeboat, 6-12 months emergency	Q.M.E.D., 6 months	Q.M.E.D., emergency	Radio operators	Certificate of service	Tanker man	Staff officer	Total
Atlantic coast	34	5,412	93	224	61	27	0	1,158	0	204	409	102	4,056	11	139	12,830
Gulf coast	148	2,002	7	41	7	2	0	733	0	68	173	0	2,057	11	29	5,278
Pacific coast	63	3,633	18	130	43	1	0	503	0	129	213	5	3,382	3	99	8,222
Great Lakes and rivers	1,336	559	11	17	11	11	0	42	0	57	74	0	2,045	18	3	4,184
Total	1,581	11,606	129	412	122	41	0	2,436	0	458	869	107	12,440	43	270	30,514

[1] Unlimited.
[2] Great Lakes, lakes, bays, and sounds.
[3] Tugs and towboats and freight vessels under 500 tons (miscellaneous).
[4] 12 months deck or 24 months other departments.

NOTE.—There were 183 Panamanian Employment Cards issued.

WAIVERS OF MANNING REQUIREMENTS FROM 1 SEPTEMBER TO 30 SEPTEMBER 1945

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

Region	Number of vessels	Deck officers substituted for higher ratings	Engineer officers substituted for higher ratings	Able seamen substituted for deck officers	Ordinary seamen substituted for able seamen	Qualified members of engine department substituted for engineer officers	Wipers or coal passers substituted for qualified members of engine department	Wipers, coal passers, or cadets substituted for engineer officers	Ordinary seamen or cadets substituted for deck officers	Total
Atlantic coast	448	62	139	4	988	18	339	3	5	1,558
Gulf coast	182	53	59	6	515	10	128		6	777
Pacific coast	393	135	234	32	1,176	121	585	22	7	2,312
Great Lakes	166		9		383		109			501
Total	1,189	250	441	42	3,062	149	1,161	25	18	5,148

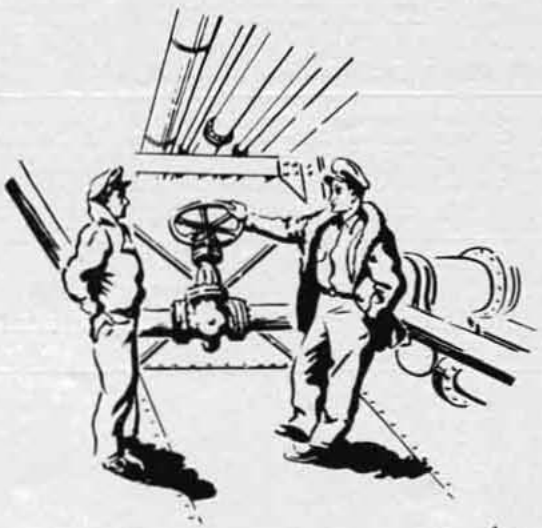
CREW SHORTAGE REPORTS FROM 1 SEPTEMBER TO 30 SEPTEMBER, 1945

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

Region	Number of vessels	Ratings in which shortages occurred												Total
		Chief mate	Second mate	Third mate	Radio	Able seamen	Ordinary seamen	Chief engineer	First engineer	Second engineer	Third engineer	Qualified member engine department	Wiper or coal passer	
Atlantic coast	17			1		9	2		3			7	7	29
Gulf coast	16					18	10				1	14	3	46
Pacific coast	12			1		6	4		1	2	1	4	1	20
Great Lakes	177	1		2		106	25		3	8	21	232	113	511
Total	222	1		4		139	41		7	10	23	257	124	606

TIPS FOR TANKERS

6 General precautions



A. When joining the ship inquire of other officers with regard to loading and discharging procedure, even though you may have served on similar ships before. Each ship has its peculiarities, each crew its own procedure and methods.

B. Keep ship's lines hove taut. Pay special attention to spring lines in narrow channels.

C. At terminals on narrow channels be prepared to "blow down" by whistle signal, vessels passing with excessive speed. Where surging may take place, be prepared to reduce or stop loading or discharging on short notice.

D. If a cargo spill takes place NOTIFY THE CAPTAIN OF THE PORT IMMEDIATELY IF CARGO GETS INTO HARBOR. In the case of a spill STOP LOADING, BAIL SPILL INTO CARGO TANK OR COFFERDAM, dry up remaining oil with sawdust. TAKE ALL NECESSARY PRECAUTIONS TO ELIMINATE POSSIBLE SOURCES OF VAPOR IGNITION.

E. In the case of equipment failure, SHUT DOWN IF NECESSARY. Consult all who may be interested and develop a plan of procedure. Put the plan into effect CAREFULLY and DELIBERATELY.

F. In the case of a severe electrical storm or when a fire occurs in the vicinity SHUT DOWN until conditions are again safe.

G. IF FOR ANY REASON OPERATIONS GET OUT OF HAND OR DOUBT EXISTS AS TO AN ESSENTIAL PART OF THE CARGO OR BALLAST TRANSFER PROCEDURE—TAKE NO CHANCES—SHUT DOWN—CHECK UP—START UP.

U. S. GOVERNMENT PRINTING OFFICE: 1943