

PROCEEDINGS OF THE MERCHANT MARINE COUNCIL

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UNITED STATES



COAST GUARD

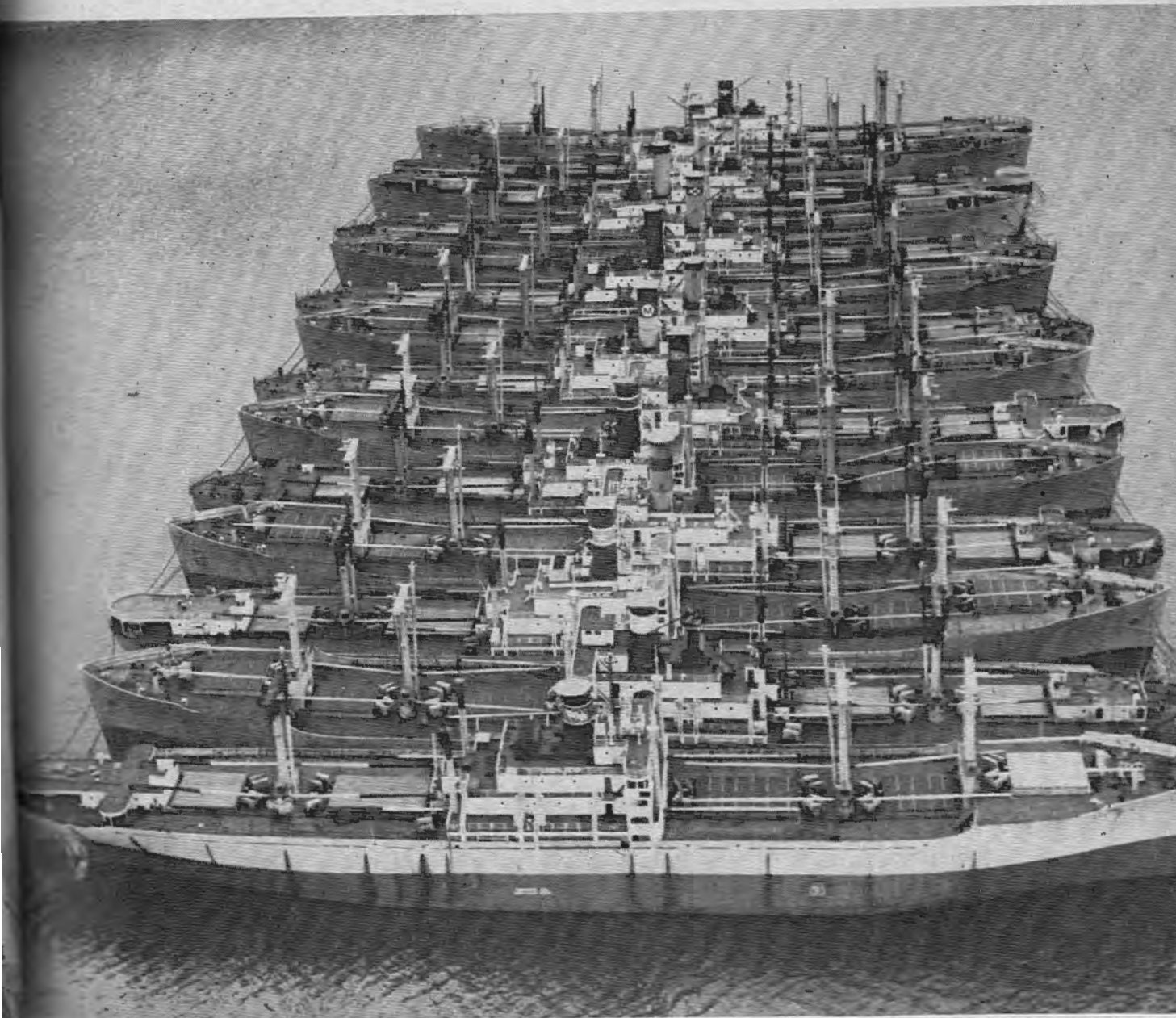
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PASS IT ALONG

CG 129

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MERCHANT MARINE COUNCIL

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FRONT COVER

Aerial view of part of the Hudson River Reserve Fleet. Ninety-seven vessels of the fleet of 176 ships, including those shown, are being used for the stowage of grain. Photograph courtesy MARINE NEWS.

BACK COVER

"Proudly She Waves." Photograph courtesy Bill Strout for WATERMAN STEAMSHIP CORPORATION.

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"I recommend it to your serious reflections how far and in what mode it may be expedient to guard against embarrassments from these contingencies by such encouragements to our own navigation as will render our commerce and agriculture less dependent on foreign bottoms, which may fail us in the very moments most interesting to both of these great objects. Our fisheries and the transportation of our own produce offer us abundant means for guarding ourselves against this evil."

George Washington, in an address to Congress, November 8, 1790

"The present (British) ministry are duped by an opinion of our not having union and energy sufficient to retaliate their restrictions (on shipping). No time is to be lost in raising and maintaining a national spirit in America. Power to govern the confederacy as to all general purposes should be granted and exercised. In a word, everything conducive to union and constitutional energy should be cultivated, cherished and protected."

John Jay, writing to Gouverneur Morris from England in 1783

"In short, commerce has made this country what it is, and it cannot be destroyed or neglected without involving the people in poverty and distress. Great numbers are directly and solely supported by our navigation. The faith of society is pledged for the preservation of the rights of commercial and seafaring no less than of the other citizens. Under this view of our affairs, I should hold myself guilty of a neglect of duty if I forbore to recommend that we should make every exertion to protect our commerce and to place our country in a suitable posture of defense as the only means of preserving both."

John Adams, as President, to Congress, November 22, 1797

THE MERCHANT VESSEL AS AN AID IN DITCHING

ALL seafarers are aware of the assistance that is often rendered to them at sea by an amphibious sea-plane in answer to a MEDICO.*

However, it is doubtful that seafarers are aware that they may be called to render assistance to an aircraft in distress—one that has been forced to ditch.

At all times there are hundreds of merchant vessels at sea—principally concentrated on certain trade routes. Usually the flight plan closely parallels the sailing track. On the North Atlantic great circle route an aircraft is seldom over 50 miles from a merchant vessel. Therefore, ships at sea are an ever-present source of assistance.

With an increasing number of trans-ocean aircraft, the chances that a merchant vessel will be required to render such assistance increase continually.

This fact is well appreciated by the Coast Guard. Accordingly, in the publication *Aircraft Emergency Procedures Over Water*, there has been included a separate chapter on assistance by merchant ship. This is a publication compiled by the Coast Guard and adopted for use by the Department of the Navy and the Department of the Air Force. It is available to all commercial airlines and, presumably, all trans-ocean aircraft have a copy on board.

Since communications between an airplane about to ditch and a merchant vessel are at best poor, it would be well for shipmasters to be aware of the procedures that pilots would follow. Accordingly, excerpts from Chapter 7, *The Merchant Vessel as an Aid in Ditching*, are printed for the shipmaster's information:

COMMUNICATING WITH MERCHANT VESSELS

Communicating with merchant vessels may be difficult. Approximately 75 percent of these vessels stand a one operator watch, i. e., one operator is on watch intermittently only 8 hours a day. During the remaining 16 hours, the only guard is the auto-alarm system on 500 kc/s. If an aircraft in distress is able to transmit on 500 kc/s and is close enough to the ship to trigger the auto-alarm, communications can be established on CW. If the aircraft is unable to emit sufficient signal strength to trigger the ship alarm, then the distress call

may be heard by a more powerful station—this station will in turn broadcast an auto-alarm signal. The majority of merchant vessels are unable to communicate by voice, but must use CW even after contact is established. However, some merchant vessels are equipped to exchange communications on frequencies in the 2-3 Mcs band (voice emission).

SELECTING THE NEAREST MERCHANT VESSEL

When an aircraft transmits a distress message on 500 kc/s, stations of the maritime mobile service in the vicinity hearing the message are required to answer. If, after a period of time, no stations in the immediate vicinity answer, ships more remote from the distress position are required to acknowledge. An aircraft initiating a distress message on 500 kc/s will probably receive acknowledgments, and positions, from several ships. The pilot is then faced with the problem of deciding which ship he is to proceed toward and communicate with. Obviously, if the pilot requests position reports of all ships on the circuit, a long time delay will result, together with an overloading of the circuit. The pilot must select the ship he plans to use and enforce silence on other stations. The pilot may then determine the ship's capability for using voice and a common frequency. If possible, a shift should be made to a voice frequency. If the vessel is a foreign merchant vessel, unable to use English, it may be better to stay on CW and use Q signals.

NOTE: (The block of Q signals QRA-QUZ, common to both the maritime and aeronautical services, should be used. These Q signals are in international use. The aeronautical block, QWA-QNZ, probably would not be known to shipboard operators, so it should not be used.)

Usually an aircraft will initiate the distress call on the air-ground frequency to the ground stations. This will, in turn, be relayed to RCC—who will provide for the broadcast of the auto-alarm alert to ships at sea. From the aircraft's position and the merchant vessel plot, the RCC controller will be able to inform the aircraft, through the air-ground station, of merchant vessels in the vicinity. The aircraft may then call the ship direct on 500 kc/s and/or 2182 kc/s. Large ships standing 24-hour watches and many smaller vessels such as yachts and fishing vessels may be able to use the voice frequency of the distressed aircraft.

It is suggested that aircraft navigators may find it desirable to enter on the chart the following informa-

tion on all vessels sighted: time sighted, position, estimated course and speed. (Estimation of speed may prove difficult. As a general rule, most merchant vessels will be cruising between 9-15 knots.) This information may be useful if an emergency develops.

RENDEZVOUSING

The aircraft's navigation plot should be the basic method used in effecting rendezvous. Homing by radio bearings may be used in two ways:

a. The most reliable method is for the merchant vessel to transmit homing signals on an appropriate frequency in the 400 kc/s band to allow the aircraft to home, using its ADF. The merchant vessel should be requested to transmit its call letters until the aircraft has made positive identification. When the signal has been identified, the merchant vessel should be directed to send 20-second dashes with its call sign after every third dash. Maritime mobile service radio direction finding frequencies are between 405 and 490 kc/s. Many merchant vessels, however, have only one operator and two transmitters. In such cases, it may be necessary for the vessel to transmit for homing on 500 kc/s in intervals of three minutes, then conduct necessary communications with the aircraft on 500 kc/s. If the merchant vessel is able to use high frequency voice, communications may be conducted on this frequency while the ship is transmitting homing signals on a frequency between 405 and 490 kc/s.

b. A second method is for the aircraft to transmit on 500 kc/s for bearings. The ship may take bearings on the aircraft with the ship's or equipment, and advise the aircraft its true bearing from the ship. This method has the advantage that a large number of ships can be taking bearings while the aircraft is transmitting. If the aircraft ditches, a reliable fix is available. The aircraft should transmit long dashes, broken by identification, then cease the homing signals for other communications.

DITCHING BESIDE A MERCHANT VESSEL

Day:

If the pilot elects to ditch beside a merchant vessel, sea and weather conditions should be determined while inbound. From information furnished by the ship or determined by the pilot, the ditching heading should be selected and the vessel advised. The merchant vessel should be requested to steam on this heading.

* EDITOR'S NOTE: See August and September, 1955, issues of the *Proceedings* for MEDICO articles.

The aircraft should ditch off the ship's bow or in the wake. If the ship is a large fast vessel or liner, the pilot may land in the wake. A large vessel, proceeding at high speed, will produce a wake astern that may reduce the swell and sea system. If the ship is small or slow, no advantage will be derived from this procedure. Then it is better to ditch off the bow to facilitate early rescue. Merchant vessels will, in nearly all cases, use lifeboats to pick up survivors.

Night:

Under night conditions, the merchant vessel can assist best by turning on all lights on the ship to give the pilot a reference mark and aid in depth perception.

Merchant vessels are normally unable to provide flare or starshell illumination. The pilot of a ditching aircraft should be prepared to use his

own parachute flares for this purpose. This can be done by dropping the flares upwind of the ship, and utilizing the Single Aircraft Ditching Procedure prescribed in Chapter 5. (See Figure 1.) A night ditching can then be made beside the ship with the advantage of illumination. Flares may be used to alert a ship when no other communications have been established. Flares should not be dropped so as to endanger the ship.

ATTRACTING VISUAL ATTENTION OF MERCHANT VESSELS

The procedure for an aircraft to call upon a surface craft to render assistance to survivors or to an aircraft in distress is now standardized as follows:

- a. Circle the vessel at least once at low altitude.

(Continued on page 144)

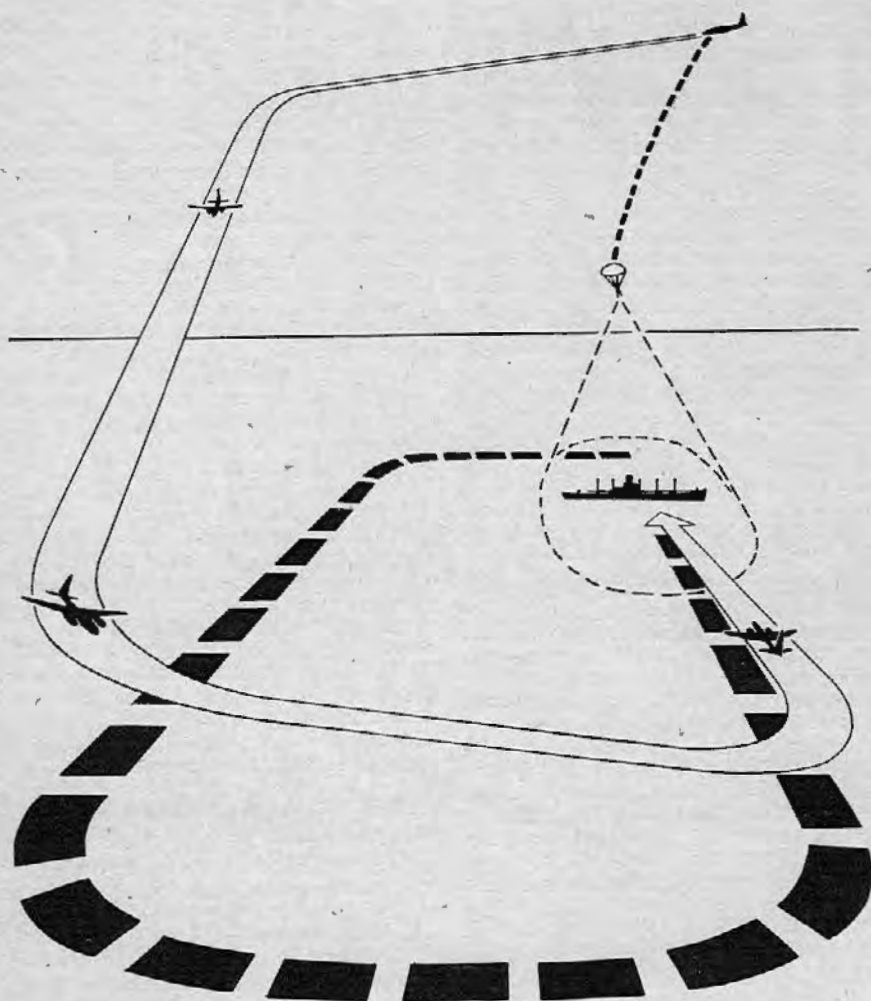


Figure 1. Aircraft ditching procedure near merchant ship. Flare is dropped to windward of ship and landing approach is made from opposite direction.



TRADITIONS OF THE SEA

The roll of American Seafarers who have performed their duties in an outstanding and meritorious manner in accordance with the highest traditions of the sea is long but never completed. One of the names which has a distinguished place on this honor roll is that of CAPTAIN JOHN TRYG.

During the early part of World War II CAPTAIN TRYG made several voyages on the treacherous Murmansk run.

On July 20, 1945 the President of the United States conferred the *Merchant Marine Distinguished Service Medal* on CAPTAIN JOHN TRYG.

A summary of the citation is as follows:

For distinguished service under continuous enemy attack. His ship, the SS *Schoharie* loaded with a cargo of war material vitally needed by our Russian ally, was in an early Murmansk bound convoy. During the voyage, for five days and nights, his ship was subjected to a running battle with enemy submarines, dive bombers, and torpedo planes.

The ship was equipped with only two 20-mm Oerlikons and two .30-caliber guns.

During this period, the ship's guns were manned around the clock by the merchant crew and were credited with the destruction of four enemy planes.

On one occasion, a torpedo plane dove out of a low overcast and made a direct attack on the ship, dropping a torpedo within a hundred yards. Due to Captain Tryg's skillful ship handling the torpedo passed 15 feet astern. As the plane flew past the starboard engine was observed to be in flames and smoking badly.

In the face of all the enemy could do in the air, on the surface and under the sea, his expert seamanship and the magnificent discipline of his crew, brought the ship safely to her destination.

His outstanding courage, leadership, and disregard of danger were in keeping with the highest traditions of the United States Merchant Marine.



MERCHANT MARINE OFFICERS

RANK QUALIFICATIONS

The main qualifications for the various ranks are as follows:
Lieutenant Commander

Age—Must not have reached 40th birthday in the calendar year in which application is made.

License—Master (unlimited)—Ocean or Coastwise; Master and First Class Pilot (unlimited)—Great Lakes, Western Rivers, or other inland waters; or Chief Engineer (unlimited horsepower).

Experience—Twelve (12) or more years' service aboard a vessel of the United States, in the capacity of a licensed officer of which not less than 1 year must have been served as Master or Chief Engineer: *Provided*, That any person holding a degree from an accredited college or a graduate of a maritime academy, Federal or State, may substitute such degree, diploma, or certificate of completion in lieu of one year of the required sea service other than the year required to be served as Master or Chief Engineer: *Provided*, That experience ashore as assistant port captain, assistant port engineer, marine surveyor, or comparable position thereto may be substituted equally up to five (5) years of the required sea service: *Provided further*, That service on public vessels, when evaluated in accordance with the Coast Guard standards for establishing eligibility for merchant marine licenses, may be substituted for up to four (4) years of the required sea service. However, substitutions of educational credits, supervisory positions ashore and service on public vessels may not work to reduce the required sea service on commercial merchant vessels below six (6) years.

Lieutenant

Age—Must not have reached 38th birthday in the calendar year in which application is made.

License—Chief Mate (unlimited)—Ocean or Coastwise; Master and First Class Pilot (unlimited)—Great Lakes, Western Rivers, or other inland waters; or First Assistant Engineer (5,000 or more horsepower); Chief Engineer (2,000 or more horsepower).

Experience—Six (6) or more years' service aboard a vessel of the United States in the capacity of a licensed officer of which not less than 1 year must have been

served as Chief Mate, or First Assistant Engineer: *Provided*, That 2 years of the required 6 may have been served on public vessels, but such service must satisfy the Coast Guard equivalency standards required to determine eligibility for merchant marine licenses: *Provided*, That any person holding a degree from an accredited college or a graduate of a maritime academy, Federal or State, may substitute such degree, diploma, or certificate of completion, in lieu of 1 year of the required sea service other than the year required to be served as Chief Mate or First Assistant Engineer: *Provided further*, That experience ashore as assistant port captain, assistant port engineer, marine surveyor, or comparable position may be substituted equally for up to 2 years of the required sea service. However, substitutions of educational credits or supervising positions ashore may not work to reduce the required sea service below the four (4) years required by law; and further, substitutions of public vessel service may not work to reduce the required sea service on commercial merchant vessels below three (3) years.

Lieutenant (junior grade)

Age—Must not have reached 32d birthday in the calendar year in which application is made.

License—Second Mate (unlimited)—Ocean or Coastwise; First Class Pilot (unlimited)—Great Lakes, Western Rivers, or other inland waters; or Second Assistant Engineer (5,000 or more horsepower); First Assistant Engineer (2,000 or more horsepower).

Experience—Four (4) or more years' service aboard a vessel of the United States in the capacity of a licensed officer. Of this service, 75 percent (3 years) must have been served aboard commercial merchant vessels of the United States and the remainder of the time (1 year) can be made up by time served on public vessels of the United States. However, service on public vessels must meet the Coast Guard equivalency standards now used to determine eligibility for a merchant marine license or raise in grade.

Commissioned warrant officer

Age—Must have reached his 27th birthday in the calendar year in which application is made and

A NEW approach to officer procurement has been adopted by the Coast Guard; and, it should evoke considerable interest among merchant marine officers. In 1948 a special officer procurement program was established, commonly referred to as the P. L. 219 program, to obtain officers from the merchant marine to perform marine inspection functions of the Coast Guard. Although a number of officers have been commissioned, a greater number is needed each year to fill the thinning ranks of the Bureau of Marine Inspectors who are rapidly approaching retirement age.

The Coast Guard is endeavoring to obtain experienced merchant marine officers to fill these billets. Those officers who can qualify will be commissioned as Lieutenant Commander, Lieutenant, Lieutenant (jg), and Warrant Officer, depending on age, license, and experience.

EXAMINATION CHANGE

To promote interest in the program the requirements have undergone major revision. The main revision has centered around the examination subjects. Heretofore, a prospective applicant found himself faced by a lengthy and comprehensive written examination on physics and chemistry, in addition to the professional subjects. No longer will chemistry and physics be given and the emphasis will be on the practical subjects, i. e., navigation, seamanship, and engineering.

Another revision that should interest potential applicants is the change in the examination schedule. In the past the examination was given over a 3-day period once every year. Realizing that many officers might be at sea during a 3-day period, the examinations will now be given over a 3-month period. The applicant can now designate the date and place where he wishes to sit for the examination and take it on 3 successive days.

In addition to these changes the age and license requirements have been modified so as to more accurately reflect existing conditions. For example, in the past, to qualify as Lieutenant, it was mandatory that the applicant have a Master's license and not be over 36 years of age; a Chief Mate's license is now required and the maximum age is now 38.

*EDITOR'S NOTE: New regulations to administer P. L. 219 have been promulgated. See Page 145.

must not have reached his 40th birthday in the calendar year in which application is made.

License—Third mate (unlimited)—Ocean or Coastwise; First Class Pilot (1,000 or more gross tons)—Great Lakes, Western Rivers, or other inland waters; Third Assistant Engineer (2,500 or more horsepower); First Assistant Engineer (1,000 or more horsepower).

Experience—W-4

Twelve (12) or more years service aboard a vessel of the United States, in the capacity of a licensed officer: *Provided*, That any person holding a license higher in grade than the required license may substitute such license in lieu of two years of the required sea service, however, such credit would only be given for two grades higher than the basic required license or a maximum of four (4) years substituted sea time: *Provided*, That four (4) years of the required twelve (12) may have been served on public vessels but it must satisfy the Coast Guard equivalency standards required to determine eligibility for merchant marine licenses. However, substitutions of higher license credits combined with substitution of public vessel service may not work to reduce the required sea service on commercial merchant vessels below six (6) years.

W-3

Six (6) or more years service aboard a vessel of the United States, in the capacity of a li-

censed officer: *Provided*, That any person holding a license higher in grade than the required license may substitute such license in lieu of two (2) years of the required sea service, however, such credit to be given for only one grade higher than the basic required license or a maximum of two (2) years substituted sea time: *Provided*, That two (2) years of the required six (6) may have been served on public vessels but it must satisfy the Coast Guard equivalency standards required to determine eligibility for merchant marine licenses. However, substitution of a higher license credit combined with substitution of public vessel service may not work to reduce the required sea service on commercial merchant vessels below three (3) years.

The planned career of an officer appointed to commissioned status from the merchant marine will be according to the following plan:

Training

Three months' military indoctrination at New London, Conn.
Nine months' sea duty on a major cutter.

Three months' shore duty in a district office or other major shore establishment not connected with Merchant Marine Safety.

Three months' Merchant Marine Safety indoctrination at New London, Conn.

Six months' Merchant Marine Safety duty.

Assignments

- (a) 3 years—Merchant Marine Safety duty.
- (b) 1-3 years—sea and shore duty in a function other than merchant marine safety.
- (c) 3-5 years—Merchant Marine Safety duty.
- (d) A period of sea duty similar to that required of officers of the same rank.

BENEFITS DERIVED

Officers commissioned via this program are given permanent commissions as general duty officers and will be in the regular line of promotion.

Considerable thought was given to the revision of the program and the Coast Guard feels that it will attract wide interest and anticipates an increased number of applications. Although, admittedly, the basic pay differential between Coast Guard officers and merchant marine officers is marked, the intangible remunerations more than make up the difference. A few of these intangibles are: \$10,000 Government life insurance policy; medical care for dependents; 30 days vacation annually with pay; credit for all Naval Reserve commission time (inactive or active) for pay purposes (longevity); and a retirement program that is unequalled. For example, a Coast Guard Captain with 30 years service retires at 75 percent of his pay plus social security benefits or approximately \$700 per month.

The next examination period is tentatively scheduled to run from October 1, 1956, to December 31, 1956.

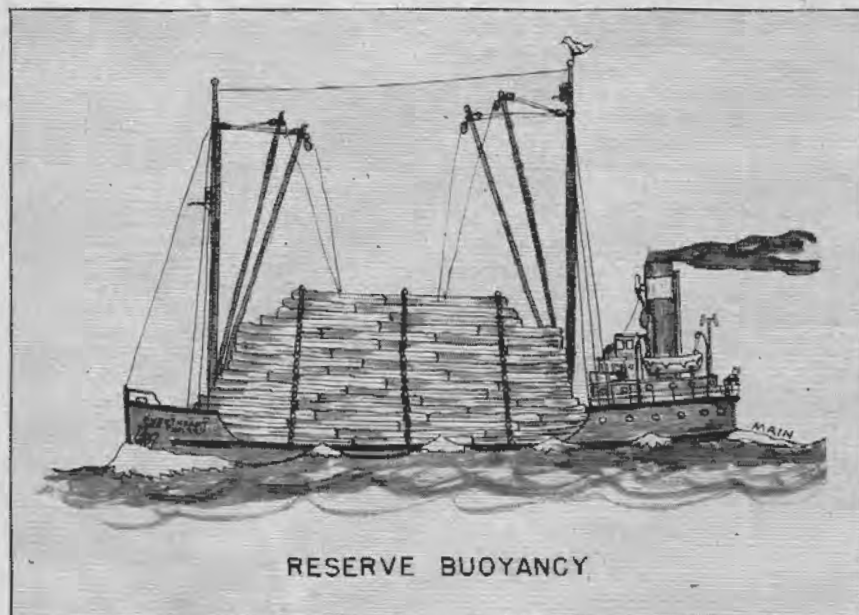
Additional detailed information and application forms can be obtained by writing to the Commandant (PTP), U. S. Coast Guard, Washington 25, D. C.

CONVENTIONS

The Government of the United Kingdom has advised this Country that acting as depository nation, it has received notification of extension by the Government of the French Republic to Overseas France of the International Load Line Convention 1930.

The notification was received on December 28, 1955, and in accordance with Article 21 of the Convention took effect on February 28, 1956.

This Country was also advised that the Governments of Thailand and Viet-Nam notified their acceptances on December 8, 1955, and March 15, 1956, respectively, of the International Regulations for Preventing Collisions at Sea, 1948.



RESERVE BUOYANCY

READERS' COMMENTS

In the May 1956 issue of the *Proceedings* appeared the article "Flag Procedure." This article attracted much interest and several letters of comment were received.

Some of these comments may be of interest to others. Concerning the custom of flying the flag of the country you are entering at the foremast truck, one reader, a Navy Captain, commented as follows:

Under international law a merchant vessel enters a foreign country with the intent to do business or obtain some other favor or privilege for private gain. In return for these privileges she temporarily divests herself of some of her nationality, and accepts a limited dual nationality during her stay in that country. She accepts the right of local authorities to conduct visit and search, including that of making arrests on board; agrees to abide by that country's immigration and customs laws and restrictions; be governed by local harbor laws and pilot rules; and, etc. She indicates her acceptance of these conditions by hoisting the flag of that country at her foremast, and flies it simultaneously with her own national flag. All of which implies a great deal more than mere courtesy.

A man-of-war on the other hand never divests herself of her sovereign nationality, and is never subject to visit and search, nor does she hoist the colors of the country visited. If visit and search were attempted it is her duty to resist force with force to the utmost. When a foreign national or personal flag is flown by a man-of-war it is, in fact, a matter of courtesy, and only in honor of a national holiday or in honor of the dignitary whose flag is temporarily flown.

The Coast Guard feels that while the foregoing is technically correct, it is more a custom or courtesy than a requirement. With the exception of a few countries which require the courtesy by law, i. e. some South American Republics, the merchant ship accepts dual nationality by the act of engaging in trade in a port, whether or not she shows the foreign flag.

Another reader, a Merchant Marine Master, commented as follows:

Regarding the display of the signals on sailing day, it has been the observer's experience to keep the "Blue Peter" flying after colors in the evening if the ship is sailing after dark the same day; and, if early the following morning, to display the "Blue Peter" at daybreak before the usual time for colors. I have also seen with profit the display of the same flag "P" flying from a ship in the offing awaiting passengers and crew, when the ship was neither anchored nor moored alongside a wharf. In shifting ship the "P" is usually left flying until the final departure is effected.

The Coast Guard agrees that the particular conditions that exist on sailing day would dictate the times that the "Blue Peter" is flown.



nautical queries

Q. List the probable causes which would result in lowering the water temperature in the de-aerating feed water.

A. (1) A drop in the exhaust steam pressure.

(2) The addition of large quantities of extra feed.

(3) A tube failure in the condenser.

(4) Excessively raising the level of the water in the de-aerating feed heater.

(5) Excessive cooling of the condensate in the main condenser.

Q. What care should be given kapok life preservers?

A. Kapok is highly flammable and life preservers containing this material should not be stowed near an open flame or where cigarettes that are carelessly handled may ignite them.

Kapok preservers should not be used as pillows or foot rests as compression and matting of the material reduces its buoyancy.

Holes and tears in the fabric envelope of a kapok jacket seriously impair its usefulness for sustained immersion and such jackets should be replaced. Oil or paint soaked jackets should also be replaced.

Q. What defects make cork life preservers unfit for service?

A. (1) Missing, torn, or broken straps.

(2) Torn or ripped seams, or holes in the fabric covering.

(3) A broken or granulated condition of the cork block inserts.

Q. What is the minimum length of lifeboat falls?

A. The falls should be of such length that the lifeboat may be lowered to the water with the vessel at its lightest draft and listed 15°.

Q. May repairs or alterations be made to lifeboats aboard ocean passenger vessels? Explain.

A. No repairs or alterations, except in an emergency, are allowed to be made to any lifesaving or fire detecting or extinguishing equipment without advance notice to the Officer in Charge, Marine Inspection. When emergency repairs or alterations have been made, notice must be given to the Officer in Charge, Marine Inspection, as soon as practical.

Q. What care should be given sails and other canvas aboard ship?

A. Sails and other canvas should be aired in fine weather to prevent mildew and rot.

Q. How many tarpaulins are required for hatches of a merchant vessel in ocean service?

A. Two.

Q. How is the wear on a shot of chain cable determined?

A. By measuring the sectional area of the links at the most worn part.

Q. Why is it important to use the proper knot for each particular purpose?

A. Knots so tied greatly increase the grip as power is applied to them, yet are easily untied when not in use. Improper knots may slip at the crucial moment and moreover are very hard to untie once they have been jammed.

Q. Why should gasoline never be used for cleaning purposes?

A. Because of the explosive vapor hazard.

Q. What is the recommended distribution in distance for fire extinguishers aboard large vessels?

A. So that not more than 50 feet (horizontally) will have to be traveled to reach the nearest extinguisher.

Q. Why should towlines be available on the offshore side of a vessel undergoing repairs at a pier?

A. So that they may be quickly passed to a tug in the event a hasty departure is required due to a pier fire or a fire aboard ship.

Q. Before welding or burning operations on a bulkhead are commenced, what check must be made?

A. The conditions on the other side of the bulkhead.

Q. What signal should be displayed by night when loading or discharging bulk oil at a dock?

A. A red light.

Q. How often should oil-pressure gages be tested?

A. At least once each year.

Q. When transferring an oil cargo, what should be done if a severe electrical storm comes up?

A. Stop the transfer operation.

CORRECTION

In the article "Marine Safety Legislation" which appeared in the July 1956 *Proceedings*, it was stated that tankers would continue to be inspected annually. This was in error. PUBLIC LAW 519 applies to tankers and they will be inspected on a biennial basis.

RELIEF OFFICERS

FOR many years the officers responsible for the safety of a ship could be readily determined from the ship's articles. Such is not the case today. Now, when a vessel is in a domestic port, there are four additional officers—two night mates and two night engineers.

Before World War II, it was the custom of a few companies to employ relief officers so their regular officers could spend more time at home. Today it is no longer a custom but an accepted practice specifically covered in manning contracts.

It would appear that an inherent weakness in this practice is the fact that a relief officer, who might be a complete stranger to the type of ship, is suddenly responsible for the loading or discharging of the cargo and the overall safety of the ship. When it is considered that relief officers are aboard the ship two-thirds of all the time it is in port (5:00 p. m. to 8:00 a. m. on week days and from 5:00 p. m. Friday until 8:00 a. m. Monday) the extent of their responsibility can be realized.

To compensate for any unfamiliarity with the ship, it is incumbent upon the regular officers to make sure that information (diagrams, charts, instruction sheets) concerning the ship and the safety equipment are readily available. Some companies have had special instruction booklets made up containing information the relief officer might need. Some have issued standing instructions that the relief officer must be personally shown the location of the fire-fighting equipment, especially the CO₂ room, and the fact noted in the logbook.

Since there is no navigation involved and the cargo handling is usually well supervised by the com-

pany's shoreside personnel, the most important aspect of the night mate's job concerns fire fighting. To satisfactorily perform his job, he must have no doubt in his mind as to where the equipment is located and how to use it. Chances are that should a fire occur at night the majority of the ship's crew will be ashore. This means that he will not only have to direct the fire fighting but quite possibly will have to personally engage in the operation.

A fine example of how a relief officer can and should act occurred several years ago in the port of Charleston, S. C. The SS *Hawaiian*, a C-4 type freighter, was loading Army cargo for Korea. A few minutes after 8:00 p. m. a lift-truck which was being used in No. 4 upper 'tween deck ran out of gas. A 5-gallon can of gasoline was lowered to the driver and he started to fill the tank. Suddenly, some of the gas spilled and ran over the hot manifold—a flash fire resulted! The driver, in his excitement, dropped the can on the wooden hatch covers. The flaming gasoline spewed out and ran down through the cracks of the hatch cover into the lower hold—a disaster was in the making.

The relief mate, Mr. John B. Kennedy, had been supervising cargo loading during the early part of the evening. At 8:10 p. m., he was on the bow tending the mooring lines when a stevedore ran forward shouting, "Fire! Fire!"

As Mr. Kennedy raced aft he could see a red ominous glow over the open hatch. He bounded up to the bridge, sounded the general alarm and called the engineroom for water on deck. The fire detector was ringing wildly.

He returned to the main deck and with the help of the stevedore foreman extinguished the blaze in the vicinity of the lift-truck. They used two foam extinguishers. After the fire was extinguished, 15 stevedores, who had been trapped in the hatch wing, were able to climb to safety. It was apparent though that the lower hold was still afire.

As soon as the last stevedore was out of the hold, Mr. Kennedy ordered the hatch buttoned up tight. Hatch covers were battened down, ventilators were covered, and blower fans secured.

At 8:18 p. m. the mate released 12 bottles (100 pounds each) of CO₂ into No. 4 lower hold.

The hold was kept covered for one hour. When it was finally opened, with the local fire department standing by, the flame was extinguished. All that remained of the fire was some smoldering bales of clothing.

From the recital of events it is apparent that the relief mate at no time was in doubt what to do. Only 8 minutes elapsed between the fire and the release of the CO₂. During this time, the flaming gas in the 'tween deck was extinguished and 15 stevedores were able to escape.

Since the widespread use of relief officers has come about there has been much discussion as to how far their responsibility extends. Some persons have ventured the opinion that since they are not signed on articles they are not serving under the authority of their license, and their responsibility is limited. The thought has also been expressed that they are not subject to the Captain's orders.

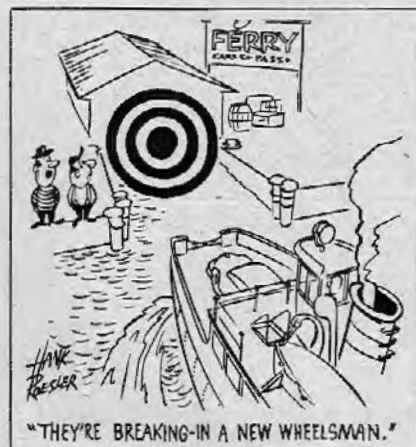
Recently, a letter was received at Coast Guard Headquarters which asked, "What is the degree of responsibility of a relief officer?" and, "Is a relief officer subject to a command of the Master?"

The following excerpts from the letter of reply reflect the Coast Guard's interpretation of his responsibilities:

The Coast Guard considers the night relief officers to be employees of the vessel and as such are subject to the lawful commands and control of the Master to the same degree as any other ship's officer. While the selection of the relief officers is often not the choice of the individual Master, it is his privilege and duty to determine that they are properly licensed and fully informed of the safety measures to be followed while standing night watches aboard his vessel. Further, should the Master consider the relief officer to be unfit for any reason to fully carry out the normal duties, he may refuse to permit the assigned officer to stand the night watch.

As for the responsibility of the night relief officer for the safety of the vessel and crew while employed in that capacity, the Coast Guard considers such personnel to be acting under the authority of their licenses and on this basis they are subject to the provisions of R. S. 4450, as amended, for any misconduct, neglect of duty, or negligence that may occur during their hours of duty. No written agreement is considered necessary, it being sufficient that the usual entry in the deck or engine log that the night relief officer relieved the regular ship's officer in the usual manner.

From the foregoing, it can be seen that the relief officer has an important job and a large responsibility subject to lawful implications. To competently perform the job on a strange ship is no easy matter. It behooves the relief officer to become acquainted with the ship and be ready for any emergency. Once you accept the job, there is no one to assist you, it is up to you.



(Courtesy Maritime Reporter)

RUBBER LIFERAFTS

SINCE World War II seafarers have become acquainted with inflatable rubber liferafts. Although this type of lifesaving apparatus has had wide use by the U. S. Navy and U. S. Coast Guard it has never been authorized for use aboard merchant vessels.

In 1948 at the INTERNATIONAL CONFERENCE ON SAFETY OF LIFE AT SEA, rubber liferafts were excluded from Regulation 30 which specified the type of buoyant apparatus and liferafts which could be used on Convention vessels. Only liferafts of rigid construction were allowed.

The reason for this exclusion was based on previous experience with the maintenance and testing of the rafts and the reliability of the inflating device. The manufacturers contended that previous shortcomings had been remedied and that now their inflatable raft had many advantages over the rigid type. Two of these were: (1) Ease and rapidity of launching; (2) ability to go alongside in a heavy seaway without damage to the liferaft.

Following the Conference, the manufacturers of rubber liferafts in Great Britain petitioned the Government to permit the use on British merchant vessels. Their endeavor was a success and in the last few years the British Ministry of Transport approved the use of the inflatable liferafts in lieu of buoyant apparatus on passenger vessels not engaged on international voyages (not subject to the Convention) and on fishing vessels. Those ships which are subject to the terms of the Convention may carry the inflatable liferafts in addition to the prescribed amount of buoyant apparatus.

On April 25, 1956, the British Ministry of Transport made a regulation to the effect that all fishing vessels between 50 and 145 feet in length would be required to carry inflatable rafts after October 1956.

RESCUE BY LIFERAFT

Two recent rescues which involved the use of inflatable liferafts seem to indicate their worth.

One occurred on April 21, 1956, off the Faroes when the trawler *Osako* sank in heavy weather. The wind was of gale force and the high seas made the launching of lifeboats extremely hazardous. A nearby trawler, the *Thessalonian*, launched two inflatable liferafts and floated them over to the sinking trawler. The entire crew of the *Osako* was saved in this manner. The crews of both ves-

sels were much impressed with the way in which the rafts took a heavy beating against the ship's side without damage.

The second rescue occurred off the East coast of Iceland on May 27, 1956. The trawler *St. Celestin* was sunk after a collision with another trawler, *Arctic Viking*.

The chief engineer of the *St. Celestin* stated that the vessel was almost cut in two and in a matter of seconds the water was waist deep in the engine room. He said there was no time to get life jackets or launch the lifeboats but the two inflatable liferafts were thrown overboard and quickly inflated. All hands, 19 men, were taken on board the *Arctic Viking* from the liferafts.

DESCRIPTION OF RAFT

The liferafts used on British merchant ships are oval in shape and vary in size from 6 to 20 person capacity.

They are made of rubberized cotton fabric and rely for their buoyancy on inflation by the carbon dioxide carried in small cylinders attached to the liferaft. They are constructed with two arches, a center thwart and a floor, all of which are inflatable. A tent is attached to the two inflatable arches, and rises with them when inflation takes place, thus giving the occupants protection from the weather and extremes of temperature.

Sections of the buoyancy structure are sealed off from the other so that damage to any one section is localized.

The liferaft is stowed in a canvas valise, lightly laced, and to this is secured a static line. This line is fastened to a stanchion or similar installation on the ship and releases the carbon dioxide when the raft is launched.

The 20-man liferaft and its valise weigh about 220 pounds and can be launched by two men.

PROPOSAL TO AMEND REGULATION 30

On December 9, 1955, the Secretary of State notified the Coast Guard that the British Government had proposed an amendment to Regulation 30, Chapter III, of the INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, and requested the views of the Commandant of the Coast Guard as to the desirability of agreeing to the British proposal.

The proposal was that in paragraph (d) of Regulation 30, after the word "liferafts" in line 1, the words "of non-

inflatable type" be added and that a new paragraph (e) be added as follows:

(e) Liferafts of inflatable type may be carried in lieu of buoyant apparatus provided that, in addition to complying with the requirements of subparagraphs (i), (ii), (iii) and (vi) of paragraph (b) of the Regulation, each liferaft satisfies the following conditions—

(i) It shall have ample stability in a seaway and shall be capable of being readily righted.

(ii) The inflation shall take place automatically either on the pulling of a line, or by some other simple method approved by the Administration.

(iii) The number of persons for which the raft is certified shall be determined by the Administration, and shall not exceed that for which there is sufficient room for comfortable seating. The raft when inflated shall effectively support its occupants out of the water.

(iv) The buoyancy shall be arranged, to the satisfaction of the Administration, either by a division of the buoyancy into two separate compartments each capable of supporting the certified number of persons out of the water, or otherwise, so that there is a reasonable margin of buoyancy to provide against part damage or part failure to inflate.

The proposal was placed on the agenda of the MERCHANT MARINE COUNCIL for study and comment. Maritime labor organizations and steamship companies were advised of the proposal.

After the MERCHANT MARINE COUNCIL had reviewed the comments re-

(Continued on page 144)



IF YOU'RE STILL TRYING TO RUSH THAT PERISHABLE CARGO TO PORT, ... FORGET ABOUT IT!

(Courtesy Maritime Reporter)

LESSONS FROM CASUALTIES

SPECIAL CIRCUMSTANCES

ALTHOUGH statistics prove that the vast majority of collisions are caused by a failure of one or both vessels to comply with the RULES OF THE ROAD—collisions do occur where neither party was at fault.

Such was the case last year when a collision occurred on the Columbia River between a LIBERTY and a barge.

The LIBERTY, SS *Boy*, had departed from a Vancouver dock and was heading downstream, assisted by a tugboat on a headline. There was a Columbia River pilot on the bridge, along with the Master.

Approximately 1,000 yards from the dock was a railroad bridge. At 1:11 a. m., as she approached the bridge, a whistle signal was sounded. Four minutes later the bridge was opened. The bridge was a drawspan type. The span rotated on a small island in the center of the channel. When opened the span paralleled the channel, thus making two passageways for vessels. However, due to better water on the southern or Oregon side, downbound deep-draft vessels customarily used that side.

"BLIND" SPOT

The approach from above the bridge is in a slight "dog leg" but not enough of a bend to call for the one-long-blast bend signal. It is enough, however, that when the span is open an observer approaching the bridge would look at the span at an angle and not from head on. Thus, a "blind" spot exists until the vessel fairs up to enter the draw.

At the same time the *Boy* was heading downstream, a pusher tug, the *Winquatt* was upbound. The *Winquatt* had four oil barges ahead and was en route to The Dalles. The tug and tow displayed regulation navigation lights as did the *Boy*.

As the tug approached the bridge the mate observed that the draw was already open, but attached no particular significance to the fact, as it was common practice for the bridge tender when he observed a tug and tow approaching to open the draw before receiving a signal. Nevertheless, he sounded one long and one short blast, which was acknowledged by the bridge.

Suddenly, as the *Boy* entered the draw, the lights of the lead barge were seen 500 feet ahead. She sounded one blast; the rudder was put hard right; and engines were rung HARD ASTERN—too late!

On the tug, the mate suddenly noticed that a range of two lights had loomed up ahead—rushing toward him. He rang FULL ASTERN and sounded the 3-blast backing signal—too late!

At approximately 1:25 a. m., 30 seconds after the two vessels had sighted each other, a collision occurred. The lead barge was struck by the freighter's stem—a 20-foot hole was ripped in the bow of the barge. Fortunately, there were no deaths or injuries and the damaged barge did not sink. The *Boy* had negligible damage.

DIRECT LINE-OF-SIGHT

It is apparent that for a short period of time before the two vessels

entered the draw, they were in direct line-of-sight with the bridge span—just long enough so that they were caught off guard.

Presumably, the bridge tender was in a position, before the ships were in *extremis*, to realize the approaching danger. However, there was no positive way to warn them—a blast from the bridge whistle might have further confused the situation.

Usually, any "blind" spot encountered in piloting is caused by a bend in the river—provided for by the one-long-blast required by RULE 25 (b) of the INTERNATIONAL RULES.

There is no specific rule covering other type "blind" spots; however, the PRECAUTION RULE covers such cases generally with the words "special circumstances." It is not intended to impute a violation of the PRECAUTION RULE to either vessel; however, it can only be concluded that the *special circumstances* in this case did require special precautions.

PRECAUTION

Rule 29. Nothing in these Rules shall exonerate any vessel, or the owner, master or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

Irrespective of fault, it behooves all navigators to recognize a potential "blind" approach and take special precautions. This collision happened to occur on the Columbia River—it might well have occurred on any of a thousand rivers in the world.



Portion of chart showing Columbia River and railroad bridge downriver from Vancouver. "X" marks point of collision. Dotted lines show course of the two vessels.

PATENT LOG

Just as the anchor, the oldest of shipboard instruments, is still one of the most efficient, other old instruments also compare favorably with their 20th century counterparts. Such an instrument is the *patent log* which while carried on all ships is seldom used. In fact, it is probable that many of the mates sailing today have never streamed a log. This is understandable since radar and loran readily enable a navigator to obtain the distance made good. However, such modern instruments can break down and the occasion arise when it is prudent to stream the log. If so, seafarers should not hesitate to do so because of any reservation as to its accuracy.

On a recent voyage of the *SS Steel Admiral*, the radar became inoperative. Captain J. Brummelen decided that for the safety of the vessel, as well as an object lesson for inexperienced and skeptical officers, he would stream the patent log. The ship departed Port Said, Egypt, on March 25, 1956, bound for Port Arthur, Texas. During the voyage, which ended on April 11, 1956, she steamed an observed distance of 6,671 miles. The distance by patent log was 6,659 miles—a difference of only 12 miles in 17 days steaming. The distance by engine revolutions was 7,040 miles—a difference of 369 miles. It is interesting to note the comparison of slip—patent log .018 percent (negative), and engine revolutions 5.531 percent (positive.)

During the voyage the vessel experienced all kinds of weather from a gentle breeze with small sea to a fresh gale with a very rough head sea and swells. There were also vast areas of ocean heavily infested with sea weed. The successful performance and uninterrupted service of the log was due in part to the careful attention and

oiling by the junior third mate, P. C. Ticer; and the use of a simple anti-fouling device. (See Figure 1.)

The device consisted of a canvas cover which fitted over the rotator buckle, and tapered at each end to fit snug around the line. This prevented the sea weed from becoming entangled on the buckle. The log was oiled at 12-hour intervals with No. 40 oil.

Captain Brummelen stated that it was a revealing experience to some of the officers who doubted the efficiency of the log and the need for its use when electronic instruments failed. He commented that he considers the distance by patent log, in any weather, regardless of trim or draft, to be far more reliable and accurate than the distance by engine revolutions.



MERCHANT MARINE STATISTICS

There were 1,085 vessels of 1,000 gross tons and over in the active oceangoing U. S. merchant fleet on June 1, 1956, according to figures released recently by the Maritime Administration. This was four more than the number active on May 1, 1956.

There were 48 Government-owned and 1,037 privately owned ships in active service. These figures did not include privately owned vessels temporarily inactive, or Government-owned vessels employed in loading grain for storage or undergoing repairs. They also excluded 35 vessels in the custody of the Departments of Defense, State, and Interior.

There was a decrease of 7 active vessels and an increase of 17 inactive vessels in the privately owned fleet, making a net increase of 10. Twelve

freighters were purchased from the Maritime Administration, and one new tanker was completed, while one freighter was a marine casualty, one tanker was sold foreign, and one tanker was taken out of documentation.

The Maritime Administration's active fleet increased by 11, while its total fleet decreased by 17, with the sale of two freighters to Korea, 12 to private companies, and 3 transferred to the Navy. This made a net decrease of 7 vessels in the total merchant fleet, active and inactive, which numbered 3,219 on June 1, 1956.

Orders for 3 new tankers and delivery of one tanker brought the total of merchant oceangoing vessels being built or under conversion to 52.



CASUALTIES

Casualties to ships during April 1956—627—showed a decrease as compared with April last year—645. This figure was issued by the Liverpool Underwriters' Association and concerned ships of 500 gross tons and over.

Of the number, 7 were total losses of 25,552 gross tons and 620 were partial losses.

Of the total figure, 128 were classified as having machinery damage; 107 as collisions; 102 as contact damage; 90 as weather damaged; 90 as stranded; 26 as damaged by fire and explosion; and 1 as having foundered, leaving 87 "other casualties" to make up the total.

The total loss figure was made up as follows:

The German *SS Maria Schroeder* (1,906 GT) stranded off Sinai Peninsula; the Russian *SS Krymov* (1,905 GT) stranded on Murcar Sands, Aberdeen; the Turkish *SS Kaptan Uzonoglu* (2,565 GT) stranded Eregli; the Portuguese *SS Luabo* (1,425 GT) foundered lat. 47°52' S. long. 32°40' E. with loss of 14 lives; the Norwegian *MS Dovrefjellet* (1,100 GT) stranded Muckle Skerry; the Swedish *MS Akka* (5,409 GT) struck Gantock Rocks and sank; and the Belgian *MS Prince de Liege* (2,588 GT) was abandoned on fire and beached off Gibraltar.

The most serious casualty involving American ships occurred on the Great Lakes between the *SS A. M. Byers* (6,364 GT) and the *SS E. M. Ford* (8,526 GT).

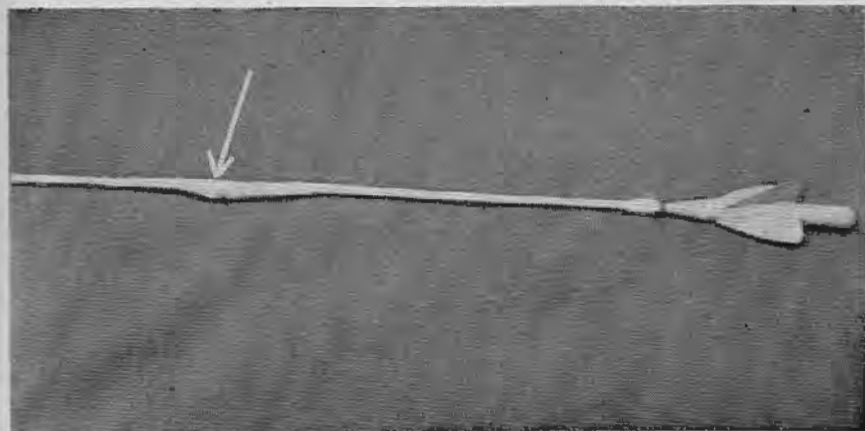


Figure 1.

DITCHING

(Continued from page 136)

b. Fly across the bow of the vessel at low altitude, opening and closing the throttle, or changing the propeller pitch when possible, and rocking the wings.

c. Head in the direction of the distress scene. Repeat steps 2 and 3 until the vessel acknowledges by following. The aircraft may use the Aldis lamp, radio, or message drop to explain the situation.

The surface craft should follow the aircraft—or indicate that it is unable to do so, by hoisting the international flag NAN, or by other visual or radio means. Crossing the wake of the vessel close astern at a low altitude, opening and closing the throttle, or changing the propeller pitch, indicates that the assistance of the surface vessel to which the signal is directed is no longer required.



RUBBER LIFERAFTS

(Continued from page 141)

ceived on the proposal it recommended to the Commandant that the United States agree to the British proposal. Accordingly, the Secretary of the Treasury on June 20, 1956, notified the Secretary of State that the Commandant considered it desirable for the United States to agree to the British proposal subject to acceptance by the United States Senate.

It should be noted that the proposal provides for inflatable liferafts as an alternative to the conventional buoyant apparatus and does not make them compulsory, and if adopted it may provide a wider latitude in selecting equipment for merchant vessels.

It will be several years, in any event, before Regulation 30 could be amended. To amend any part of the Convention, it is necessary that the 43 member nations must accede to the proposal. In the case of the United States, the Senate must authorize any such accession to a change in the Convention.



APPENDIX

AMENDMENTS TO REGULATIONS

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

Subchapter I—Cargo and Miscellaneous Vessels

[CGFR 56-26]

PART 95—FIRE PROTECTION EQUIPMENT

SUBPART 95.05—FIRE DETECTING AND EXTINGUISHING EQUIPMENT, WHERE REQUIRED

FIXED FIRE EXTINGUISHING SYSTEMS

On October 18, 1952, a revision of the inspection regulations to implement and enforce the Convention for the Safety of Life at Sea, 1948, was published in the FEDERAL REGISTER. These revised regulations became effective on November 19, 1952. On vessels of 1,000 gross tons and over contracted for on or after November 19, 1952, or where conversion from coal to oil is contracted for on and after November 19, 1952, the provisions of 46 CFR 95.05-10 (a) (3) require a fixed carbon dioxide, foam or water spray system shall be installed in all spaces containing oil fired boilers, either main or auxiliary, or their fuel units, valves, or manifolds in the line between the settling tanks and the boilers.

In 1953 an interpretation was made of the term "oil fuel units or settling tanks," as used in 46 CFR 95.05-10 (a) (3) and in regulations 50 (i) (iii) and 51 (d) (iii) in Chapter II of the International Convention for Safety of Life at Sea, 1948, as meaning oil fuel boilers, main or auxiliary, fuel oil service pumps, and such fuel oil units as the heaters, strainers, valves, manifolds, or fittings that are subject to the discharge pressures of the fuel oil service pumps. This interpretation is based on correspondence with the British; informal discussions with members of industry, and a study of merchant vessel plans submitted to the Coast Guard. This interpretation is necessary in order to determine the required amount of carbon dioxide to be carried to provide total flooding in the engine room. An appropriate amendment to 46 CFR 95.05-10 (a) (3) was published in the FEDERAL REGISTER dated December 5, 1953.

On August 6, 1954, an amendment to 46 CFR 95.05-10 was published in the FEDERAL REGISTER to remove motorboats from the application of this

regulation. When this amendment was published the interpretation of the term "oil fuel units or settling tanks" in the amendment published in the FEDERAL REGISTER on December 5, 1953, was inadvertently omitted. This interpretation has been followed since 1953 and the amendment to 46 CFR 95.05-10 (a) (3) is republished so that it will be continued in effect.

Because the amendment in this document is an interpretation and a restatement of Coast Guard practice, it is hereby found that compliance with the Administrative Procedure Act respecting notice of proposed rule making, public rule making procedures thereon, and effective date requirements thereof, is unnecessary.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Order No. 120, dated July 31, 1950 (15 F. R. 6521), and Treasury Department Order 167-14, dated November 26, 1954 (19 F. R. 8026), to promulgate regulations in accordance with the statutes cited with the regulations below, the following amendment in this document is prescribed and shall become effective on the date of publication of this document in the FEDERAL REGISTER:

Section 95.05-10 (a) (3) is amended to read as follows:

§ 95.05-10 *Fixed fire extinguishing systems.* (a) * * *

(3) On vessels of 1,000 gross tons and over, contracted for on or after November 19, 1952, or where conversion from coal to oil is contracted for on or after November 19, 1952, a fixed carbon dioxide, foam or water spray system shall be installed in all spaces containing oil fired boilers, either main or auxiliary, their fuel oil service, pumps, and/or such fuel oil units as the heaters, strainers, valves, manifolds, etc., that are subject to the discharge pressure of the fuel oil service pump.

(R. S. 4405, as amended, 4463, as amended; 46 U. S. C. 375, 416. Interpret or apply R. S. 4417, 4418, 4426, 4470, 4471, 4477, 4479, and 4483, as amended, secs. 1, 2, 45 Stat. 1544, sec. 17, 54 Stat. 166, sec. 2, 54 Stat. 1028, as amended, sec. 3, 68 Stat. 675; 46 U. S. C. 391, 392, 404, 463, 464, 472, 476, 367, 526p, 463a; 50 U. S. C. 198; E. O. 10402, 17 F. R. 9917; 3 CFR 1952 Supp.)

Dated: June 21, 1956.

[SEAL] J. A. HIRSHFIELD,
Rear Admiral, U. S. Coast Guard,
Acting Commandant.

[F. R. Doc. 56-5065; Filed, June 26, 1956; 8:52 a. m.]

TITLE 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of the Treasury

Subchapter B—Military Personnel

[CGFR 56-9]

PART 33—APPOINTMENTS OF CIVILIANS AS COMMISSIONED OFFICERS, CHIEF WARRANT OFFICERS, AND WARRANT OFFICERS

SUBPART 33.05—APPOINTMENTS OF LICENSED OFFICERS OF THE UNITED STATES MERCHANT MARINE AS COMMISSIONED OFFICERS, CHIEF WARRANT OFFICERS, AND WARRANT OFFICERS

The regulations in Subpart 33.05 are amended to read as follows and shall be effective on and after the date of publication in the FEDERAL REGISTER.

Sec.

- 33.05-1 Purpose.
- 33.05-3 Appointments.
- 33.05-5 Precedence.
- 33.05-7 General requirements for eligibility.
- 33.05-9 Specific requirements for commissioned officers.
- 33.05-11 Specific requirements for commissioned warrant officers.
- 33.05-13 Exceptions to general and specific requirements.
- 33.05-15 Scope of examinations for commissioned officers.
- 33.05-17 Scope of examinations for commissioned warrant officers.
- 33.05-19 Procedure for making application.
- 33.05-21 Determination of eligibility and notification for examination.
- 33.05-23 Conducting of examinations.
- 33.05-25 Notification.
- 33.05-27 Requirements for examination.

AUTHORITY: §§ 33.05-1 to 33.05-27 issued under sec. 1, 63 Stat. 503, as amended; 14 U. S. C. 92. Interpret or apply sec. 1, 63 Stat. 513, 514; 14 U. S. C. 225, 228.

§ 33.05-1 Purpose. The regulations in this subpart govern the appointments of licensed officers of the United States Merchant Marine as commissioned officers, or commissioned warrant officers in the United States Coast Guard.

§ 33.05-3 Appointments. The appointments will be made in ranks or specialties appropriate to the qualifications and experience of the applicants. Any person who accepts such an appointment as a commissioned officer or commissioned warrant officer shall serve a probationary period of two years. During this period his commission may be revoked if his services are unsatisfactory. Also, during this probationary period such officers will be subject to the same rules of conduct and performance of

duty as are applicable to all other officers in the Coast Guard.

§ 33.05-5 Precedence. (a) Officers appointed under this subpart shall take precedence with other officers in their respective ranks in accordance with the date of commission in such ranks. Appointees whose dates of commission are the same shall take precedence with each other in the order recommended by the selecting and examining board as approved by the Commandant.

§ 33.05-7 General requirements for eligibility. In order to be considered for appointment as a commissioned officer or commissioned warrant officer in the Coast Guard, an applicant must:

(a) Be a male citizen of the United States.

(b) Reach at least his 21st birthday in the year in which application is made. No applicant will be commissioned who has not reached his 21st birthday.

(c) Not reach his 40th birthday in the year in which application is made.

(d) Satisfy the Commandant of the Coast Guard as to his good moral character. No person who has been convicted of a felony is eligible for appointment as a commissioned officer or commissioned warrant officer.

(e) Be physically sound, not less than five feet four inches in height, stripped, nor more than six feet six inches in height, stripped.

(f) Meet specific requirements of the grade for which considered.

§ 33.05-9 Specific requirements for commissioned officers. In order to be considered for appointment as a commissioned officer in the Coast Guard, an applicant must:

(a) Have served four or more years aboard a vessel of the United States in the capacity of a licensed officer.

(b) Receive a satisfactory grade in a written examination in each of the following subjects:

- (1) General.
- (2) English.
- (3) Tests of emotional stability, social adjustment, vocational interest, study habits, background, or personality characteristics as may be administered, and aptitude tests.

(c) If a licensed deck officer, receive a satisfactory grade in a written examination in each of the following additional subjects:

- (1) Navigation.
- (2) Seamanship.

(d) If a licensed engineer officer, receive a satisfactory grade in a written examination in each of the following additional subjects:

- (1) Marine engineering.

(2) Electrical engineering.

(e) Be interviewed by a Board of at least three Coast Guard officers of the rank of Lieutenant Commander or above, who will assign the applicant a mark in general adaptability.

(f) Meet physical standards prescribed for original entry into the U.S. Coast Guard as outlined in Subpart 33.10 of this part.

§ 33.05-11 Specific requirements for commissioned warrant officers. In order to be considered for appointment as a commissioned warrant officer in the Coast Guard, an applicant must:

(a) Have served four or more years aboard a vessel of the United States in the capacity of a licensed officer.

(b) Receive a satisfactory grade in a written examination in each of the following subjects:

- (1) General.
- (2) English.
- (3) Tests of emotional stability, social adjustment, vocational interest, study habits, background, or personality characteristics as may be administered, and aptitude tests.

(c) If a licensed deck officer, receive a satisfactory grade in a written examination in each of the following subjects:

- (1) Navigation.
- (2) Seamanship.

(d) If a licensed engineer officer, receive a satisfactory grade in a written examination in each of the following subjects:

- (1) Marine engineering.
- (2) Electrical engineering.

(e) Be interviewed by a board of at least three Coast Guard officers of the rank of Lieutenant Commander, or above, who will assign the applicant a mark in general adaptability.

(f) Meet physical standards prescribed for original entry into the Coast Guard as outlined in Subpart 33.10 of this part.

§ 33.05-13 Exceptions to general and specific requirements. Notwithstanding the limitations prescribed in sections 33.05-7 (c); 33.05-9 (b), (c) and (d); and 33.05-11 (b), (c) and (d); the Commandant may, when the needs of the service so require, recommend the appointment of an individual possessing outstanding professional qualifications for a particular assignment requiring special knowledge which is not available in the commissioned corps of the Coast Guard.



§ 33.05-15 *Scope of examinations for commissioned officers.* The scope of examinations listed in section 33.05-9 are described generally in this section. The examination in any one subject may not cover all the topics described under that subject. However, to insure adequate preparation for the examination, all topics should be studied.

(a) General.

(1) Laws and Regulations pertaining to the United States Merchant Marine. The topics included are: Life saving apparatus; safety equipment; regulations covering safety and comfort of passengers and crews; annual and special inspections; notices to be posted; drills; procedures in disputes and casualties.

(2) Ship construction. The topics included are: Hull structure; fittings and equipment; stability; ship maintenance; preservation and repair; subdivision; damage control.

(b) Aptitude tests, tests of emotional stability and background characteristics as may be administered.

(c) English. Demonstrate the principles of English grammar, composition, spelling, punctuation, by writing a short (500 word) essay on a work of literature, or a recent current event.

(d) Navigation. The topics included are: Use and care of navigational instruments; definitions of nautical astronomy; buoyage system of the United States; piloting; principles of compass compensation; practical problems in determining latitude, longitude, azimuths, compass error, times of sunrise and sunset, and tides and currents.

(e) Seamanship. The topics included are: Types and characteristics of ships and boats; marlinspike seamanship; standing and running rigging; ground tackle; deck seamanship; signals; rules of the road; weather; ship handling.

(f) Marine engineering. The topics included are: Descriptions and

principles of operation of marine boilers and fittings, turbines, steam reciprocating engines, internal combustion engines, and fire room and engine room auxiliaries; lubrication; maintenance and repair.

(g) Electrical engineering. The topics included are: Definitions; measurements; magnets and magnetism; Ohm's Law; Kirchhoff's Law; solutions of d. c. circuits; d. c. generators; d. c. motors; inductance; capacitance, and impedance; power factors; a. c. measurements; solutions of a. c. circuits; a. c. generators; a. c. motors; safety precautions; batteries.

§ 33.05-17 *Scope of examinations for commissioned warrant officers.*

The scope of examinations listed in section 33.05-13 are described generally in this section. The examination in any one subject may not cover all the topics described under that subject. However, to insure adequate preparation for the examination, all topics should be studied.

(a) General.

(1) Laws and Regulations pertaining to the United States Merchant Marine. The topics included are: Life saving apparatus; safety equipment; annual and special inspections; notices to be posted; drills.

(2) Ship construction. Basic questions on the following topics: Terminology; ship maintenance, preservation and repair.

(3) Fire fighting equipment. Basic questions on the following topics: CO₂ systems, oxygen breathing apparatus, fresh air masks, safety lamp.

(b) Aptitude tests, tests of emotional stability and background characteristics as may be administered.

(c) English. Demonstrate the principles of English grammar, composition, spelling, punctuation, by writing a short (500 word) essay on a work of literature, or a recent current event.

(d) Navigation. Basic questions on the following topics: Meteorology; compass, gyro and magnetic; use of radar.

(e) Seamanship. Basic questions on the following topics: Marlinspike seamanship; block and tackle; standing and running rigging; deck seamanship.

(f) Marine engineering. The topics included are: Descriptions and principles of operation of marine boilers, and fittings, turbines, steam reciprocating engines, internal combustion engines and fire room and engine room auxiliaries; lubrication maintenance and repair.

(g) Electrical engineering. The topics included are: Definitions; measurements; magnets and magnetism; Ohm's Law; Kirchhoff's Law;

solutions of d. c. circuits; d. c. generators; d. c. motors; inductance, capacitance, and impedance; power factors; a. c. measurements; solutions of a. c. circuits; a. c. generators; a. c. motors; safety precautions; batteries.

§ 33.05-19 *Procedure for making application.*

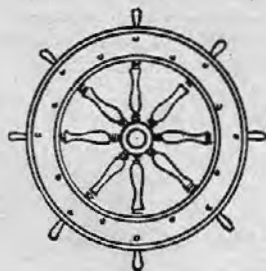
(a) Those persons who consider themselves eligible under the regulations in this subpart and desire to apply for an appointment as a commissioned officer or commissioned warrant officer in the U. S. Coast Guard should address a letter to the Commandant (PTP), United States Coast Guard, Washington 25, D. C., requesting an application form.

(b) Information will be furnished the applicant on the application form setting forth the ports at which the examination may be taken and the period during which the next examination will be scheduled. The applicant should state on the application form the place and date that he wishes to take the entrance examination. This preference will be acted upon in accordance with section 33.05-21 (b). The applicant should also state whether he wishes to be considered for commissioned officer or commissioned warrant officer rank.

(c) The application form should be completed and mailed, with the required enclosures, to the Commandant (PTP), U. S. Coast Guard, Washington, D. C.

§ 33.05-21 *Determination of eligibility and notification for examination.*

(a) Upon receipt of the completed application form at Coast Guard Headquarters, a determination will be made as to whether the applicant is eligible to participate in examinations for appointment as commissioned officer, commissioned warrant officer.





Second day: 8:00 a. m. to 12 noon—Navigation and Marine Engineering.

1:00 p. m. to 4:30 p. m.—Seaman-ship and Electrical Engineering.

Third day: 8:00 a. m. to 10:30 a. m.—English.

10:30 a. m. to 4:30 p. m.—Interviews and Physical Examinations.

§ 33.05-25 Notification.

(a) All examination papers will be graded and reviewed, and adaptability of applicants for entrance into the Coast Guard determined by a Board of Officers, Coast Guard Headquarters, Washington, D. C. This Board will be appointed by the Commandant and the Board's findings, when approved by the Commandant, are final.

(b) Applicants for appointments as commissioned officers or commissioned warrant officers in the Coast Guard who are determined to be mentally and morally suited and otherwise qualified for appointment will be so notified and directed to report for a final physical examination.

(c) All candidates for appointments as commissioned officers or commissioned warrant officers in the Coast Guard who are found to be not mentally, morally, or physically qualified for the appointment will be so notified.

(d) Appointments to commissioned officer or commissioned warrant officer rank will be made by the President, by and with the advice and consent of the Senate. Upon acceptance by the candidate he will be ordered immediately to active duty in the Coast Guard.

§ 33.05-27 Requirements for examination.

(a) All expenses in connection with application, preliminary physical examination, and travel to point of examination and interview must be borne by the candidate. Examinations will be given at specified times and places. Candidates will be given sufficient notice to arrange their personal affairs for the time necessary for examination.

[SEAL] A. C. RICHMOND,
Vice Admiral, U. S. Coast Guard,
Commandant.

Dated: June 25, 1956.

[F. R. Doc. 56-5898; Filed, July 20, 1956; 8:46 a. m.]

ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of ships' stores and supplies certificated from 1 June to 29 June 1956, inclusive, for use on board vessels in accordance with the provisions of Part 147 of the regulations governing "Explosives or Other Dangerous Articles on Board Vessels" are as follows:

CERTIFIED

Gamlen Chemical Co., 4 Midland Ave., East Paterson, N. J., Certificate No. 260, dated 13 June 1956, GAMLEN CARBON SOLVENT.

E. F. Drew & Co., Inc., 15 East 26th St., New York 10, N. Y., Certificate No. 262, dated 26 June 1956, DREW OIL AND GREASE REMOVER.

E. F. Drew & Co., Inc., 15 East 26th St., New York 10, N. Y., Certificate No. 263, dated 26 June 1956, DREW TANK CLEANER #4.

AFFIDAVIT

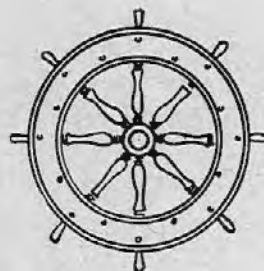
The following affidavit was accepted during the period from 15 May 1956 to 15 June 1956:

Gulf Engineering Co., Inc., 1000 South Peters St., New Orleans 13, La., VALVES.

FUSIBLE PLUGS

The regulations prescribed in Subpart 162.014, Subchapter Q, Specifications, require that manufacturers submit samples from each heat of fusible plugs for test prior to plugs manufactured from the heating being used on vessels subject to inspection by the Coast Guard. A list of approved heats which have been tested and found acceptable during the period from 15 May 1956 to 15 June 1956 is as follows:

H. B. Sherman Mfg. Co., Battle Creek, Mich. Heat Nos. 815, 816, 817, and 818.



(b) Candidates on the list will be advised of the time and place where they may take the examination. However, no examination can be given within thirty days of the date of receipt of the application form; and, any applicant making application within thirty days of the end of the examination period will have to wait until the next examination period.

§ 33.05-23 Conducting of examinations.

(a) Examinations will be conducted at various centers throughout the country. The schedule of examinations will normally be as follows:

(1) Commissioned officers.

First day: 8:00 a. m. to 12 noon—General.

1:00 p. m. to 4:30 p. m.—Aptitude Tests.

Second day: 8:00 a. m. to 12 noon—Navigation and Marine Engineering.

1:00 p. m. to 4:30 p. m.—Seaman-ship and Electrical Engineering.

Third day: 8:00 a. m. to 10:30 a. m.—English.

10:30 a. m. to 4:30 p. m.—Interviews and Physical Examination.

(2) Commissioned warrant officers.

First day: 8:00 a. m. to 12 noon—General.

1:00 p. m. to 4:30 p. m.—Aptitude Tests.

