PROCEEDINGS

OF THE MERCHANT MARINE COUNCIL

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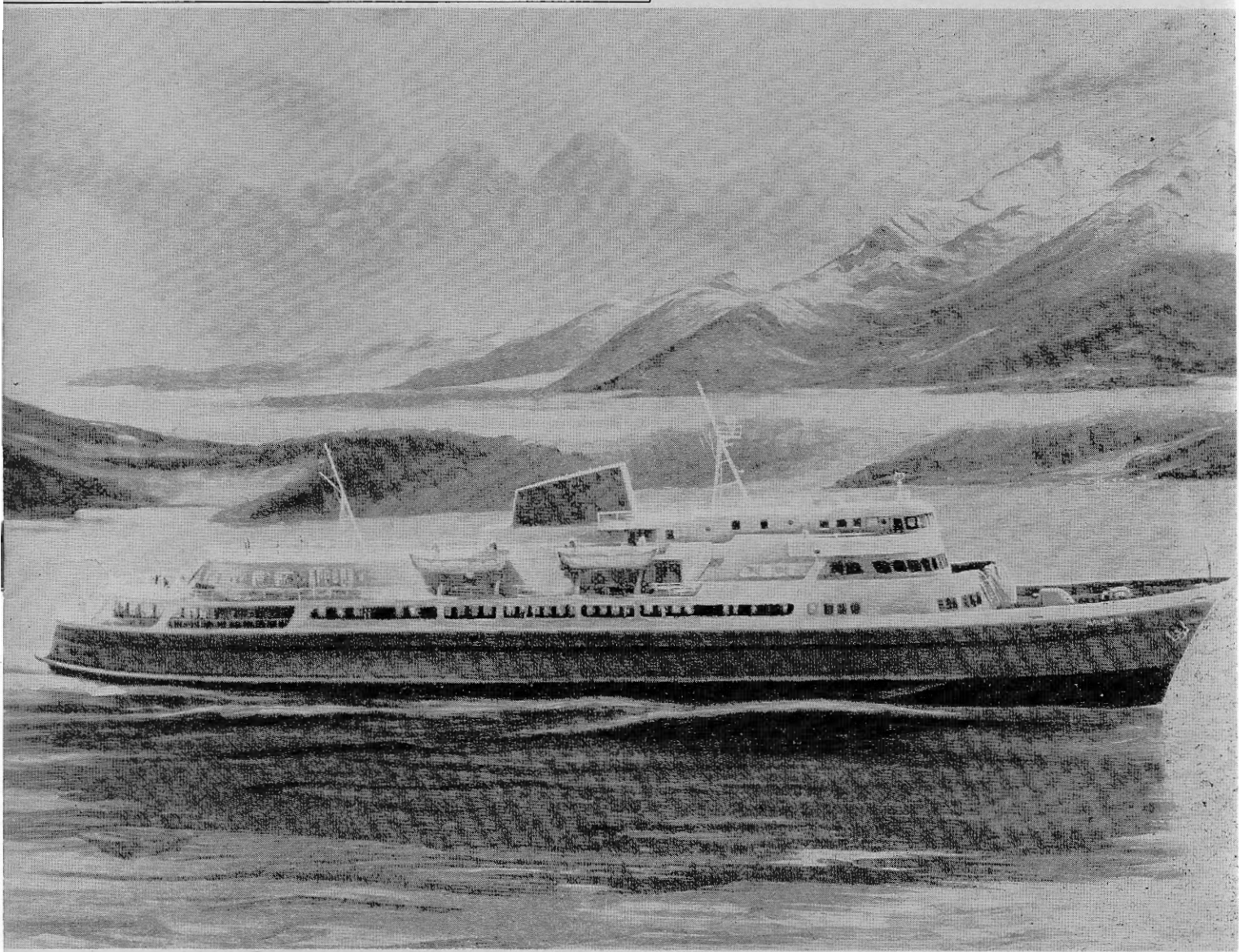

PROCEEDINGS

OF THE

MERCHANT MARINE COUNCIL

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LCDR N. B. Binns, USCG, *Editor*
T. A. DeNardo, *Assistant Editor*

REPRESENTATIVES of winners in the 1962 Barge and Towing Vessel Industry Safety Contest, which is cosponsored by the American Waterways Operators, Inc., and the National Safety Council, are shown above with officials of the Association and representatives of Government agencies.

Seated (left to right) are Dave Jarvis, chairman of the AWO Safety Committee, who made the award presentation; Rear Adm. Richard M. Ross, Commander of the Third Coast Guard District; Braxton B. Carr, president of the American Waterways Operators, Inc.; and M. F. Spellacy, Chairman of the Board of AWO.

Standing are the representatives of four award winning companies: C. S. Townshend, Socony Mobil Oil Co.; Gerald Johnson, Ashland Oil & Refining Co.; John F. McKay, Jr., Marquette Cement Manufacturing Co.; and George W. Fraser, of American Oil Co.

THIS COPY FOR NOT LESS THAN 20 READERS—PASS IT ALONG

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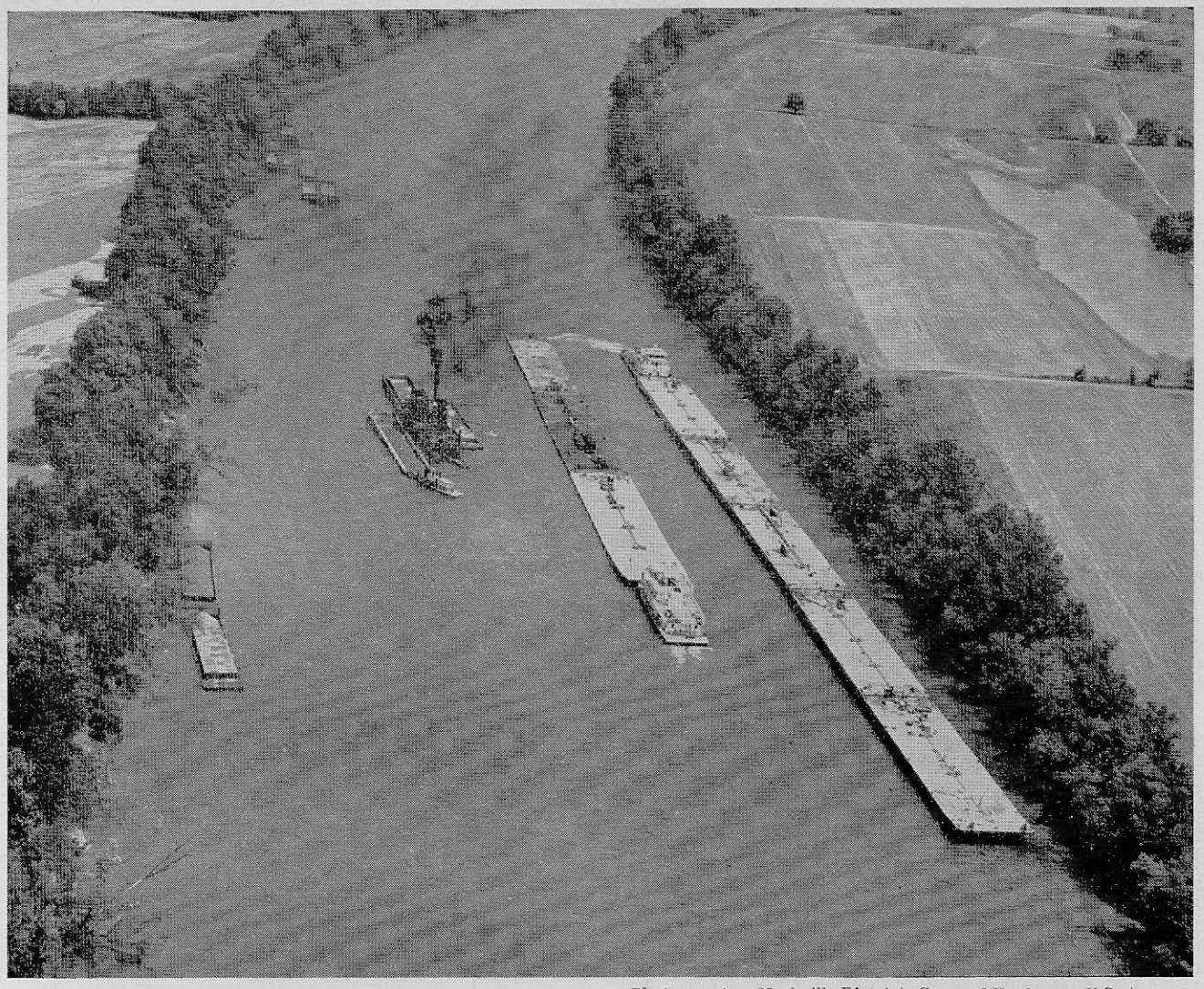


Photo courtesy Nashville District, Corps of Engineers, U.S. Army.

CHEMICAL HANDLING BY BARGES

By Commander Eric G. Grundy, USCG

Chief, Chemical Engineering Branch, Headquarters

THE FOLLOWING ARTICLE is taken from a paper presented by Commander Grundy at the 1962 meeting of the Chemical Section of the National Safety Congress.

The complexion of barge shipments of bulk chemicals is rapidly changing. As many of the newer chemicals find their demand increasing beyond carload lots, they turn toward the water for a means of bulk transportation.

Out of the old standby oil tank barge, a new species is developing. The newer chemical carriers have little in common with a petroleum barge except that their cargo is a liquid shipped in bulk in tanks. The difference between the hazardous properties of the newer and the older cargoes has required many changes in design of the hull structure, the tanks, and the associated equipment. These newer types of barges are intended for carriage of chemicals of different or greater hazard than the paraffin hydrocarbons of the past. They should be designated "chemical" barges to prevent confusion with the "tank barges" designed for petroleum which are often not suitable for containment of other chemicals. Since the hazards are becoming more diverse, it would appear more desirable to have the barges designed for the carriage of commodities by groups—such as amines, ketones, alcohols, etc.

HAZARDS VARY

In some instances materials may be hazardous in several ways; for example Ethylene Oxide is a flammable, explosive, polymerizing, toxic and

ignition. Such a problem item can be best controlled by endorsement on an individual commodity basis for transportation in vessels specifically designed for its properties.

Different physical and chemical properties require differences in barge design. As a specific example, let us consider the density of the product. Most of the older materials had a specific gravity of one or less, with the majority running about 0.7 to 0.8. These are relatively light cargoes. Comparing these densities with examples such as liquid chlorine 1.56 carbon disulfide 1.26, and sulfuric acid 1.83, it is apparent that for carriage of these materials structural modifications are necessary. The tanks have to be stronger to resist the stresses due to increased weight and increased dynamic loads. There must also be a stronger barge structure to support the tanks and prevent buckling of the barge due to uneven loading or compression stress when under tow. More flotation is required to preserve freeboard under heavier lading and more subdivision to enhance stability when these heavier commodities surge or shift and bring about free surface effects.

PRODUCT PURITY

Requirements of product purity have also had their effect. To prevent contamination, independent tanks or double skinned barges are often employed. Having all tank stiffeners on the outside or using strong pressure-type tanks with smooth interior walls, makes proper cleaning easy and rapid. Use of materials such as stainless steel, nickel cladding or aluminum for tanks has also proved advantageous to prevent contamination of some products.

CONTAMINATION

Contamination is not merely a product purity consideration. Small amounts of contamination can cause serious effects in some of the newer chemicals offered for bulk shipments. In some petrochemicals, a small amount of acetylene impurity can react with copper, brass, bronze and other metals to produce acetylides-highly explosive compounds that certainly should not be in close contact with inflammables. Ammonia, a common cargo today, reacts with unsaturates, such as butadiene and isoprene, to produce highly toxic vapors. In addition, enough heat may be released to cause polymerization, fire or explosion. To eliminate some of the more hazardous possibilities of contamination, tanks used for certain materials are not authorized to be used for alternate cargoes without being approved for cleanliness and safety.

If contamination becomes great enough, the end result is the same as mixing. Mixing chemicals is a dangerous practice under any conditions, and when highly-reactive materials are mixed it can result in catastrophe. To prevent inadvertent mixing, the trend is toward separate self-contained systems. Tanks for highly-reactive commodities are being required to have their own separate filling and discharge lines, isolated vent piping, independent pumps and, when appropriate, a closed system for gas inerting and refrigerating cycle piping, pumps, and associated vessels.

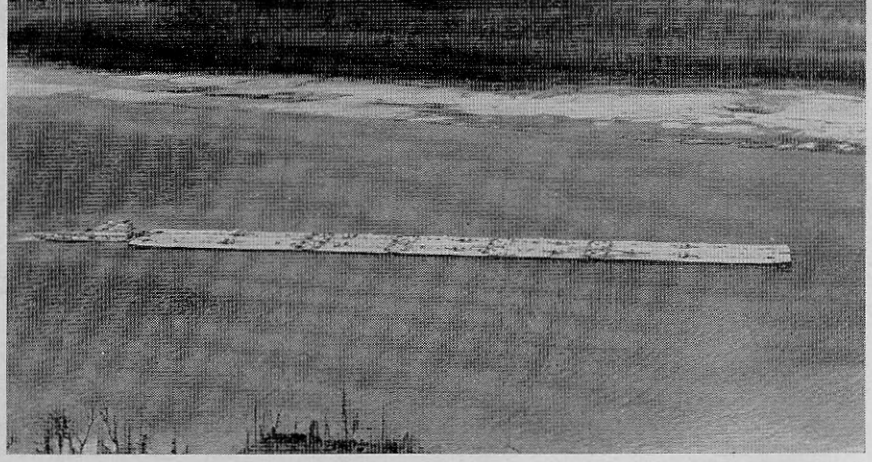


Photo courtesy Humble Oil & Refining Co.

CARGO SEGREGATION

Segregation of cargoes is the countering device for accidental mixing. By controlling the other cargoes that can be loaded aboard a barge when it is carrying certain highly-reactive compounds, many dangerous combinations are eliminated. This control cannot be exercised unless there is a complete knowledge of the intended cargoes of the barge. In practice it works out rather well, however, since the trend of barge shipments has always been toward single commodity shipments and the increase in chemical shipments follows this trend.

Many of the more recent and some of the future chemicals that are candidates for bulk shipment are gases at ordinary temperatures. In an effort to conserve shipping space and to promote more economical transportation, these materials are, or will be, transported in a liquefied state. Some movements will be in pressurized tanks, some in refrigerated tanks, and some in a combination of pressure and refrigeration.

BARGE MACHINERY

In order to reduce boil-off losses of refrigerated cargoes, the following designs are being employed: reliquefaction of the vapors, increased insulation, sub-cooling of the liquid cargo, and higher pressure settings on the cargo tank relief valves. Reliquefaction of the vapors will necessitate a continuous, or at least intermittent, operation of the necessary pumps for the compressors and condensers. Standby machinery is also required to take over in case of pump failure in the refrigeration cycle when a combination pressure and refrigeration system is used. In this manner, machinery in operation during transit is becoming a part of the barging situation. If the plant becomes too complicated and demands too much attention, manning of certain barges may become necessary.

Many other changes are being made in venting, inerting, inhibiting, sampling enroute, fire protection and fire-fighting, gauging, pumping and filling and discharging, just to name a few As the new materials offered for shipment bring on new problems, advancement of knowledge in other fields is providing the technology for their solution. Chemical transportation is in a state of flux, and the carriers of the future could be quite different from those of today.

TREAT BURNS WITH COLD WATER

By Alex G. Shulman, M.D.

From the "Industrial Supervisor"—National Safety Council

OUR EXPERIENCE with several hundred burn cases has shown that the simple immersion of the burned area in cold water or the application of cold, moist towel compresses using iced tap water, provides immediate relief of pain and seems to heal the burned area faster.

I would like to tell you of two incidents that got us started on the ice-water treatment for burns. About 8 years ago I accidentally spilled some boiling grease on the back of my hand. In the following agonizing few moments it seemed logical to plunge the hand into a basin of cold water. The immediate relief of pain was so impressive that I kept the hand immersed for over 1 hour, because the momentary removal of the hand from the water caused the return of the original intense pain. After an hour or so, I was able to take the hand out of the water with no return of the pain and from then on, not only was there no pain but the burn seemed to heal more rapidly than I expected.

A few weeks later, a 3-year-old child who had grasped the hot-water pipes leading to a shower room was brought in screaming with the intense pain of her hands. When the hands were put in ice water, the child immediately showed relief and refused to to take the hands out of the water until sometime later. Once she was able to remove the hands without pain, the pain did not return and no further treatment was necessary.

These two initial cases demonstrate a simple fact which was known to the ancients but seems to have been ignored by most doctors. Indeed, most physicians would say, "It isn't done"—but no one quite knows why. Since these first experiences, we slowly tried out this treatment on many minor burns, gradually working up to the more severe burns. Whereas most of the burns were of thermal origin, chemical and electrical burns have been treated in the same manner.

The treatment was begun originally as an emergency measure to provide immediate relief of pain, but the effect on the burn seems in most cases to have lessened the damaging results expected. It therefore seems that harmful body responses like local swelling and interference with circulation are stopped or altered.

The actual treatment of the burned patient consists of immersing the burned limbs into a large basin of cold water as soon as possible following the burn. The desirable temperature of the water should be that which is for the patient *comfortably cold.* This is usually under 70° F. (22° C.). Ice cubes are frequently added since the heat from the burned part raises the temperature of the water.

Where it is impractical to immerse the burned part, as in the case of head, neck, shoulders, chest, abdominal wall or back—moist cold towels kept constantly cold by repeated transfer from ice water to the injured part are applied instead. In the beginning, these towels must be changed almost constantly to keep the patient comfortable.

It seems that the best results follow the *earliest* treatment after the burn and for this reason it is advocated as a first-aid treatment to be carried out by the patient himself or by his first-aid attendant. For the same reason it can be advised over the telephone quickly.

Placing a sensitive burn under a cold tap or shower is *not* advised since the painful pressure stimuli of the stream of water may offset the relief obtained by the cold water. The patient himself helps determine the length of treatment in minor burns, using permanent absence of pain and swelling as his guide.

The treatment may last from 30 minutes to several days, continuously or intermittently, depending on the depth of the burn and the degree of pain caused by it and the amount of swelling present.

To offset the patient's feeling of chilliness, which may arise, we have given hot coffee or even vodka to drink—with enthusiastic reception by the patient in most instances. Sometimes, heating pads and blankets have been used in the burn-free areas to help keep the patient warm. Once the burned part can be kept out of the water with no return of pain, many burns will require no further treatment.

If the surfaces are raw, a single layer of vaseline gauze covered with a light, dry dressing can be applied. Many cases will require little else. Severe burns will of course need the highly skilled services of a team of doctors in a general hospital.

We have treated patients with burns of up to 20 percent of the body surface, and we have found that whatever the subsequent care may be, those cases treated initially with cold water do much better than those that were not. There have been many similar observations reported in the past.

Following the publication of my article in the Journal of the American Medical Association, I received letters from all over the world, many of them telling of similar forms of treatment. For example, an English doctor reports the use of cold milk for burns; a Florida doctor says he uses cold water with tea in it for sunburns; in Scotland, when a blacksmith burns himself, he puts the burned part on the cold anvil iron; in Iceland the people have traditionally used cold water for burns; during World War II, when the aircraft carrier *Wasp* was sunk by a Japanese torpedo when refueling, the doctors in the Navy Hospital in Aukland, New Zealand, received about 75 burn cases, and they noted that those patients who were in the cold ocean water did far better than those who were not.

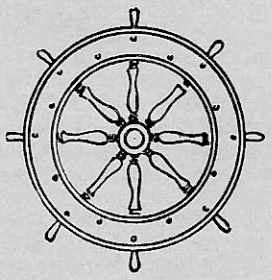
The one thing common to all these observations is the *cold,* and *cold water* is the simplest, cheapest and most accessible means of achieving this effect.

At the most recent convention of the American Medical Association in 1962, the results of work done at the University of Kansas were reported, showing graphically that rapid brief cooling with cold water of dogs severely scalded greatly improved their chances for survival.

This and other studies in animals have demonstrated what we have seen take place in extensive human burns, in the few cases where we have had the opportunity to apply this treatment.

Since the mortality rate in severe burns is almost 100 percent, even under the best conditions, we are hoping that this form of treatment, or some variation of it, may help save lives that would otherwise be lost.

In the meantime, however, this treatment has proven to be so effective and gratifying to both patient and doctor alike that it is recommended for use in most burns without hesitation.



ADDRESS REPLY TO:
COMMANDANT
U.S. COAST GUARD
HEADQUARTERS
WASHINGTON, D.C. 20226

MVI–3
8 April 1963

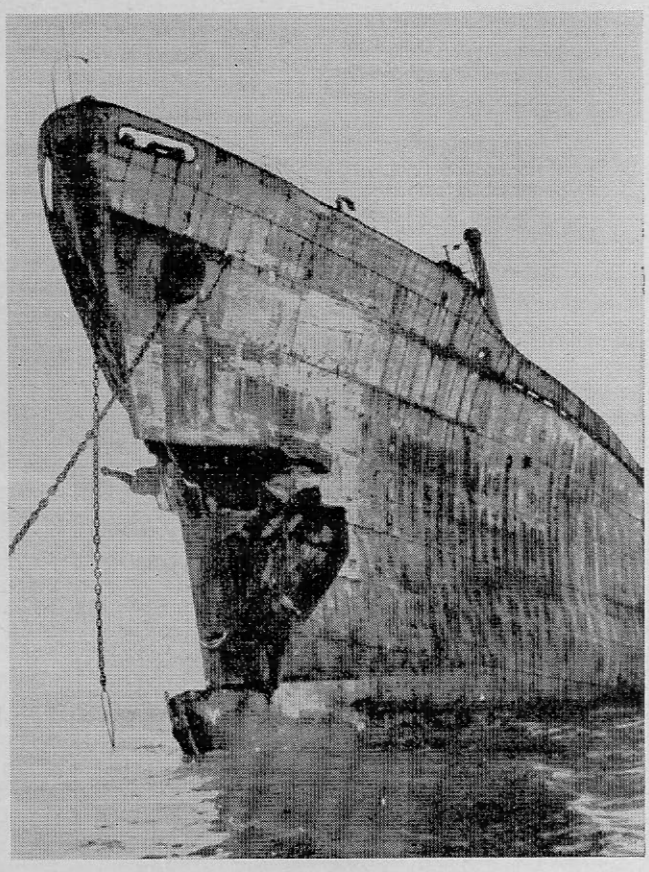
Commandant's Action
on

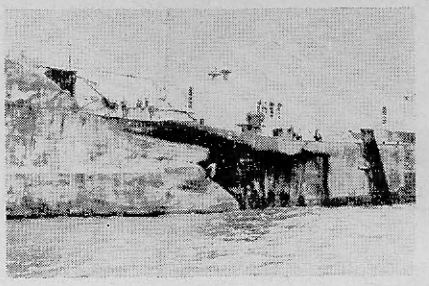
Marine Board of Investigation; collision between M/V *Union Reliance,* Chinese flag, and M/V *Berean,* Norwegian flag, in Houston Ship Channel on 7 November 1961 with loss of life

The record of Marine Board of Investigation convened to investigate subject casualty, together with its findings of fact, conclusions and recommendations has been reviewed.

The M/V *Berean,* a Norwegian tank vessel of 9003 gross tons, loaded with various oils and chemicals, including a cargo of acrylonitrile contained in Number 1 tank across, arrived off Galveston Bar, Texas, on the evening of 7 November 1961. At 2115, upon receiving a pilot on board, the vessel, with a draft of approximately 19 feet forward and 25 feet aft, proceeded up the Houston Ship Channel at an approximate speed of 14 knots, reducing speed as necessary when meeting or passing other vessels. On reaching the vicinity of Morgan Point, an outbound vessel was observed ahead. As the *Berean* approached Beacons 71 and 72 the outbound vessel, later identified as the *Union Reliance,* was observed entering the bend at "Five Mile Cut" near Beacon 75. The *Berean,* then on the inbound channel range at full speed, reduced speed to half ahead and then slow ahead. The outbound *Union Reliance* was observed to negotiate the slight turn in the channel at Beacon 75 while close aboard the starboard or West side of the channel. At this point, with the two vessels approximately 1 mile apart, the pilot of the *Berean* ordered one blast of the whistle for a port to port passing. Immediately thereafter the *Union Reliance* was observed to sheer cross channel and the *Berean*'s pilot heard the vessel sound three blasts and drop her anchor. The *Berean*'s pilot immediately ordered right rudder, full astern, three blasts on the whistle and the mate on the bridge was instructed to proceed forward and drop the anchors. At this moment the master of the *Berean* appeared on the bridge and, observing the situation, jingled the engineroom telegraph for emergency full astern and, upon instructions from the pilot, sounded the danger signal on the ship's whistle. Approximately 2 minutes following the full astern bell, the *Berean* was felt to ground gently on the east channel bank. Immediately following the grounding the bow of the *Union Reliance* made contact with the port bow of the *Berean* at an angle of approximately 50 to 60 degrees between centerlines. After raking the *Berean*'s side, the bow of the *Union Reliance* penetrated the *Berean* at Number 1 cargo tank just aft of the break in the forecastle. The area of penetration was immediately engulfed in flames which spread rapidly throughout the length of the *Union Reliance.*

The *Union Reliance* (ex-*Mormacland*), a Chinese freighter of 7638 gross tons laden with general cargo including a forward deck cargo of approximately 200 drums of citronella departed Long Reach Dock, Houston, Texas, at 1830 on 7 November 1961, with a Houston Ship Channel Pilot on board, bound for New Orleans, Louisiana. Approximately 2 hours following departure, while in the vicinity of Adams Terminal, the vessel experienced a steering casualty which necessitated anchoring to effect repairs. Upon discovering that one brush holder in the starboard steering engine motor was grounded, control was shifted to the port steering motor and, after several tests of the steering mechanism, the trip down channel was resumed. Speed was set at full ahead (maneuvering speed) which is estimated to have been approximately 9 knots. Upon approaching the slight bend in the channel in the





vicinity of Beacon 75 the pilot ordered port rudder followed by "ease to 10 degrees port" and then amidships. When the rudder angle indicator reached 5 degrees port the helmsman reported that the wheel was jammed and would not move in either direction. Upon shifting to gyro-electric it was found that, although the gyro-electric steering wheel would turn, the rudder would not respond. The main engines were immediately put to slow ahead, stop and then full astern and the danger signal was sounded on the ship's whistle. As the engines commenced astern motion the pilot ordered the starboard anchor dropped and approximately 2 minutes thereafter ordered the port anchor dropped with instructions to hold both anchors. The Chief engineer, in company with the Second assistant, proceeded to the steering flats moments before impact, but failed to observe any malfunctioning.

The *Union Reliance* continued to sheer cross channel to port with both anchors down and, at 2315, her bow made contact with the port side of the *Berean* penetrating the *Berean's* Number 1 cargo hold to a depth of approximately 10 feet. The acrylonitrile cargo in the *Berean's* Number 1 tank sprayed over the forward half of the *Union Reliance* and the resultant flames rapidly engulfed the forward portion of the vessel up to and including the deckhouse area. The intensity of the fire and smoke caused the crewmembers to flee to the after living quarters and also forced evacuation of the engineroom. The fire continued to spread to the after portion of the vessel prohibiting the launching of all but the after starboard lifeboat.

As the result of this casualty twelve persons aboard the *Union Reliance* including the pilot lost their lives and two others suffered burn injuries. There were no personnel injuries nor lives lost aboard the *Berean* although the vessel sustained extensive hull damage. The *Union Reliance*, in addition to damage resulting from impact, suffered extensive hull damage as the result of the fire which continued to burn for about three days following the collision. Due to the intensity of the fire in the area of the pilot house, the steering mechanism within that portion of the vessel was completely destroyed. Later examination revealed no malfunctioning of the steering components in the after steering engineroom.

REMARKS

Concurring with the Board, it is considered that this casualty was caused by a steering gear failure aboard the *Union Reliance*, confined to that portion of the steering mechanism which was destroyed by fire.

The Board's conclusion that no toxic effects were felt by the crew of either vessel is not fully concurred in. Acrylonitrile appears to act similarly to cyanide, inhibiting the utilization of oxygen. Small vapor concentrations may cause symptoms upon prolonged exposure while concentrations in greater degrees may be dangerous to life on short single exposures. If exposure to the vapors is great enough, loss of consciousness will ensue followed by cessation of respiration (asphyxia) and finally death. Therefore, considering its toxicological data, and since autopsies were not performed on those persons who lost their lives in this casualty, the part played by acrylonitrile vapors, if any, is not determinable.

Concerning the Board's recommendation to amend 46 CFR 92.07 to require Class B bulkheads within all public spaces and crew's sleeping quarters, this subpart already provides that all joiner work within accommodation spaces be of incombustible materials. This requirement, a recent amendment to the regulations for cargo vessels, exceeds the requirements of the 1960 SOLAS Convention and is felt to provide adequate fire protection for a new cargo vessel. U.S. flag cargo ships of this size already comply with this requirement since it has been the practice in this country for many years for owners to specify incombustible joiner work for new cargo ship construction. Therefore, any further amendment at this time is not warranted.

Where not in conflict to the foregoing, the record of the Marine Board of Investigation is approved.

D. McG. Morrison,
Vice Admiral, U.S. Coast Guard,
Acting Commandant.

NOTES ON CASUALTIES

Recently a freighter was loading cargo of freezer vans (trailers) at an East Coast port. The perishable cargo in the vans was maintained in a frozen condition by the use of nitrogen. In the ordinary course of events, the vans are moved to the pier for loading on board the vessel. Prior to loading operations, the vents are opened on the van and liquid nitrogen is sprayed into the van and over its cargo. After liquid nitrogen becomes heated by the atmosphere, it changes into a gas, driving the air out of the van through purge valves. Normally, the van then remains on the pier for some 2 hours before being loaded on the vessel, to permit all of the liquid nitrogen to change into gas. During the operation under discussion, a van was hoisted on board the freighter and placed for storage on the main deck alongside and to starboard of No. 2 hatch. At this time the vessel was trimmed down by the stern approximately 2 feet. Liquid nitrogen leaked from the after end of the van in a stream approximately three-eighths of an inch in diameter, producing a frozen or frosted area on the main deck approximately 3 feet in diameter. A short time later, a loud noise similar to an explosion was heard and a 62-inch crack appeared in the deck plates in way of the frozen area. About 30 minutes later another explosion was heard and a second crack appeared, about the same size as the first. The temperature of the liquid nitrogen at the time of its escape from the van was minus 320° F.

Due to operational circumstances, the van in question had not remained on the dock for its usual 2-hour "warming up" period but had been loaded on board some 20 minutes after it had been "charged" with liquid nitrogen.

As a result of this casualty, two deck plates and an end beam at No. 2 hatch were cracked and had to be replaced.

Liquid nitrogen in escaping onto the main deck not only caused the chilled area to contract, resulting in high stresses, but also cooled the steel far below its transition temperature so that it was in an extremely brittle state, thus resulting in the fractures.

The temperature of liquid nitrogen is minus 320° F. Fractures of this type, or possibly more severe, may be expected to occur whenever liquid nitrogen is permitted to drip onto a ship's deck or other portion of its structure. For this reason it is essential that freezer vans which have been charged with liquid nitrogen *never* be loaded aboard ship until sufficient time has elapsed to assure full prior vaporization of the nitrogen.

MARITIME SIDELIGHTS

There were 919 vessels of 1,000 gross tons and over in the active oceangoing U.S. merchant fleet on July 1, 1963, 2 less than the number active on June 1, 1963, according to the Maritime Administration.

There were 18 government-owned and 901 privately owned ships in active service. These figures did not include privately owned vessels temporarily inactive, or government-owned vessels employed in loading storage grain. They also exclude 26 vessels in the custody of the Departments of Defense, State, and Interior, and the Panama Canal Co.

There was one less active vessel and five more inactive vessels in the privately owned fleet. One combination passenger-cargo containership, the *Santa Mariana*, 4 freighters, the *Adabelle Lykes*, *American Corsair*, *Export Commerce*, and *African Dawn*, and a tanker, *Sinclair Texas*, were delivered from construction. One tanker and one freighter were sold for scrap. This made a net gain of 4 to a total of 983. Of the 81 privately owned inactive vessels, 7 freighters and 8 tankers were being repaired or reactivated. The others were laid up or temporarily idle.

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The Coast and Geodetic Survey announces the publication of a folder of Tidal Current Charts of Narragansett Bay, R.I., the first edition since 1936.

The charts show the hourly velocity and direction of the tidal current in Narragansett Bay, R.I. They present a comprehensive view of the tidal current in the entire area and provide a means for readily determining for any time the velocity and direction of the current at various locations throughout the bay. Directions of the current are shown by arrows and the velocities are given in knots.

The charts may be used for any year and are referred to the times of high water at Newport, R.I. Daily predictions for this station are given in "Tide Tables, East Coast, North and South America," published annually by the Coast and Geodetic Survey.

These charts were originally published in C&GS Special Publication No. 208 which is now out of print. Copies of the charts can be obtained from the Coast and Geodetic Survey, Washington 25, D.C., or any sales agent in the Narragansett Bay area. The price is 50 cents for each set of 13 charts.

SAFETY AWARD

CAPT. F. S. Siwik, master of the SS *Santa Rosa*, shown receiving the Ship Safety Achievement Citation from Rear Adm. O. C. Rohnke, USCG.

The SS *Santa Rosa* recently received the National Safety Council and American Merchant Marine Institute joint "Ship Safety Achievement Citation of Merit" award.

Rear Adm. O. C. Rohnke, USCG, Chief, Office of Merchant Marine Safety, presented the award to Capt. Frank S. Siwik, master of Grace Line's luxury passenger liner.

The *Santa Rosa* was proceeding north along the east coast at a speed of 26 knots when the bridge was notified that a passenger had fallen overboard; within 5 minutes the vessel had been brought hard right, lookouts posted, life rings thrown overboard, and personnel notified. In 4 more minutes the lifeboat under command of Chief Officer William Knollman was away. Five minutes later the passenger was safely in the lifeboat and within 35 minutes from the alert the vessel was underway again on course and speed.

In making the presentation Admiral Rohnke observed that the excellent seamanship displayed by the *Santa Rosa* "Represents alertness on the part of the officers and crew which can be achieved only through training and a sense of loyalty."

The U.S. Salvage Association has established its first Far Eastern branch office in Yokohama, Japan.

The association represents marine underwriters in making surveys of damage and condition on vessels and marine equipment.

nautical queries

DECK

Q. What precautions should you take when using a canister-type gas mask?

(a) Watch the timer indicating wearing period

(b) Use a flame safety lamp

(c) Retreat to fresh air if fumes are noticed

(d) Use a life line

(e) All of the above

A. (e) All of the above

Q. The oxygen breathing apparatus bypass valve:

(a) Is kept wide open

(b) Is used only to start operation

(c) Is an emergency valve used when some working part fails

(d) Operates to remove water

(e) Adjusts the gage pressure

A. (c) Is an emergency valve used when some working part fails

Q. In the canister-type gas mask, air enters the canister:

(a) At the top

(b) At the bottom

(c) From an oxygen bottle

(d) From an air hose

A. (b) At the bottom

Q. (a) What is meant by the linear coefficient of expansion?

(b) What is meant by stress? What is meant by strain?

(c) What is the elastic limit?

A. (a) It is the amount, along its length, which a body will expand for each degree change in temperature.

(b) Stress is the general term denoting the force of resistance which acts between bodies or parts of a body when under the influence of a load. It is measured either in tons or pounds. Strain is the change in form produced by stress.

(c) The smallest stress that produces a permanent deformation is known as the elastic limit.

Q. What provisions are made, if any, for absorbing excessive rudder shock on the following types of steering gear?

(a) Screw-gear

(b) Quadrant

(c) Hydraulic ram

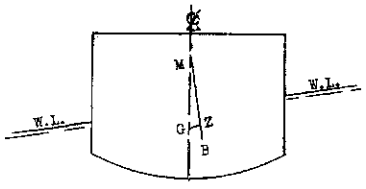
A. (a) No provisions are made for absorbing excessive shock, consequently, it is necessary that the construction of the screw-gear portion of the machine be as rugged as possible.

(b) The quadrant, being freely mounted on the rudder stock, operates the tiller through buffer springs which serve to relieve any excess rudder shock.

(c) Relief valves are fitted in the hydraulic system, and act to prevent damage to any part of the gear, should excessive rudder shock occur.

STABILITY

Q. On the sketch shown, what is:
a. Metacentric height.
b. Center of gravity.
c. Center of buoyancy.
d. Righting arm.



A. a. GM=Metacentric height.
b. G =Center of gravity.
c. B =Center of buoyancy.
d. GZ =Righting arm.

⚓ ⚓ ⚓

ENGINE

Q. A centrifugal pump begins to lose capacity. What troubles do you look for?

A. Air leaks in suction or stuffing boxes, speed too low, head too high or suction lift too high, impeller partially plugged, not enough suction head for hot water, wearing rings worn, impeller damaged, casing packing defective, foot valve clogged, foot valve or suction pipe not immersed deep enough.

Q. Define the following terms as applied to speed regulating governors:

(a) isochronous

(b) speed droop

(c) sensitivity

A. (a) Isochronous: Constant speed. Specifically the same average speed regardless of load.

(b) Speed droop: A progressive drop in speed as the load is picked up by the prime mover from no load to full load without manually changing the governor speed setting. It may be expressed in R.P.M. or percentage.

(c) Sensitivity: The smallest speed change for which the governor will produce a corrective movement.

Q. Where should gate valves be used in preference to globe or angle valves?

A. Gate valves are preferable for lines on which it is important to minimize resistance to flow. They are necessary where complete drainage of the pipe must be provided. They are suited primarily for locations where valves are to be generally wide open or tight shut because, when used for throttling, the high velocity of flow tends to erode the seating surfaces.

Q. List the procedure to be followed if the steam reciprocating simplex pump fails to start.

A. (1) Secure the pump. Do not attempt to adjust the tappet collars.

(2) Examine the discharge and the exhaust lines for closed valves or for a valve disc that has become detached from its stem.

(3) Jack the pump with a bar to determine if there is excessive friction.

(4) Disconnect the auxiliary valve stem from the operating gear without disturbing the adjustment of the tappet collars. Open the exhaust, suction and discharge valves and then crack the throttle. Work the auxiliary valve by hand. Should the pump still refuse to start secure the pump. Remove the steam valve chest cover and examine the main valve to see if it has overridden or stuck.

(5) If the pump cannot now be started, a complete overhaul of the working parts of the steam end will probably be necessary.

Q. Describe how the speed of the turbine is controlled by the lifting beam and nozzle control valves.

A. Steam is admitted to the turbine through throttle and nozzle control valves. Speed control is effected by varying the number of nozzle control valves that are open, through the operation of the lifting beam mechanism. Normally the throttle is left wide open. The mechanism consists of a steel beam drilled with holes in which the nozzle valves slide. The valve stems are of varying lengths and are fitted with shoulders at the ends. When the beam is lowered all valves will rest upon their seats. Raising the beam will open the valves in succession, in sequence of stem length. The beam is raised and lowered by the lever connected to the speed governor.

BARGE RIGGING

By Lee Hokanson and Arthur E. Wills

United States P&I Agency

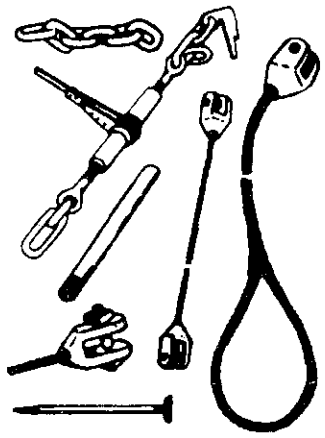
On a river towboat in a shipyard or one waiting for barges to be loaded or discharged, rigging usually is stowed on the foredeck. It is kept there to be available as needed for transfer to the barges when tow is made up and for replacing gear that may carry away while the tow is underway. It is amazing how much gear can be stowed in such a small area by an efficient deck mate, with still plenty of room to get around safely.

A safety-minded deck mate stows the wires in several piles on the after end of the foredeck. Each pile is made up of wires of the same length so that there is no problem in locating the proper length when needed. Usually there are three different lengths of wires. They differ with the various companies, barges and experience, but frequently run to 65 feet, 25 feet and 11 feet. Each of these lengths is coiled neatly and tied with ropeyarn in several places to keep it safely packaged.

Of the other gear, usually wire straps, short lengths of chain, shackles, toothpicks, and cheater bars are stowed under the towing knee ladders or in the forward gear locker. Ladders are hung on brackets on the side of the housing to be out of harm's way and not present a tripping hazard. Manila lines are neatly coiled or faked down on deck in separate piles. Ratchets are stacked in criss-cross square piles, usually as far forward as possible. Barge navigation lights, with their electrical wires, are put in a safe place in the forward gear locker.

With the rigging stowed in this manner, there is no difficulty encountered in finding a specific item when needed. Besides being more shipshape and handy, danger to personnel from tripping or stumbling is eliminated.

When carrying rigging onto barges, always be sure that you have a firm footing. Even a slight slip when carrying a wire or ratchet can cause a painful injury such as a hernia, a strained or sprained back, knee or ankle. When carrying a piece of rigging along the walkway of a barge, always have it on your outboard side so that it can be dropped quickly if necessary—even overboard sometimes—and will not foul on the barge sides or obstructions. Before using any gear be sure that it is in good condition. Discard rusty or fish-hooked cables, frayed manila, etc.



Lately, aluminum ratchets are being seen more and more on towboats. They are very light and easy to carry but because of that lightness, when you straddle them and pull on the handle to take up slack in the wire, the link over the pelican hook sometimes slips off and a man finds himself sitting down, maybe pretty hard. This could cause serious injury so keep a sharp eye on that holding link.

Many of these aluminum ratchets have another bad feature caused by absence of the usual link between the pelican hook and the eyebolt. Because of this, more slack is required to connect the pelican hook and the eyebolt must be two-blocked before the wire is taut. Often the wire is not brought taut and then it is necessary to shift chain links and wires so that after connecting and tightening up on the ratchet, the wire will be brought up tight—as it must be to be effective.

Always arrange the ratchet so that when taking up slack on the wire you face outboard and pull inboard. Otherwise a slight slip could cause you to fall between the barges or even to fall overboard.

Last, but not least, be sure to remove the toothpick after tightening a ratchet so that your shipmates will not trip over it. *IT'S THE LITTLE THINGS THAT ADD UP TO PROVIDE SAFETY.*

SOME REGULATORY ASPECTS OF TANKER SAFETY

EDITORIAL CORRECTION

In the July 1963 issue of the *Proceedings* we ran an article entitled "Some Regulatory Aspects of Tanker Safety." This article was extracted from a paper delivered by Capt. A. W. Johnsen, USCG, at the May 1963 meeting of the Annual Tanker Conference of the American Petroleum Institute. The last few paragraphs of the article as printed under the general heading of Overall Problems were incorrectly quoted; the correct statements are as follows:

OVERALL PROBLEMS

At this point, I'd like to make a few comments on the overall problem of tanker safety. This paper and others presented this morning have been concerned primarily with methods of eliminating the hazard of empty cargo tank explosions. Important as this subject is, the Coast Guard views it as only one approach to the ultimate solution. Another important approach is the prevention of collisions—which, incidentally, would eliminate most of the hazard from empty cargo tanks. Certainly the present widespread use of radar and the increasing use of single frequency bridge-to-bridge radio telephone are major steps forward.

However, collision remains one of the major causes of marine casualties. Therefore, I would like to suggest that the shipping industry consider two research projects.

The first project would be to study the effects of speed on the maneuvering characteristics of large ships operating in channels having restricted widths and depths.

The record suggested project would be to determine whether or not a code of recommended practices for the operation and navigation of large tank ships would effectively contribute toward reduction in the incidence and/or severity of tanker collision casualties.

Another area for further work is the training and education of tanker personnel. It has been repeatedly shown that the major underlying cause of casualties in most industries is personnel error rather than equipment failure. The tanker industry is no exception. Oftentimes this results from a lack of information or misinformation rather than carelessness or inattention. Tankermen, along with other maritime industry workers,

need to keep pace with our advancing technology. They require up-to-date information on cargo properties, particularly new chemicals, their handling and their hazards. Training is an important industrial tool whose edges should be maintained sharp, in order to minimize casualty costs.

In conclusion, I'd like to say that it has been a most rewarding experience for the Coast Guard to participate in the Shell Oil-Keystone vapor concentration study and we hope that continued good use is made of the unique facilities on the *Cherry Valley* to obtain additional much needed technical information.

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NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 10–63

APRIL 1, 1963

Subj: Typical Class A–60, A–30, A–15 and A–O Steel Bulkheads and Decks

This circular provides the information required by shipbuilders, and others concerned, for the application of approved insulation, bulkhead panels, and deck coverings to achieve the various structural fire protection classifications for *steel* bulkheads and decks required by Subpart 72.05 of Subchapter H (Passenger Vessels), Subpart 32.57 of Subchapter D (Tank Vessels) and Subpart 92.07 of Subchapter I (Cargo and Miscellaneous Vessels).

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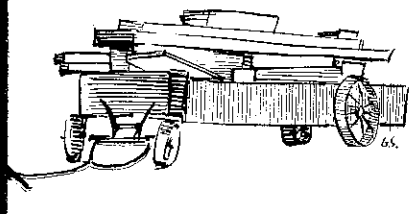
NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 11–63

JUNE 4, 1963

Subj: LSTs as unmanned barges; structural reinforcement and drydocking; hull inspection requirements

To provide a minimum structural standard for conversion of the subject vessels for unmanned barge operation in merchant service on Ocean, Coastwise or Great Lakes waters, and to provide an adequate, uniform basis for hull inspection of these vessels subsequent to conversion.



MERCHANT MARINE PERSONNEL STATISTICS

MERCHANT MARINE OFFICER LICENSES ISSUED

QUARTER ENDING JUNE 30, 1963

DECK

Grade	Original	Renewal
Master:		
Ocean	50	445
Coastwise	16	37
Great Lakes		29
B.S. & L	17	111
Rivers	12	56
Radio officer licenses issued	15	48
Chief mate:		
Ocean	37	107
Coastwise		4
Mate:		
Great Lakes	1	
B.S. & L	4	11
Rivers	13	28
2d mate:		
Ocean	56	90
Coastwise		1
3d mate:		
Ocean	60	85
Coastwise		
Pilots:		
Great Lakes	3	18
B.S. & L	75	27
Rivers	137	58
Master: Uninspected vessels	123	17
Mate: Uninspected vessels	64	1
Motor boat operators	474	998
Total	1,157	2,171
Grand total	3,328	

ENGINEER

Grade	Original	Renewal
STEAM		
Chief engineer:		
Unlimited	51	489
Limited	4	94
1st assistant engineer:		
Unlimited	36	143
Limited	6	10
2d assistant engineer:		
Unlimited	54	189
Limited	1	4
3d assistant engineer:		
Unlimited	73	215
Limited	2	
MOTOR		
Chief engineer:		
Unlimited	6	80
Limited	37	122
1st assistant engineer:		
Unlimited	1	11
Limited	14	20
2d assistant engineer:		
Unlimited	8	14
Limited	2	1
3d assistant engineer:		
Unlimited	39	118
Limited		1
Chief engineer: Uninspected vessels	61	9
Assistant engineer: Uninspected vessels	49	4
Total	444	1,524
Grand total	1,968	

WAIVER OF MANNING REQUIREMENTS

Waivers	Atlantic coast	Gulf coast	Pacific coast	Great Lakes	Total
Deck officers substituted for higher ratings					
Engineer officers substituted for higher ratings					
Ordinary seamen for able seamen					
Wiper or coalpassers for qualified member engine department					
Total waivers					
Number of vessels					

ORIGINAL SEAMEN'S DOCUMENTS ISSUED

Type of document	Atlantic coast	Gulf coast	Pacific coast	Great Lakes and rivers	Total
Staff officer	40	10	25	2	77
Continuous discharge book		11			11
Merchant Mariner's documents	1,895	790	1,069	912	4,666
AB any waters unlimited	84	56	69	40	249
AB any waters, 12 months	70	38	34	26	168
AB Great Lakes, 18 months	3	4	9	24	40
AB tugs and towboats, any waters	7		5		12
AB Bays and Sounds	3	1			4
AB seagoing barges	1	1	1		3
Lifeboatman	105	5	67	4	181
QMED	144	55	74	59	332
Certificate of service	1,823	771	1,035	814	4,443
Tankerman	17	84	18	89	208
Total	4,192	1,826	2,406	1,970	10,394

INVESTIGATING UNITS

Coast Guard Merchant Marine Investigating Units and Merchant Marine Details investigated a total of 4,346 cases during the second quarter of 1963. During this period, hearings before examiners resulted involving 77 officers and 223 unlicensed men. In the case of officers, 2 licenses were revoked, 6 were suspended without probation granted, 16 were suspended with probation granted, 11 cases were dismissed after hearing, and 4 hearings were closed with admonition. Of the unlicensed personnel, 10 documents were revoked, 8 were suspended without probation granted, 96 were suspended with probation granted, 19 cases were dismissed after hearing, and 18 hearings were closed with admonition. Eighteen licenses and 211 documents were voluntarily surrendered.

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 12–63

JUNE 4, 1963

Subj: Underwriters' Laboratories, Inc., Electric Marine Type Lighting Fixtures for Use on Merchant Vessels Inspected by the U.S. Coast Guard

PURPOSE

The purpose of this circular is to modify the instructions and policies promulgated in Navigation and Vessel Inspection Circular No. 6–58. Navigation and Vessel Inspection Circular No. 6–58 covered the use of Underwriters' Laboratories, Inc., marine labeled fixtures and discontinued listing of lighting fixtures in CG–293, "Miscellaneous Electrical Equipment List."

BACKGROUND

a. Underwriters' Laboratories, Inc., Standard 595 (Marine Type Electric Lighting Fixtures) was first published in 1958. Extensive revisions were later made and included in the second edition published in September 1962. Navigation and Vessel Inspection Circular No. 6–58 anticipated that all fixture approvals could be handled through Underwriters' Laboratories labeling service and previous Coast Guard listings in CG–293 could be withdrawn by June 1963.

b. Although many manufacturers have made application for listing and labeling by Underwriters' Laboratories, Inc., those who have completed the necessary action are a small percentage of the total marine manufacturers. Additionally, certain difficulties have arisen in adapting the Underwriters' Laboratories procedures to marine practices. Problems have arisen in such areas as packaging, markings, materials and temperature tests. It has also been found that certain fixtures are not adaptable to the labeling procedure.

ACTION

a. To provide more time for manufacturers to complete the necessary tests and negotiations with Underwriters' Laboratories, Inc., the deadline for discontinuing listing in CG–293 will be extended to 30 June 1964.

b. In this interim period conferences with manufacturers and Underwriters' Laboratories, Inc., will be held in order to eliminate some of the difficulties presently being encountered with UL 595.

c. The current listing of lighting fixtures in CG–293 will be examined to determine which types of lights are not adaptable to the labeling service. Certain fixtures may always require listing in CG–293. Instructions concerning these lights will be published.

d. In the interim period lights labeled by Underwriters' Laboratories, Inc., will be accepted as outlined in Navigation and Vessel Inspection Circular No. 6–58. The present listings in CG–293 will be continued until 30 June 1964. Additions to this listing will be made only for fixtures which are of a type covered by paragraph 3(c).

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 13–63

JUNE 5, 1963

Subject: Vent piping closures

PURPOSE

The purpose of this circular is to clarify the requirements for closures on vent pipes which extend above the weather deck on vessels subject to Coast Guard inspection.

BACKGROUND

The regulations in 46 CFR 43.10–80(a) and 55.10–60(e) and (f) require that vents from ballast, fuel oil and other tanks be provided with satisfactory means for closing the openings and that where flame screens are fitted, the closing device shall not damage these screens. During past years, vent check valves incorporating both a float and a cover which may be closed manually have been installed to meet this requirement. This type of installation consisting of a check valve and a cover is not necessary for compliance.

DISCUSSION

The Load Line Regulations in 46 CFR 43.10–80(a) and the Marine Engineering Regulations and Material Specifications in 46 CFR 55.10–60 require efficient and satisfactory means to be provided for closing the openings of vent pipes from ballast, fuel oil and other tanks. These regulations are based on the International Load Line Convention, London, 1930. In the past, devices such as wooden plugs, canvas covers, hinged covers and inverted vent check valves have been accepted. In continuation of this policy, the following devices are considered to be acceptable and satisfactory means of closing vents:

a. A ball check valve wherein the ball float, which is normally in the open position and resting at the bottom of the inverted assembly on the float support, will float upwards under force of a submerging wave to seat and close the valve during the period of submergence.

b. A hinged closure (manual or automatic) wherein the hinged cover is normally open on the outlet of the return bend and may be closed by the immersion action of the sea or by hand.

c. Other devices

Wooden plugs which may be inserted in the outlet of the return bend to keep out the sea during heavy weather and removed manually when no longer needed.

Canvas hoods which may be installed over the vent head and secured by line during heavy weather and removed manually when no longer needed.

d. Alternative devices

If other suitable or improved devices differing from those specified herein are developed, their use will be given consideration upon formal application to the Commandant.

ACTION

Any single one of the above described methods of closure is acceptable under existing regulations as a satisfactory means for closing the opening of vent pipes provided the flame screens, where installed, are not damaged.

The Officer in Charge, Marine Inspection shall satisfy himself that all vent closures are adequate and suitable for the purpose intended.

AMENDMENTS TO REGULATIONS

[EDITOR'S NOTE.—The following regulations have been promulgated or amended since the last issue of the PROCEEDINGS. A complete text of the regulations may be found in the Federal Register indicated at the end of each article. Copies of the Federal Register containing the material referred to may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402]

Title 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of the Treasury

SUBCHAPTER D—NAVIGATION REQUIREMENTS FOR CERTAIN INLAND WATERS

[CGFR 63-35]

PART 82—BOUNDARY LINES OF INLAND WATERS

Changes in Descriptions

The purpose of the amendments in this document is to bring the existing terminology used to designate certain aids to navigation, marking the boundary lines between areas where the Inland and International Rules of the Road apply, into conformity with present practice. In particular, the term "lighthouse" is considered out dated and somewhat misleading when applied to small, unmanned lights which replace older aids to navigation. In these amendments the language utilized is based on the designations of aids to navigation as set forth in the Coast Guard's Light Lists.

Because the amendments to the regulations in this document are editorial corrections, 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), is impracticable and unnecessary.

ATLANTIC COAST

1. Section 82.5 is amended to read as follows:

§ 82.5 All harbors on the coast of Maine, New Hampshire, and Massachusetts between West Quoddy Head, Maine, and Cape Ann Light, Mass.

A line drawn from Sail Rock Lighted Whistle Buoy 1 to the southeasternmost extremity of Long Point, Maine, to the southeasternmost extremity of Western Head; thence to the southeasternmost extremity of Old Man; thence to the southernmost extremity of Double Shot Islands; thence to Libby Island Light; thence to Moose Peak Light; thence to the eastern extremity of Little Pond Head. A line drawn from the southern extremity of Pond Point, Great Wass Island, to the southernmost point of Crumple Island; thence to Petit Manan Light; thence to Mount Desert Light; thence to Martinicus Rock Light; thence to Monhegan Island Light; thence to Seguin Light; thence to Portland Lightship; thence to Boon Island Light; thence to Cape Ann Lighted Whistle Buoy 2.

2. Section 82.10 is amended to read as follows:

§ 82.10 Massachusetts Bay.

A line drawn from Cape Ann Lighted Whistle Buoy 2 to Boston Lightship; thence to Cape Cod Light.

3. Section 82.15 is amended to read as follows:

§ 82.15 Nantucket Sound, Vineyard Sound, Buzzard's Bay, Narragansett Bay, Block Island Sound, and easterly entrance to Long Island Sound.

ACCEPTABLE HYDRAULIC CAST ALUMINUM VALVES

Hydraulic cast aluminum valves which have passed high-impact shock tests and accepted under the provisions of 46 CFR 55.07-1(e)(3).

Manufacturer	Valve type	Model	Maximum allowable pressure (psi)
Aurora Fluid Power, Division Aurora Corp. of Illinois, 8810 Harvard Ave., Cleveland 5, Ohio.[1]	3-way valve	100407	300
	do	100166	1500
	4-way valve	100128	150
	do	100173	1500
	do	100418	300
	do	100487	2000

[1] Delete previous name of Gabriel Valve Division, The Gabriel Co., 1115 East 152d St., Cleveland 10, Ohio.

ACCEPTABLE COVERED STEEL ARC WELDING ELECTRODES

The following are additions to the list of electrodes which are acceptable to United States Coast Guard for use in welded fabrications.

Distributors and/or manufacturers	Brand	AWS Class	Operating positions and electrode sizes (inches)				
			5/32 and smaller	3/16	7/32	1/4	5/16
Arcrods Corp., Sparrows Point, Md	Arcrods 095	E8016-C3	1	2			
Harnischfeger Corp., Milwaukee, Wis	P & H 108	E8018-C3	1	2	2	2	2
Do	P & H 107	E11018-G	1	2	2	2	2
A. O. Smith Corp., Milwaukee, Wis	SW 728	E7028	2	2	2	2	
Reid Avery Co., Dundalk, Md	Raco 7018	E7018, E6018	1	2	2	2	

A line drawn from Chatham Light to Pollock Rip Lightship; thence to Great Round Shoal Channel Entrance Lighted Whistle Buoy GRS; thence to Sankaty Head Light. A line drawn from the westernmost extremity of Smith Point, Nantucket Island, to No Mans Land Lighted Whistle Buoy 2; thence to Gay Head Light; thence to Block Island Southeast Light; thence to Montauk Point Light on the easterly end of Long Island, N.Y.

4. Section 82.30 is amended to read as follows:

§ 82.30 Chesapeake Bay and tributaries.

A line drawn from Cape Henry Light to Cape Henry Junction Lighted Whistle Buoy; thence to Cape Charles Light.

5. Section 82.45 is amended to read as follows:

§ 82.45 St. Simon Sound, St. Andrew Sound, and Cumberland Sound.

Starting from the hotel located approximately ¾ mile, 63½° true, from St. Simon (rear) Light, a line drawn to St. Simon Lighted Whistle Buoy St. S; thence to St. Andrew Sound Outer Entrance Buoy; thence to St. Marys Entrance Lighted Whistle Buoy 1STM; thence to Amelia Island Light.

6. Section 82.55 is amended to read as follows:

§ 82.55 Florida Reefs and Keys from Miami to Marquesas Keys.

A line drawn from the east end of the north jetty at the entrance to Miami, to Miami Lighted Whistle Buoy 2; thence to Fowey Rocks Light; thence to Pacific Reef Light; thence to Carysfort Reef Light; thence to Molasses Reef Light; thence to Alligator Reef Light; thence to Tennessee Reef Light; thence to Sombrero Key Light; thence to American Shoal Light; thence to Key West Entrance Lighted Whistle Buoy; thence to Sand Key Light; thence to Cosgrove Shoal Light; thence to westernmost extremity of Marquesas Keys.

GULF COAST

7. Section 82.65 is amended to read as follows:

§ 82.65 San Carlos Bay and tributaries.

A line drawn from the northwesternmost point of Estero Island to Caloosa Lighted Bell Buoy 2; thence to Sanibel Island Light.

8. Section 82.95 is amended to read as follows:

§ 82.95 Mobile Bay, Ala., to Mississippi Passes, La.

Starting from a point which is located 1 mile, 90° true, from Mobile Point Light, a line drawn to a point 5.5 miles, 202° true, from Mobile Point Light; thence to Ship Island Light; thence to Chandeleur Light; thence in a curved line following the general trend of the seaward, high-water shore lines of the Chandeleur Islands to the southwesternmost extremity of Errol Shoal (lat. 29°35.8′ N., long. 89°00.8′ W.); thence to a point 5.1 miles, 107° true, from Pass a Loutre Abandoned Lighthouse.

9. Section 82.103 is amended to read as follows:

§ 82.103 Mississippi Passes, La., to Sabine Pass, Tex.

A line drawn from a point 5.1 miles, 107° true, from Pass a Loutre Abandoned Lighthouse to a point 1.7 miles, 113° true, from South Pass West Jetty Light; thence to a point 1.8 miles, 189° true, from South West Pass Entrance Light; thence to Ship Shoal Light; thence to a point 10.2 miles, 172° true, from Calcasieu Pass Entrance Range Front Light; thence to a point 2.5 miles, 163° true, from Sabine Pass East Jetty Light.

PACIFIC COAST

10. Section 82.133 is amended to read as follows:

§ 82.133 San Francisco Harbor.

A straight line from Point Bonita Light drawn through Mile Rocks Light to the shore.

11. Section 82.145 is amended to read as follows:

§ 82.145 San Pedro Bay.

A line drawn from Los Angeles Harbor Light through the axis of the Middle Breakwater to the easternmost extremity of the Long Beach Breakwater; thence to Anaheim Bay East Jetty Light 4.

12. Section 82.157 is amended to read as follows:

§ 82.157 San Diego Harbor.

A line drawn from the southerly tower of the Coronado Hotel to San Diego Channel Lighted Bell Buoy 5; thence to Point Loma Light.

HAWAII

13. Section 82.175 is amended to read as follows:

§ 82.175 Mamala Bay.

A line drawn from Barbers Point Light to Diamond Head Light.

ALASKA

14. Section 82.275 is amended to read as follows:

§ 82.275 Bays, sounds, straits and inlets on the coast of southeastern Alaska between Cape Spencer Light and Sitklan Island.

A line drawn from Cape Spencer Light due south to a point of intersection which is due west of the southernmost extremity of Cape Cross; thence to Cape Edgecumbe Light; thence through Cape Bartolome Light and extended to a point of intersection which is due west of Cape Muzon Light; thence due east to Cape Muzon Light; thence to a point which is 1 mile, 180° true, from Cape Chacon Light; thence to Barren Island Light; thence to Lord Rock Light; thence to the southernmost extremity of Garnet Point, Karagunut Island; thence to the southeasternmost extremity of Island Point, Sitklan Island. A line drawn from the northeasternmost extremity of Point Mansfield, Sitklan Island, 040° true, to where it intersects the mainland.

(Federal Register of July 6, 1963.)

ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of ships' stores and supplies certificated from July 1 to 31, 1963, 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

Pennsalt Chemicals Corp., 2700 South Eastern Ave., Los Angeles 22, Calif., Certificate No. 565, dated July 8, 1963, PENNSALT 3001 WASH DOWN.

Wyandotte Chemicals Corp., Wyandotte, Mich., Certificate No. 566, dated July 12, 1963, WYANDOTTE QUICK BREAK.

The Dow Chemical Co., Midland, Mich., Certificate No. 567, dated July 16, 1963, KORLAN 24E.

AFFIDAVITS

The following affidavits were accepted during the period from June 15 to July 15, 1963:

Boro Valve, Inc., Judd Valve Division, 38–54 Review Ave., Long Island City 1, N.Y., VALVES.

Phelps Dodge Copper Products Corp., 300 Park Ave., New York 22, N.Y., PIPE & TUBING.

Summerill Tubing Co. Division, P.O. Box 1557, Pittsburgh 30, Pa., PIPE & TUBING.

W. C. Norris Division,[1] Dover Corp., 10 N. Elwood, Tulsa 1, Okla., VALVES.

Josam Manufacturing Co.,[2] Michigan City, Ind., VALVES, FITTINGS & CASTINGS.

[1] Delete in the Formerly Approved Affidavit Section of CG–190.

[2] Currently listed in CG–190 for Valves and Fittings. The listing is hereby annotated to indicate that the listing includes Castings.

MERCHANT MARINE SAFETY PUBLICATIONS

The following publications that are directly applicable to the Merchant Marine are available and may be obtained upon request from the nearest Marine Inspection Office of the United States Coast Guard. The date of each publication is indicated in parentheses following its title. The dates of the Federal Registers affecting each publication are noted after the date of each edition.

CG No.	TITLE OF PUBLICATION
101	Specimen Examination for Merchant Marine Deck Officers (7–1–58).
108	Rules and Regulations for Military Explosives and Hazardous Munitions (8–1–62).
115	Marine Engineering Regulations and Material Specifications (3–1–63).
123	Rules and Regulations for Tank Vessels (1–2–62). F.R. 5–2–62, 9–11–62, 2–6–63, 4–4–63, 5–30–63.
129	Proceedings of the Merchant Marine Council (Monthly).
169	Rules of the Road—International—Inland (6–1–62), F.R. 1–18–63, 5–23–63, 5–29–63, 7–6–63.
172	Rules of the Road—Great Lakes (6–1–62). F.R. 8–31–62, 5–11–63, 5–23–63, 5–29–63.
174	A Manual for the Safe Handling of Inflammable and Combustible Liquids (7–2–51).
175	Manual for Lifeboatmen, Able Seamen, and Qualified Members of Engine Department (9–1–60).
176	Load Line Regulation (9–1–61). F.R. 7–27–62, 11–14–62, 2–2–63, 6–11–63.
182	Specimen Examinations for Merchant Marine Engineer Licenses (12–1–59).
184	Rules of the Road—Western Rivers (6–1–62). F.R. 1–18–63, 5–23–63, 5–29–63.
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227	Laws Governing Marine Inspection (6–1–62).
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323	Rules and Regulations for Small Passenger Vessels (Not More Than 65 Feet in Length) (6–1–61). F.R. 9–11–62, 10–5–62, 12–28–62, 1–22–63.
329	Fire Fighting Manual for Tank Vessels (4–1–58).

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CHANGES PUBLISHED DURING JULY 1963

The following has been modified by Federal Register:
CG–169 Federal Register, July 6, 1963.

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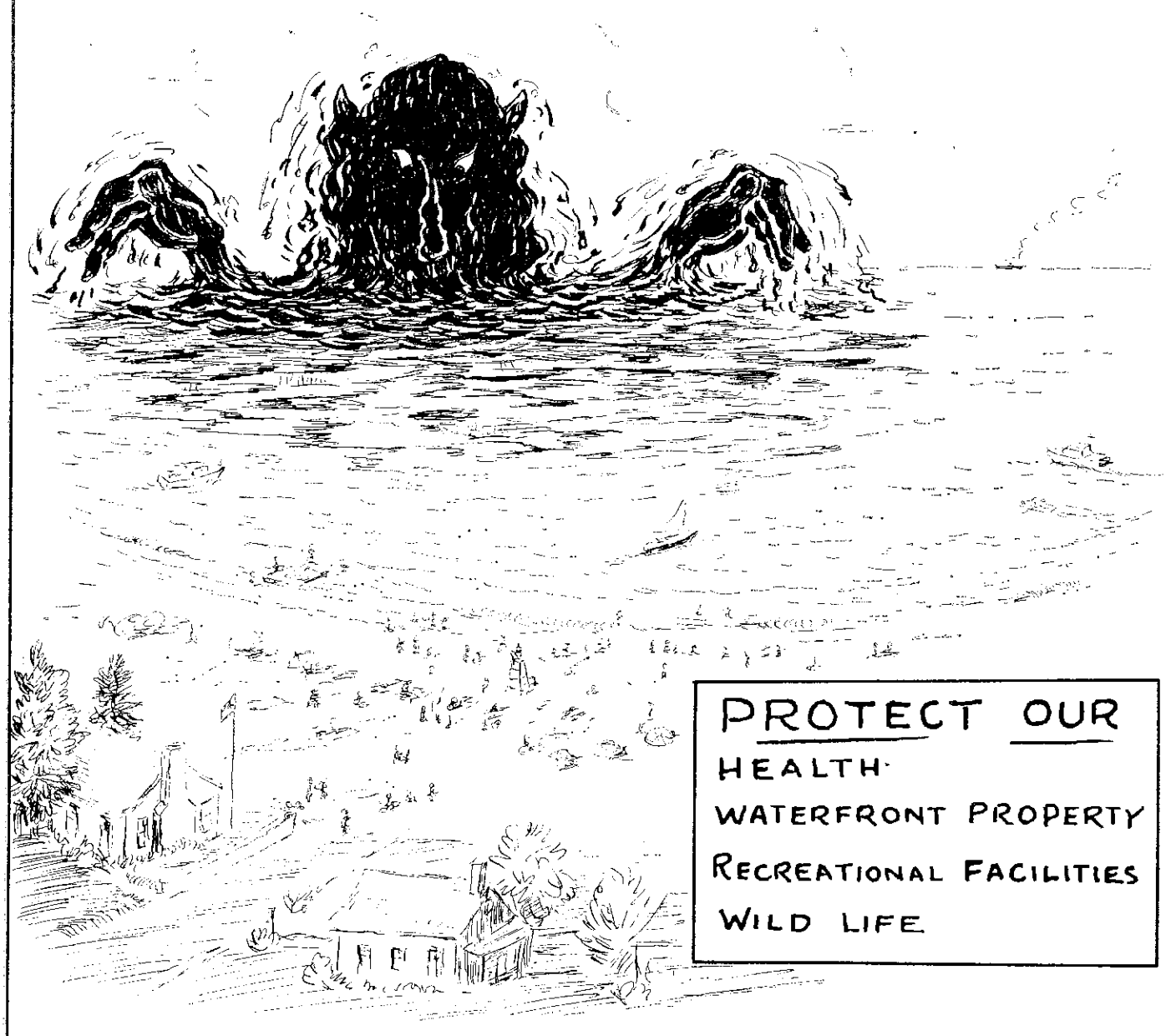
STOP - THE MENACE OF OIL POLLUTION



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