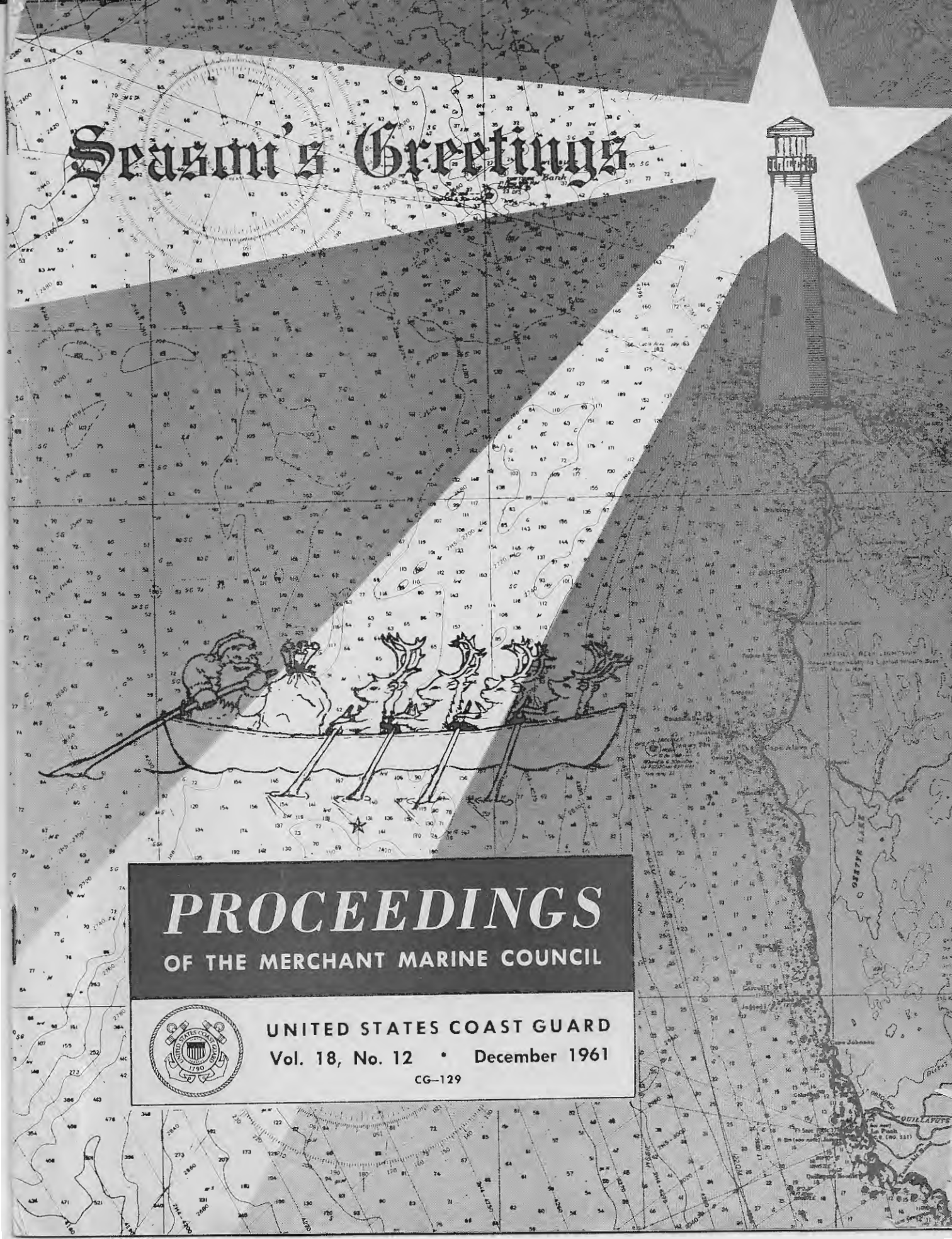

PROCEEDINGS

OF THE MERCHANT MARINE COUNCIL

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CG–129

PROCEEDINGS

OF THE

MERCHANT MARINE COUNCIL

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Christmas scene depicting Santa Claus and friends approaching the Olympic Peninsula; sketched by LCDR R. S. Dolliver, USCG.

BACK COVER

CGC *Eastwind* unloading supplies and equipment at Cape Hallett, Antarctic. This photo, taken by Kenneth Mather, Photographer 2/c, USCG, won the Grand Prize and First Place Black & White in the 1961 *U.S. Camera* contest.

Season's Greetings

The close of another year is at hand; at this time, traditionally devoted to contemplation of the past and speculation on the future, I extend my sincere best wishes to the marine fraternity everywhere both at sea and ashore. May your Christmas be peaceful, and may you enjoy the New Year in health and safety.

A. C. Richmond

Admiral, U.S. Coast Guard
Commandant

DIST. (SDL NO. 73)

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List 111

COMMENDATION

MRS. ARDEN T. PEDERSEN is shown receiving a Letter of Commendation issued posthumously to her husband who effected the rescue of 10 crew members from the stranded towboat *Elizabeth Olson*. Capt. E. H. Joyce, OCMI Portland, presented the award at a formal ceremony at Coos Bay, Oreg. Mr. Robert Fisher (far right), deckhand on Captain Pedersen's towboat *Rebel*, was also presented with a similar award for his assistance in the rescue. Captain Pedersen died of injuries suffered in an automobile accident which occurred a short time after his gallant rescue achievement.

MVI
26 MAY 1961

CAPT. ARDEN T. PEDERSEN,
Rt. 2, Box 1842,
Coos Bay, Oreg.

DEAR CAPTAIN PEDERSEN: The Coast Guard, as the principal agency of the United States charged with the safety of life and property at sea, is pleased to commend you for your courage and outstanding seamanship when, as master of the towing vessel *Rebel*, you effected the rescue of 10 crew members of the towing vessel *Elizabeth Olson* which had grounded on the Coquille River entrance bar on 30 November 1960.

The report of the Coast Guard investigation into the circumstances of the casualty disclosed that the *Elizabeth Olson* grounded on the Coquille River entrance bar at 8:50 a.m. and was breaking up from the effects of a strong flood current and heavy swells. The *Rebel* had safely crossed the bar, but when called for assistance by the *Elizabeth Olson*, you reversed the *Rebel's* course and despite the danger of becoming similarly stranded went immediately to her aid. You maneuvered the *Rebel's* stern near the bow of the stranded vessel and during periods between swells the imperiled crew jumped overboard and with the assistance of your deckhand, Mr. Bob Fisher, of Box 902, Brandon, Oreg., were safely brought aboard. In this manner, 10 of the 11 crew members were rescued by the *Rebel*, the eleventh man having been washed ashore unharmed. Within an hour the *Elizabeth Olson* broke up and became a total loss.

Bnt for the timely and effective efforts of yourself and Mr. Fisher the unfortunate accident to the *Elizabeth Olson* may well have been occasioned by loss of life. This achievement, which shonld afford you a large measure of personal satisfaction is deserving of the highest praise.

Sincerely yours,

J. A. HIRSHFIELD,
Vice Admiral, U.S. Coast Guard,
Acting Commandant.

RESCUES

The Sinclair Refining Company tanker *Sheldon Clark*, was the first rescue ship to reach an aircraft of the 306th Air Refueling Squadron which ditched in the ocean last year. Capt. John J. Morgan, Master of the sea tanker recently met Maj. Richard A. Gieger, USAF, pilot of the ditched air tanker, for the first time. Present were the Commanding Officer of the Squadron based at MacDill Air Force Base, Tampa, Fla.; high officials of the refining company, and representatives of the American Merchant Marine Institute and the Marine Section, National Safety Council.

On behalf of the Institute and the Marine Section, Capt. J. O. Thompson, USCG, presented Captain Morgan the two associations' Ship Safety Achievement Citation of Merit, in commemoration of the rescue feat of March 30, 1960. On that date the *Sheldon Clark* made a record run of 103 miles in search of survivors after receiving an SOS from the United States Coast Guard at Miami. Shortly after midnight on March 31, she was successful in picking up two of the survivors from the downed aircraft, Maj. R. D. Yates and 1st Lt. J. H. Taft. She then continued her search until all survivors had been picked up by one or another of several rescue vessels by then on the scene. Major Gieger was picked up by another ship and hence met Captain Morgan for the first time at the award presentation.

The crew of the *Sheldon Clark*, performed according to the best traditions of the sea throughout the period of search and rescue. Of dramatic interest was the meeting between the pilot of the air tanker who decided to ditch because of engine trouble and the captain of the sea tanker who hastened to his assistance under hazardous and difficult conditions.

The crew and the master of the States Marine Lines Freighter *Blue Grass State* involved in the rescue of 11 survivors from a stricken Mexican vessel have been honored for heroic action by the governments of Mexico and the United States.

The awards were made during a ceremony recently when the *Blue Grass State* was berthed in Seattle. Documents signed by the Secretariat of Marine of Mexico and by Acting Maritime Administrator Thomas E. Stakem were presented to Capt. Fred E. Arnold, who was master of the U.S. ship on Oct. 28, 1959, when the survivors were picked up in the Pacific.

The rescued men were from the Mexican-flag motorship *Sinaloa*, which floundered during a tropical storm.

REVIEW OF MARINE CASUALTIES

By Commander John H. Hawley, USCG
Chief, Casualty Review Branch, Headquarters

AT THE ENTRANCE to the Archives in Washington is inscribed "What is Past is Prologue." One story has it that a visitor to the Capital asked his taxi driver what it meant. The cabbie replied "It means we ain't seen nothin' yet."

From a marine casualty point of view, at least, we've seen plenty. In many areas we've profited by past mistakes. In others more effort is indicated. A brief review of some of the significant aspects of more recent casualties may light the way.

You no doubt will recall the *Amoco Virginia* disaster on 8 November 1959 in the Houston Ship Channel. The vessel was loading automotive gasoline and number 2 heating oil at the Hess Terminal.

The evidence developed by the Marine Board of Investigation was largely circumstantial but it appears that there was accidental discharge of gasoline into the water from the tanker which was ignited by open flame oil lanterns used as running lights on a loaded sand barge being push-towed past the area. Incredible as it may seem, the evidence indicated that the night mate in charge of loading aboard the *Amoco Virginia* and the master of the tug *Pan Six* who was the officer in charge of the pumping operations on two tank barges alongside had both been put on notice an hour or more before the fire that there was gasoline on the water around the vessel but pumping operations were continued. Six crew members from the *Amoco Virginia* and one fireman lost their lives as a result of that casualty.

This article on marine casualties was delivered by Commander John H. Hawley before the Marine Section of the National Safety Council during the 1961 National Safety Congress in Chicago, Ill.—ED.

Aside from the more obvious lesson, this casualty pointed up the problem created by accidental spillages of any commodity which might create a hazard to safety. In the *Amoco Virginia* case, the Board also found that at some time prior to the casualty a tank barge had been holed while being shifted and as a result gasoline flowed into the channel. While not contributing since it preceded the fire by 12 hours, it unquestionably created a dangerous situation at that time.

Largely as a result of this casualty, the entire problem of spillages, leakages, or discharge of hazardous or dangerous material into navigable waters of the United States has been made the subject of a special Coast Guard study. That study is still going on. The problem is vast and goes beyond the basic responsibility of the Coast Guard for safety of life at sea. While petroleum products in the water are primarily a hazard to ships and waterfront facilities, the spillage of other dangerous materials such as

poisonous chemicals into rivers which provide water for drinking and industrial purposes could conceivably imperil the lives and livelihood of thousands of people. The solution is basically simple. Prevent spillages and discharges to the extent possible.

This is nothing new. Normally, no vessel will purposely dump cargo into the rivers. On the other hand, accidents do happen. Recognizing the potential danger if some commodities are accidentally spilled, extra care is indicated when they are being handled. Greater attention to navigation and the placement of barges strategically within a tow are two of the more obvious considerations. When accidental spillages occur, immediate reporting by the master, operator, owner, or person in charge is essential so that precautions may be taken to close off water intakes and protect waterfront facilities as well as other shipping. For the present time at least, such reports should be made to the nearest office of the Coast Guard.

Undoubtedly when the Coast Guard study is completed, there will be recommendations for specific regulations in this regard.

PASSENGERS' LIVES LOST

A 14-year record for U.S. ocean going certificated passenger ships was broken on 22 October 1960 when the combination freight and passenger vessel *Alcoa Corsair* collided with the Italian freight vessel *Lorenzo Marcello* in the lower Mississippi River. Five passengers and five crew members lost their lives and six passengers and four crew members were injured in this casualty—all from the *Alcoa Corsair*. Not since 1946 has a passenger been killed aboard an inspected U.S. ocean going passenger vessel as a result of a vessel casualty. It was in that year that the passenger vessel *Yukon* stranded on the shores of Cape Fairfield, Alaska, with the subsequent loss of nine passengers and two crew members and the total loss of the vessel.

The *Alcoa Corsair/Lorenzo Marcello* collision, typical of most other collisions, was due to personnel fault. The *Alcoa Corsair* was downbound and rounding 60 Mile Point which entails about a 90° right turn over a 2-mile course. The *Lorenzo Marcello,* upbound, was heading for the Point as is the custom and the *Alcoa Corsair* was keeping to the bend. It was a clear dark night. The vessels were in sight of each other when over 2 miles apart and when within 1½ miles, two-blast signals were exchanged. There were conflicting versions as to what subsequently occurred but two facts were indisputable. The *Alcoa Corsair* was permitted to swing about 16° farther right than the axis of the channel below 60 Mile Point and the *Lorenzo Marcello* turned right at the last minute in the face of the *Alcoa Corsair*. It was the opinion of the Coast Guard that this casualty was caused by the failure of both vessels to navigate with caution. The *Alcoa Corsair* failed to make a timely and sufficient alteration of course to port to insure a safe starboard to starboard passing and the *Lorenzo Marcello* failed to recognize the increasing danger of the situation which should have been apparent.

The case was unique in one respect. In the face of the traditional master/pilot relationship, it is seldom that the vessel's officers do not share the blame for an accident. In this instance the situation was more than just a case of meeting vessels but one of vessels meeting in a river where a knowledge of local conditions and customs dictated the special qualifications of a pilot. In addition, it was considered that under the circumstances, the officers on the bridges of the two vessels who were not pilots would not realize that their vessels were standing into danger prior to the time collision was imminent. Hence, it was concluded that the responsibility for this collision rested solely with the pilots of the two vessels.

RADAR

No review of past casualties would be complete without comment about radar. In the past 2 fiscal years there have been two particularly significant radar cases. One was the collision between the SS *Mormacpine* and the fishing vessel *Jane* off Cape Flattery, Wash., on 27 September 1959 and the other was between the British freighter *South African Pioneer* and the fishing vessel *Powhatan* off Cape May, N.J., on April 10, 1961.

In the first case, the *Mormacpine* was proceeding full ahead at 11.5 knots on a northerly heading off the Washington coast early on the morning of 27 September 1959. Upon sighting a fog bank ahead, the lookout was posted on the bow and fog signals were commenced. The engine was placed on standby but no reduction in speed was made. The radar was on and appeared to be operating satisfactorily showing a good presentation of land mass but no vessel targets were observed. The vessel had entered the fog bank and visibility was between 500 and 1,000 yards. At 0746 the master ordered right rudder to enter the Strait of Juan de Fuca. At this same time, the lookout reported by phone to the master that he heard a whistle ahead. Immediately the engine was stopped and the master checked the radar which was on the 8-mile scale but observed no vessel targets. Approximately 1½ minutes later the lookout reported sighting a vessel 1,000 feet ahead fine on the starboard bow. This later proved to be the FV *Jane*. The *Jane* appeared to be underway with little or no way on and was heading across the bow of the *Mormacpine,* from starboard to port. Upon receiving the report from the lookout, the master ordered full astern on the engines. The rudder was already hard right. The response to the engine order was immediate but these maneuvers did not succeed in evading the *Jane* and at about 0755, with the *Mormacpine* making an estimated 3 to 4 knots through the water, her bow struck and holed the *Jane* on her port side.

The *Jane,* a 49-foot, wood hull fishing vessel, was en route Neah Bay, Wash., to Destruction Island. After clearing the harbor, she headed west at half speed—approximately 5 knots—into a 9-foot westerly swell. At 0720 fog was encountered. Fog signals were commenced and speed was reduced to 4 knots. The *Mormacpine* was first observed bearing down on the port side of the *Jane* about 50 or 60 feet away. The *Mormacpine* was undamaged but the *Jane* was severely holed and sank 3 minutes after the collision. Three of the five crew members aboard the *Jane* were rescued but the master and the fifth crew member were lost.

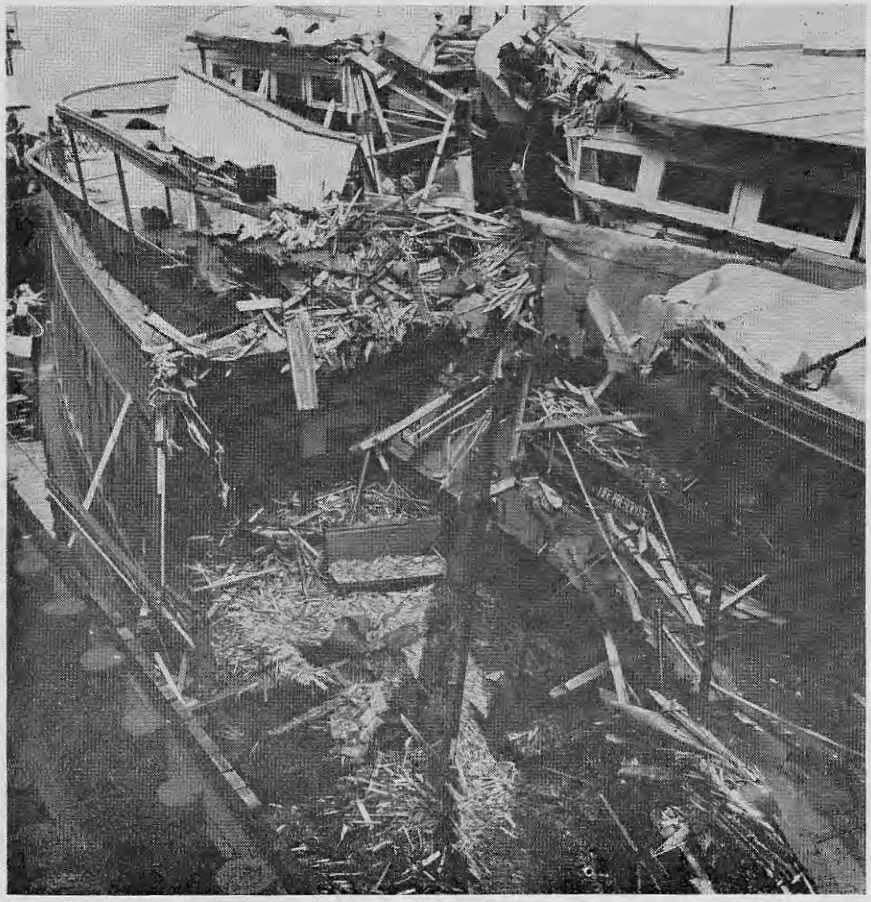
In the second case the *South African Pioneer* was en route to New York from Charleston, S.C., heading on a course of 015° T at 14 knots. At about 0542 on the morning of 10 April 1961 visibility decreased to 1½ miles. Fog signals were commenced and the engine was placed on standby which would result in a reduction of speed to 10.2 knots as the vessel reached maneuvering RPM. The radar was on the 8-mile scale. Sea return extended 3 miles from the center of the scope and rain areas appeared beyond this range. No contacts were observed on the scope. At 0545 the lookout was sent below to call the stewards' department. Between 0549 and 0550 a red light was observed close aboard 10° on the starboard bow. Hard right rudder was ordered and moments later was shifted to hard left, then amidships and full astern. At 0551 the stern of the *Pioneer* struck the *Powhatan* amidships on the port side at a 60° angle. The *Pioneer's* speed was estimated to be slightly under 10 knots.

The *Powhatan,* a 78-foot wood hull fishing vessel was proceeding south-southwest at a speed of 7 knots towards Hampton, Va., through rough seas and heavy swells. There was no lookout on the bow. There was a helmsman at the wheel and the mas-

ter was making a loran fix from the receiver located in his room immediately abaft the wheelhouse. The *Pioneer* was first observed by the helmsman who shouted the warning. When the master came out of his room the *Pioneer* was so close he could not see her navigation lights. Almost immediately thereafter the *Powhatan* was struck and cut in two. The speed of the *Powhatan* at the time of impact was estimated somewhat less than 7 knots. There was no damage to the *Pioneer*. Out of five crew members aboard the *Powhatan*, four lost their lives.

In both of these cases personnel fault was considered to be the principal cause. Both the *Mormacpine* and the *South African Pioneer* were going at an immoderate speed. On both fishing vessels there was evidence of improper lookout. In both of these cases sea conditions were such that the fishing vessels could reasonably be expected to be obscured as radar targets. Both of these fishing vessels were constructed of wood and could further be expected to produce poor radar returns and on both the *Mormacpine* and the *Pioneer* the navigation personnel was undoubtedly influenced by the absence of any radar targets on the scope.

You are all familiar with the recommendations annexed to the International Rules of the Road adopted at the 1960 SOLAS Convention concerning the use of radar. The following is quoted from recommendation 2: ". . . . Information obtained from the use of radar is one of the circumstances to be taken into account when determining moderate speed. In this regard it must be recognized that small vessels, small icebergs, and similar floating objects may not be detected by radar. . . ." If heeded this recommendation should go far in preventing the type of casualty suffered by the *Jane* and the *Powhatan*. These two casualties also indicate the need for increasing the radar reflectivity of wooden vessels. Radar reflectors are available and prudence dictates that small seagoing vessels install such devices. But as pointed out by the Commandant of the Coast Guard in action on the *Mormacpine/Jane* case "the increase in radar detectability presently offered by this equipment is definitely limited and offers no assurance that vessels so equipped will be observed by radar."



In heavy seas the odds are even further reduced.

From the safety point of view another particularly significant casualty was the breaking up of the T–2 tanker *Pine Ridge* off Hatteras on 21 December 1960. The resume and Commandant's Action in this case appears in the November issue of the Proceedings of the Merchant Marine Council. Briefly, the vessel, in ballast, was heading into heavy weather. Speed had been reduced to about 9 knots. She was rolling and pitching heavily and possibly taking green seas over the bow but none of the witnesses had the impression that she was pounding or slamming hard. At 1145, 21 December, without any warning, there was a loud crack and the vessel forward of number 6 tank was observed to raise up out of the water. On a subsequent sea the vessel tore across the deck and the bow sheared around to the right, then broke completely off. At the time of the casualty the master, chief mate, second mate, third mate, radio officer, chief steward and quartermaster were in the midship house which was on the forward section. As the forward section separated the bow was observed to be high out of the water and the after end awash up to the boat deck. No lifeboats were launched from the forward section and sometime during the late afternoon or early evening of 21 December the forward section sank. There were no survivors from the forward section, nor were any bodies recovered.

The Marine Board convened to investigate this casualty found that the failure was primarily of the ductile type indicating a high stress condition. In this connection, the Board found that the loading distribution of the vessel resulted in a sag numeral of almost plus 150 and a hog numeral of almost minus 20, calculated in accordance with the American Bureau of Shipping publication "Guidance Manual for Loading T–2 Tankers." The maximum sag numeral recommended in the manual is 100 and the figure of plus 150 reflects a dangerous condition of stress.

In addition to improper ballasting, the Board concluded that the weakened structural condition of the vessel was also a contributing factor. Audio gauge readings of the main hull structure after the casualty indicated a generally borderline condition and some areas where wastage was actually excessive. The vessel had been drydocked 2 months before the casualty and was attended by a Coast Guard inspector as well as a classification surveyor and the owner's representative. There is no doubt that they

did what they thought should have been done and their requirements for repairs and renewals were made in good faith.

The problem they faced is the most difficult one in the field of vessel inspection. That is the determining of the condition of an aged vessel and deciding what must be done to permit the vessel to continue operating with safety. It seems logical that as a vessel advances in years, examinations and inspections must necessarily be increasingly detailed and critical. Beyond that there must be a satisfactory resolution of the differences of opinion which are bound to arise. In his action on the *Pine Ridge* case, the Commandant commented as follows in this regard: "Obviously the proper balance between economy of operation and safety can only be achieved with full cooperation, mutual assistance, and a frank exchange of information between those directly concerned."

TRENDS

During fiscal 1961 there were 2,015 casualties to commercial vessels reported to the Coast Guard. This compares with 1,988 the year before. In fiscal 1961, 156 persons lost their lives in vessel casualties aboard commercial vessels of all sizes as opposed to 153 in fiscal 1960.

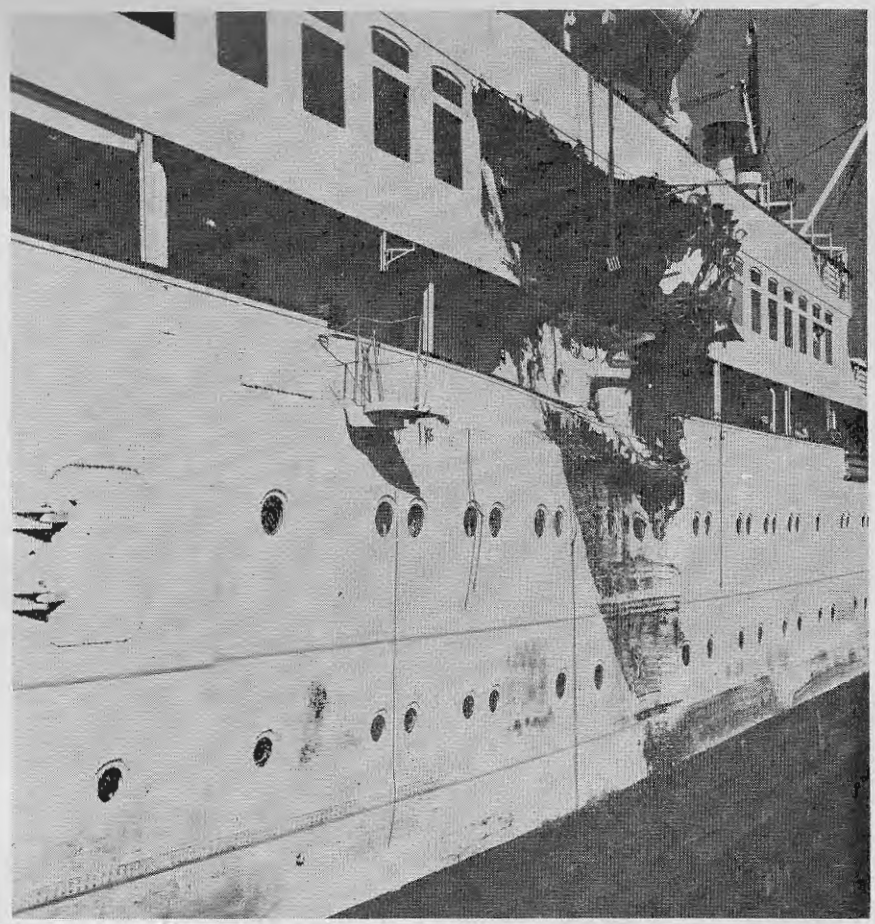
Forty of these deaths occurred on inspected vessels and 116 on uninspected vessels. Among the uninspected vessels those engaged in commercial fishing once again accounted for the most deaths with a total of 58. Uninspected tugs ran second with a total of 21. The classification of vessel casualty which accounted for the greatest percentage of these deaths on uninspected vessels was flooding, sinking, and capsizing. In the case of commercial fishing vessels 29 lost their lives in casualties of this type and on uninspected tugs 16 lost their lives.

PERSONAL ACCIDENTS

In our tabulation of personnel accidents aboard commercial inspected vessels the category which accounted for the greatest number of deaths in fiscal 1961 was death from natural causes. The total was 165. In this category 80 of the deaths to crew members resulted from one of the cardio vascular diseases.

The second largest number of deaths from personal accidents on board inspected vessels occurred as a result of falling overboard. Sixteen persons were killed from this cause of which nine were crew members.

Aboard uninspected commercial vessels the situation was reversed.



Natural causes was second, having accounted for 26 deaths of which 21 resulted from cardio vascular disease to crew members.

The major cause of death from personal accidents aboard uninspected commercial vessels was falling overboard. A total of 70 lives were accounted for in this category of which 28 were crew members off fishing vessels and 27 were crew members off tugs and tows. These figures on deaths from falling overboard are the most disturbing of the year. On uninspected vessels this was the greatest single cause of death.

In June 1959 when the Coast Guard issued its first approval on the work vest type life preserver it was hoped that deaths due to falling overboard would be materially reduced. They haven't. The reports of investigations received on these cases indicate that in most instances on tugs, tows, and dredges life vests were available. How can we get people to wear them? Stating it more broadly, how can we get people to take safety precautions of any kind?

Scare statistics obviously have little effect and certainly our seamen if not our entire population are safety educated. The problem seems to lie in the same basic human weakness that keeps us from taking our doctor's advice. If this is true, it would appear that more forceful leadership on the part of ships' officers and other designated supervisors among the unlicensed persons can go a long way towards correcting the unsafe conditions and preventing unsafe practices which cause these casualties.

Our records appear to indicate that in the lower echelons particularly there is a marked reluctance on the part of supervisors to insist on safe work methods. This is especially true if the subordinate himself is known to be an experienced man. Going back for a moment to the figures on deaths resulting from falls over the side, if the masters or supervisors required that life jackets or life vests be worn and accepted no deviation, it is reasonable to assume that many of those who died would still be with us.

The third largest number of deaths from personal accidents on inspected commercial vessels occurred as a result of suicide. Twelve persons died in this manner of which nine were

crew members and three were passengers. In addition, 11 crew members disappeared from inspected vessels under circumstances which suggested the possibility of suicide.

The third largest number of deaths from personal accidents on uninspected commercial vessels resulted from disappearances of which there were nine cases, eight of which involved crew members. While some of these cases might have been suicides six cases were on fishing vessels which tends to increase the probability of accidental falls.

On commercial uninspected vessels, positive suicides were almost inconsequential with only two cases tabulated.

Among the categories which account for the greatest number of nonfatal personal accidents resulting in incapacitation for a period in excess of 72 hours, slips and falls on deck and other slips and falls same level accounted for the most with a combined total of 202 injury cases on all commercial vessels both inspected and uninspected. In these categories no one was killed aboard inspected vessels but two were killed on uninspected vessels. The principal causes of these accidents were unsafe practices and poor maintenance or housekeeping which accounted for 57 cases; human error not otherwise classified, which means a misstep on the part of the individual, accounted for 46 cases; and weather conditions were given as the cause in 53 cases.

The second largest group of injuries occurred as a result of slips and falls on ladders and stairs. There were 116 injury cases in this group covering all commercial vessels plus 2 deaths on inspected vessels but none on uninspected vessels. Principal causes were unsafe practices or conditions and missteps in that order.

Our casualty reports in recent years are beginning to reflect a greater number of personal accidents being attributed directly to intoxication. During fiscal 1961, 11 deaths and 41 injuries were considered to have been caused primarily by intoxication. Fights aboard ship are also accounting for more casualties. There was 1 death and 92 injuries recorded in this category. It is doubtful that this reflects a true increase in casualties of these types but rather that reporting superiors and even witnesses are becoming less reluctant to call a spade a shovel.

From an analysis of the death and injury tabulations it is apparent that continued efforts to make vessels safe have paid off and this is particularly true of inspected vessels. Of course, there is still plenty of room for improvement as evidenced by some of the individual cases we have discussed here. On the other hand the sum of our casualty experience for fiscal 1961, supported by figures for previous years, indicates that greater effort must be exerted to get individuals to work safely. It is in the area of personnel fault, both from the standpoint of vessel casualties and personal accidents, that the greatest strides towards maximum safety remain to be made.

COAST GUARD RADIO STATION NMH

(JOINS AMVER OPERATING FACILITIES)

About 1 September 1961 the U.S. Coast Guard Radio Station, call NMH, joined those already operating with AMVER traffic, as an additional facility. Station NMH will operate only in the 16 and 12 mcs marine bands. Located somewhat inland, near Washington, D.C., it will leave the operation on lower frequencies to the coastal stations. NMH has long been used as the primary radio link to the Coast Guard's ocean station vessels far at sea and this shore station has antenna systems particularly effective at the higher end of the HF band. Merchant vessels should find improved operation at distances now that NMH is available.

Station NMH will listen on the standard 12 mc marine band continuously, and on the standard 16 mc marine band in daytime only. The transmitting frequencies for each of these bands will be the same as those used by present AMVER coastal stations, namely 12718.5 kcs and 17002.4 kcs.

Station NMH is not listed in the AMVER instructions as now available and held widely. No difficulties appear likely however. Station NMH will respond not only to its own call, but also to the general Coast Guard call NCG, and to calls to NMF, NMY, and NMN in the 12/16 mcs bands. The latter three stations are at Boston, New York, and Norfolk. They will continue their present schedule of AMVER traffic in the 8 mc marine band and the 500 kcs band, but will stop operating in the 12 and 16 mcs marine band of frequencies. As stated before, station NMH will transmit on the same frequencies as used now by NMF, NMY, and NMN so far as the 12/16 mcs bands are concerned. In this way, Radio Officers who may not read this announcement will still be able to send AMVER traffic using the present AMVER instructions and schedules.

Station NMH has direct teletype connection to the AMVER Center in New York, the same as the other Coast Guard Radio Stations of the AMVER network located in the continental United States. Messages sent to NMH addressed to Coast Guard New York will be delivered just as rapidly as if they were sent to NMY in New York.

Several advantages to these guard schedule changes seem likely. We expect that NMH, by combining the traffic of three stations, will be much more active thereby enabling distant radio operators to locate the station's frequency more readily. Advantage is seen in that fewer persons having more activity will enable Coast Guard operators to become proficient in the special operation peculiar to these frequency bands. Considering also that the antenna system in use at NMH is much superior on 12/16 mcs to that at any of the coastal stations (which are limited by land availability), the present changes should be a major improvement for 12/16 mcs band operations.

We would like to have a much larger portion of AMVER radio traffic use the 12/16 mcs channels. In fact, we see the increasing clutter in the 500 kc band as a weak point of AMVER communications because this reduces the efficiency of distress monitors. Some Radio Officers may not be aware that sending AMVER messages on 12/16 mcs to a more distant station, NMH for example, has no disadvantage for the AMVER system compared to using 500 kcs with a shore station close aboard. Both radio stations use the same landline teletype network to the AMVER Center in New York. The common landline circuit is true only for radio stations located in continental United States, however. Thus, the "outside" stations should be avoided if traffic can be readily cleared to a "continental" station, thereby reducing "relays." The addition of NMH to the AMVER list is expected to help in "direct" transmissions over long distances.

DRINKING OF SEA WATER
BY SHIPWRECKED MARINERS NOT RECOMMENDED

The question of whether or not shipwrecked mariners should or should not drink sea water has received widespread publicity in view of Dr. Alain Bombard's experiments and subsequent advocacy of the practice.

The April, 1960 issue of the Proceedings published the comments of the Netherlands and German delegations to the Maritime Safety Committee of IMCO wherein a strong stand was taken against the practice.

This article is a corollary to the April, 1960 article, and is a report of the subsequent panel discussion held by experts under the auspices of the World Health Organization who concluded that drinking sea water was definitely not advisable.—ED.

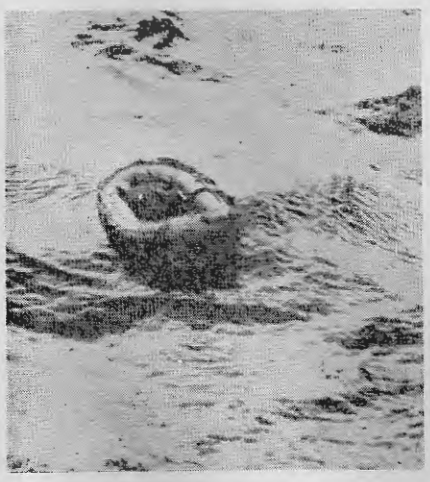
IN VIEW of the concern expressed by some of the members of the Inter-Governmental Maritime Consultative Organization over recent publicity of a viewpoint that drinking sea water was harmless, IMCO requested an expression of opinion from the World Health Organization (WHO) on this matter.

Five international experts were selected. After extensive discussion the experts, who consisted of prominent physiologists, research scientists, and naval doctors, were of the opinion that shipwrecked persons should not drink sea-water nor mix it with fresh water if the latter is in short supply.

The following summary is representative of the experts' views:

The experts agreed that ingestion of sea-water had injurious effects on both mind and body. They pointed out that not only is sea-water a cathartic, but, owing to the limitations of the human kidney, an individual who drinks sea-water can only excrete its salts by drawing on the water in the body and thus becoming still more dehydrated. If the salts are not excreted, they will have an equally bad effect by increasing the concentration of salts in the body fluid.

Moreover, consumption of even small amounts of sea-water has been found to affect some people mentally, and records show that those who have taken large quantities are likely to become irrational or crazed, if not suicidal. The experts also rejected the contention that it was possible to eke out usefully a limited supply of fresh water by adding sea-water to it. Although this has been successfully demonstrated experimentally in certain animals, there is no acceptable evidence that it would be similarly safe for humans.



Apart from the physical effects of drinking sea-water, the experts were of the opinion that morale was of primary importance to survival at sea. They felt it necessary to make it widely known that death from lack of water alone is scarcely a possibility within several days.

EXPERIMENTS

Experiments show that a man can remain reasonably fit without fresh water for six days. People have in fact survived at sea for twice as long without fresh water. If fresh water is available, 500 millilitres (one pint) per day, supplemented if possible by 100 grammes (3½ oz.) of carbohydrates, has been shown to be enough to maintain a man almost without deterioration for at least six days.

The experts have drawn up the following advice for those who may have to abandon ship:—

(1) Unless you find yourself in charge of a party, do what you are told. Try to remain cheerful. Discipline and morale count for more than anything else.

(2) If you have a remedy for seasickness in your possession, take it.

(3) If the temperature is low, cold will be your immediate and most dangerous enemy. Put on, therefore, as many woollen clothes as you can. They will help to keep you warm in the water or in a covered raft and your life-jacket will always keep you afloat even if you are fully clothed.

(4) In the tropics, avoid sunburn, keep yourself shaded and your clothes moist to reduce sweating and conserve body water.

(5) Drink no water for the first 24 hours you are adrift, then take 500 ml. (one pint) of fresh water each day until supplies are running low and thereafter 100 ml. (one-fifth of a pint) a day.

(6) Never drink sea-water and never mix sea-water with fresh water if the latter is in short supply. Seawater has been used to moisten the mouth, but the temptation to swallow it may be almost irresistible and the practice should only be attempted if the subject has complete self control.

The participants at the Geneva discussions were: Surgeon-Captain F. W. Baskerville of the Medical Department of the Royal Navy, London; Dr. J. Fabre of the University of Geneva; Dr. H. Laborit, Chief Doctor of the Navy, Paris; Professor R. A. McCance of the Medical Research Council and the University of Cambridge; Professor A. V. Wolf of the Department of Physiology, University of Illinois. The World Health Organization secretariat was represented by Dr. R. C. Burgess and Dr. C. Petitpierre.

Courtesy The Range Light

MARITIME SIDELIGHTS

The U.S. Department of Commerce announced recently that research engineering staffs and facilities of three universities will be employed under separate contracts with the Maritime Administration to study the effects of "sea slamming" on ship structures, seakeeping qualities of ships, and ship controllability.

Research to be performed under a contract with the University of California will include studies aimed at the reduction of both local structural bottom damage and superimposed hull stresses associated with sea-slamming of merchant ships.

The Massachusetts Institute of Technology contract calls for research in seakeeping qualities of ships. This will include research into increasing ship speed in head seas, which will entail analyses of ship motion data and model experiments in regular and irregular waves.

Third under the Maritime Administration's University Research Program is a contract with Stevens Institute of Technology for long-range research in ship controllability. This will require research evaluation of the hydrodynamics of merchant ship turning and steering, looking toward the improvement of merchant ship steering in rough seas and maneuvering qualities in restricted waters.

⚓ ⚓ ⚓

The start of a modernization program for the intercoastal fleet of the Weyerhaeuser Steamship Co. was marked recently in San Francisco by the reconditioning of the liberty ship *F. E. Weyerhaeuser*. This is the first of six similar ships to be reconditioned for use in the intercoastal trade.

⚓ ⚓ ⚓

The SS *Del Oro* the last in a series of three new general cargo vessels being built by Avondale Marine Ways, Inc. for the Delta Line of the Mississippi Shipping Co. was delivered recently to its owner. The vessel is approximately 506 feet by 70 feet by 28 feet and has among other innovations a 21-foot detachable blade stainless steel propeller which represents the first installation of its type on a vessel of this size.

AWARD OF MERIT

NATIONAL AWARD for safety and sanitation were presented to the lake fleet division of Republic Steel Corp. in ceremonies aboard the SS *Thomas F. Patton*.

The National Safety Council's Award of Merit was presented to Capt. A. R. Tyrrell, Master of the *Patton* by L. W. Dutton, staff representative of the National Safety Council, in recognition of the fleet's 86 percent improvement in accident frequency and 98 percent improvement in accident severity over the past 3-year marine shipping industry average.

The U.S. Department of Health, Education and Welfare's special citation for excellence in sanitation was presented by Capt. R. J. Van Derwerker, regional program director, engineering service, U.S. Public Health Service.

J. C. Clingenpeel, chief engineer for the *Patton*, accepted the citation on behalf of the fleet. This award is based on the fleet's score of "excellent" in official Public Health Service health surveys covering 166 separate items. Each item relates directly to protection of the health of the fleet's crews.

At the award presentation ceremonies were, left to right: H. L. Allen, vice president in charge of operations, Republic Steel Corp.; J. C. Clingenpeel, chief engineer, and Capt. A. R. Tyrrell, master, SS *Thomas F. Patton;* and M. E. Kingsbury, vice president in charge of operations, Wilson Marine Transit Co., which manages and operates the nine ships in Republic's lake fleet.

French Naval architects have been conducting an investigation into the problem of stresses imposed on vessels as a result of wave action. The last paper on the subject is entitled "First Results of Statistical Study of the Stresses on Merchant Ships at Sea" by M. M. Jourdain of the French Naval Construction Research Institute. Stress readings taken on ships of varying types and sizes are noted and the author shows that there is a fair relation between the various sets of readings. In general the stresses were low, and none exceeded 6½ tons per square inch.

nautical queries

DECK

Q. Under certain conditions in the Northern Hemisphere it may be assumed that the current sets 30° to the right of the direction in which it is driven by the wind and its velocity is 2 per cent of the wind velocity. Basing your answer on the foregoing statement, estimate the direction and velocity of the current that may be expected if the wind is from the Northeast at 25 knots.

A. 255°—0.5 knots

Q. What is sidereal hour angle?

A. Sidereal hour angle is the angular distance west of the vernal equinox; the arc of the celestial equator, or the angle at the celestial pole, between the hour circle of the vernal equinox and the hour circle of a point on the celestial sphere, measured westward from the hour circle of the vernal equinox through 360°.

Q. What is the vertex of a great circle?

A. The vertex of a great circle is that point on a great circle course that lies nearest the North or South Pole, depending on which is the elevated pole.

Q. The following 3 sextant altitudes of stars were obtained. The height of eye was 32 feet, the sextant index error was 1′.0 on the arc in all observations. Given:

	Observation No. 1	*Observation No. 2*	*Observation No. 3*
Star Sext. alt	5°–19′.8	14°–12′.6	42°–37′.5
Bar. Pressure	30.5 in.	1010 mb	30.7 in.
Temperature	40° F.	21° Celsius	84° F.

REQUIRED:

The observed altitudes.

A.

	Observation No. 1	*Observation No. 2*	*Observation No. 3*
Hs	5°–19′. 8	14°–12′. 6	42°–37′. 5
I.E.	(−) 1′. 0	(−) 01′. 0	(−) 01′. 0
dip	5°–18′. 8	14°–11′. 6	42°–36′. 5
	(−) 5′. 5	(−) 05′. 5	(−) 05′. 5
App. Alt.	5°–13′. 3	14°–06′. 1	42°–31′. 0
Main Corr.	(−) 9′. 5	(−) 03′. 8	(−) 01′. 1
Add. Ref. Corr.	(−) 0′. 5	(+) 00′. 2	(+) 00′. 1
Ho	5°–03′. 3	14°–02′. 5	42°–30′. 0

ENGINE

Q. Explain why a small radial clearance is so important in a reaction turbine, and not important in an impulse turbine.

A. In a reaction turbine, there is difference of pressure of steam between the stages, and therefore end leakage causes a loss of efficiency and consequently, the radial clearances are made so as to reduce this leakage as much as possible. With these small radial clearances, there is therefore great danger of the blading touching from lack of adjustment or improper expansion during warming up periods. For these reasons, the radial clearance must be very carefully watched.

In an impulse turbine, there is not the same danger from radial clearances, since these can be made much larger because tip leakage does not occur to any great extent. In an impulse turbine, the energy is converted into velocity and the steam is practically of the same pressure on both sides of any row of blades; hence leakage around the tips is not of special importance and the tip clearance can be made large enough to allow for any changes due to expansion or ordinary adjustments in operation.

In general, the tip clearances on an impulse turbine are materially larger than on a reaction turbine; hence the danger of touching the tips of the latter turbine is greater.

Q. Explain how you would get a modern marine turbine engine ready for operation.

A. (1) Measure clearances where indicators are installed.

(2) Start the lubricating oil pumps, and, if automatic, check the operation of the standby pump for starting in the event of failure of the main pump. Check the oil pressure and note the flow at all bearings and gearing.

(3) Open turbine drains, engage and start the turning engine.

(4) Start the main circulator and main condensate pump, recirculating the condensate from the main air ejector back to the main condenser.

(5) Start the 2d stage of the main air ejector, turn on gland seal steam and raise vacuum to 10–15 inches.

(6) Test and reset the emergency trip and slowly bring steam to the maneuvering valve, warming up and draining all lines before opening the main steam stops.

(7) Disengage turning engine and warmup turbine by running slowly, alternately ahead and astern.

(8) Start 1st stage of air ejectors and bring vacuum to normal.

Q. What precautions are necessary in lifting a turbine rotor?

A. Turbine rotors are usually lifted by means of wire rope slings and a strongback between the slings. Care must be taken in lifting the rotor so that no damage is done to blades, guides, or packings. This can be best assured by providing four cast iron guide frames fastened to the lower half of the casing or bearing pedestals and thus forming a perfect guide channel for the spindle. The packing rings and labyrinth packing should be carefully protected during handling by strips of soft wood held in place by wires. If the rotor is removed from the casing it should be placed in a properly lashed supporting rack where care must be taken not to injure the journals.

UNITED STATES COAST GUARD

ADDRESS REPLY TO:
COMMANDANT
U.S. COAST GUARD
HEADQUARTERS
WASHINGTON 25, D.C.

MVI
5 JUNE 1961

Commandant's Action
on
Joint Marine Board of Investigation; collision involving the SS *Green Bay* and USCG *Lightship Relief* (WAL–505) on Ambrose Lightship Station, 24 June 1960, with the resultant sinking of the *Relief*

The record of the Joint Marine Board of Investigation convened to investigate subject casualty together with its Findings of Fact, Opinions, and Recommendations has been reviewed.

In the early morning hours of 24 June 1960 the U.S. cargo vessel *Green Bay* was outbound from Port Newark, N.J., to India and the Middle East with 8,100 tons of general cargo. After clearing the Narrows, visibility decreased to zero in fog and remained so up until the time of collision. Gedney Channel Lighted Whistle Buoy (LL 1287) was left to port at about 0326, whereupon the vessel was maneuvered on various courses and speeds to seaward of the entrance of Ambrose Channel searching for the pilot launch. The launch was located at about 0400 while the *Green Bay* was drifting on a heading of 035° T with engines stopped. Before the pilot departed, the master took a radio direction finder bearing on Ambrose Lightship and a radar bearing was taken by the pilot. Both bearings were determined to be 070° T. At the investigation the pilot estimated that at the time he took the radar bearing, the range was ¾ of a mile. The master, on the other hand, estimated the *Lightship* to be 1½ miles distant, but this was not verified by any means. The pilot disembarked at about 0403. The engines were ordered slow ahead at about 0404 followed a minute later by half ahead, and the helmsman was told to come right to 070° T in order to head the vessel directly toward the *Lightship*. The lookout on the bow estimated he heard the fog signal from the *Lightship* about 3 minutes before collision broad on the starboard bow, then sighted the loom of the light on the same bearing. This bearing then changed slowly to dead ahead. According to the lookout, this information was relayed by telephone to the bridge by the chief mate who was also on the forecastle head, but the chief mate stated that when he first saw the loom of the light about 1½ minutes before collision it was dead ahead and this was the report he made to the bridge. The master, upon receiving the report of the loom dead ahead, went to the wing of the bridge but could see nothing. Moments later the thin loom of the light was visible ahead, whereupon he ordered the rudder hard right to 090° T to clear the *Lightship* and the engines full ahead to increase the swing. According to the helmsman, the vessel had not yet been steadied on 070° T when this order was received. Within seconds the light ahead became intense and realizing the *Lightship* was closer than he had originally thought, the master rang up full astern. A short time later, at about 0411.5, the bow of the *Green Bay* struck the *Lightship* on her starboard side just aft of amidships at almost a 90° angle. The *Lightship* was observed to roll under the impact, then the *Green Bay* began making sternway and backed clear. The engine was stopped at 0417 and the vessel anchored at 0421.

On the morning of 24 June 1960 the USCG *Lightship Relief* (WAL–505) was in position at the Ambrose Lightship Station. When the deck watch changed at 0345, visibility was noted to be zero due to fog. A check of the fog signal, radiobeacon, and the light showed all to be operating properly. A short time after 0400, a fog signal was heard close aboard. About a minute later a second fog signal was heard and a white light and the black shape of a vessel were observed approaching on the starboard side. The deck watch called the man on watch in the engineroom to come topside and when he arrived on deck, the vessel, later determined to be the *Green Bay*, was about 50 feet away. The general alarm was sounded and within seconds, at about 0411.5, the bow of the *Green Bay* struck the *Relief* at about a 90° angle just aft of amidships. The *Relief* rolled about 15° to port as a result of the impact, then righted herself as the *Green Bay* backed clear. A check of the damage disclosed that the vessel had been holed and the engineroom was flooding. Shortly thereafter the generator ceased operating. The order to abandon ship was then given. All hands were mustered and left the vessel in a self-inflating rubber raft. By this time the vessel was down by the stern and a few minutes later was observed to go down stern first. At about 0530 the crew of the *Relief* was located and picked up by the motor lifeboat from the *Green Bay*.

There were no lives lost as a result of this collision. One man aboard the *Relief* received minor injuries to his knee and hip. Damage to the *Green Bay* was confined to the stem and was estimated to be in the amount of $3,000.

REMARKS

It is considered that this casualty was caused principally by the *Green Bay* being headed directly toward the *Lightship* in zero visibility.

Contributing to the casualty was the failure of the vessel to fix her position either by radar or radio direction finder bearings before setting her course.

Concurring with the Board, the engine order of half ahead under the existing conditions was excessive particularly in view of the fact that the master apparently had no confidence in his radar due to previous erratic operation in addition to the fact that the distance to the *Lightship* was never established.

On the basis of the evidence in the record, no conclusion can be drawn as to the cost of salvaging and repairing, or in lieu thereof, replacing the sunken lightship. The exact damage and the claim to be asserted therefor will be determined by separate action.

By copy hereof the Commander, Third Coast Guard District, is directed to take such action as may be indicated with respect to the performance of duty of Coast Guard personnel during this incident.

Subject to the foregoing remarks, the record of the Marine Board of Investigation is approved.

A. C. RICHMOND,
Admiral, U.S. Coast Guard,
Commandant.

TABULATION OF UNSAFE PRACTICES

January through June 1961

	Atlantic	Great Lakes and rivers	Gulf	Pacific	Total
A. Access to Vessel					
Gangways, accommodation ladders, etc.					
1. Length, width, strength, etc., inadequate	8	16	4	4	32
2. Rigged or secured improperly	9	20	15	9	53
3. Angle too steep	6	23	3	8	40
4. Not clear at either end	2	7	3	3	15
5. Water discharging onto	-----	2	-----	1	3
6. Hand ropes or rails not provided or inadequate	6	16	7	11	40
7. Insufficient number	5	1	1	1	8
8. Lifeboat or other object suspended over access	1	1	1	1	4
9. Ring lifebuoy with lanyard not provided or inadequate	25	30	25	19	99
10. Other	5	9	14	6	34
B. Access to Spaces on Board Vessel					
Ladders					
11. Rigged improperly	4	-----	3	13	20
12. Rungs, steps, or treads missing or loose	23	15	12	40	90
13. Deteriorated or weakened	15	5	16	20	56
14. Handrails missing or inadequate	3	7	9	11	30
15. Doors or passages cluttered	10	3	8	7	28
16. Escape means blocked or locked	10	4	1	5	20
17. Other	20	3	1	5	29
C. Deck and Hull Openings					
18. Hatch covers, dangerously piled or placed	8	1	7	3	19
19. Hatch covers, missing or defective	12	7	9	8	36
20. Hatch covers, securing means defective	7	31	10	6	54
21. Hatch beam locking lugs, missing or defective	-----	2	-----	6	8
22. Lifelines, chains, rails, or guards missing or inadequate	22	13	8	16	59
23. Other	9	7	9	12	37
D. Decks and Platforms					
24. Slippery due to oil, grease, etc	30	37	26	27	120
25. Cluttered	17	13	8	14	52
26. Floor plates or gratings loose or not in place	12	19	4	15	50
27. Rails and guards missing or inadequate	17	9	11	19	56
28. Other	6	6	2	3	17
E. Cargo Handling					
29. Safe load not marked on booms	1	-----	4	5	10
30. Guys, falls, booms, etc., improperly rigged	1	-----	-----	-----	1
31. Over loading gear	-----	-----	-----	-----	-----
32. Jury rig winch controls	-----	-----	-----	-----	-----
33. Failure to use guards and gates of cargo elevators and escalators	1	-----	-----	-----	1
34. Using defective cargo gear	1	-----	-----	3	4
35. Smoking prohibition disregarded	3	-----	3	2	8
36. Stowage or handling of cargo or gear	2	2	1	2	7
37. Other	2	2	3	4	11
F. Lifesaving Equipment					
38. Not ready for use	59	11	17	24	111
Lifeboats					
39. Hoisting fully loaded	1	-----	1	-----	2
40. Personnel riding to fully stowed position	1	-----	1	-----	2
41. Preventive lashings not used when working in boat	5	-----	-----	-----	5
42. Winch power not shut off when using hand crank or performing maintenance	-----	-----	-----	1	1
43. Starting engine without ventilating	-----	-----	-----	-----	-----
44. Bypassed safety devices	1	1	-----	-----	2
45. Tricing and frapping lines improperly used	2	2	1	-----	5
46. Davit span lifelines not ready for use	6	5	4	4	19
47. Other	56	12	46	22	136
G. Fire Fighting Equipment					
48. Not ready for use	56	48	39	99	242
49. Fire screen doors blocked	6	1	-----	-----	7
50. Other	36	20	29	31	116
H. Ventilation					
51. Neglect to observe safety precautions prior to entering	1	1	-----	-----	2
52. Use of toxic solvent in confined spaces	2	-----	-----	-----	2
53. Grease, dust, litter in ventilation system	5	5	4	3	17
54. Cowls, mushrooms, etc., frozen	21	2	3	19	45
55. Insufficient ventilation	3	9	2	8	22
56. Other	19	19	16	11	65
I. Electrical					
57. Extension cords defective	36	26	11	13	86
58. Portable equipment not grounded	20	32	10	55	117
59. Overfused circuits	72	5	14	5	96
60. Jury rigged circuits	82	29	39	46	196
61. Caps for receptacle outlets not in place	84	38	63	129	314
62. Switch and fuse box panels in passenger spaces left unlocked	13	-----	6	4	23
63. General alarm bells muffled or dampened	24	14	26	18	82
64. Vapor globes and guards not in place	121	63	55	114	353
65. Use of defective equipment in hazardous spaces	12	16	4	1	33
66. Other	42	43	32	31	148
J. Machinery					
67. Failure to take safety precautions in lighting-off boiler	4	-----	3	1	8
68. Spring-loaded valves on sounding pipes secured in open position or not in place	24	2	10	26	62
69. Machinery guards not in place or defective	46	14	18	28	106
70. Failure to block or safeguard steam valves when working on steamlines or inside a boiler, evaporator, etc	2	-----	1	-----	3
71. Other	39	32	33	14	118
K. Welding, Burning, Heating, or Riveting					
72. No gas-free certificate for "hot work" where required	-----	1	4	2	7
73. Inadequate fire watch	4	6	1	6	17
74. Ventilation insufficient	-----	-----	-----	2	2
75. Personnel protective equipment inadequate	-----	-----	-----	-----	-----
76. Other	-----	-----	3	1	4
L. Tank Vessels					
77. Ullage holes or expansion trunk openings open without flame screens	20	25	25	4	74
78. Vent header drains left open	1	2	2	-----	5
79. Deck battens or wooden gratings not provided where needed	-----	7	-----	-----	7
80. Failure to comply with "Declaration of Inspection Prior to Bulk Cargo Transfer"	-----	-----	-----	-----	-----
81. Other	14	68	34	2	118
M. Ferry and Excursion Vessels					
82. Vehicles not properly secured during navigation	2	7	-----	-----	9
83. Vehicle motors not turned off during navigation	1	-----	-----	-----	1
84. Insufficient clearance between vehicles for egress of passengers in emergency	1	-----	-----	2	3
85. Barricades and gates opened prior to docking	-----	-----	-----	3	3
86. Passenger supervision inadequate	-----	-----	-----	1	1
87. Other	4	4	-----	6	14
N. Miscellaneous					
88. Job supervision inadequate	10	2	-----	2	14
89. Lack of supervision in maintenance of equipment	22	7	6	2	37
90. Lack of supervision in conducting drills	4	3	-----	-----	7
91. Lack of sufficient personnel	7	-----	-----	-----	7
92. Oil, fuel, and/or debris in bilges	49	20	25	43	137
93. Stoves, ranges, heaters, hot plates, lanterns, etc., not secured against vessel's movement	1	2	-----	2	5
94. Inadequate deck, gangway, passageway, lighting	1	2	3	-----	6
95. Unsanitary conditions	12	3	2	4	21
96. Chain falls improperly used	-----	-----	-----	1	1
97. Lack of precautions while effecting repairs (including warning notices, etc.)	1	-----	-----	2	3
98. First aid equipment not ready for use (medicine chest, litter)	2	1	1	2	6
99. Stowage of ship's stores improper	11	1	5	6	23
100. Access over deckloads	-----	1	-----	-----	1
101. Other	28	34	12	20	94
Grand total	1,399	957	839	1,129	4,324

MERCHANT MARINE PERSONNEL STATISTICS

MERCHANT MARINE OFFICER LICENSES ISSUED

QUARTER ENDING 30 SEPTEMBER 1961

DECK

Grade	Original	Renewal
Master:		
Ocean	27	412
Coastwise	4	21
Great Lakes		2
B. S. & L	7	84
Rivers	4	46
Radio Officer Licenses issued	9	92
Chief mate:		
Ocean	22	85
Coastwise	1	1
Mate:		
Great Lakes		1
B. S. & L	3	10
Rivers	1	30
Second mate:		
Ocean	29	67
Coastwise		1
Third mate:		
Ocean	191	72
Coastwise		
Pilots:		
Great Lakes	4	6
B. S. & L	68	13
Rivers	68	48
Master: Uninspected Vessels	8	20
Mate: Uninspected Vessels	1	1
Motorboat Operators	323	1,041
Total	770	2,053
Grand Total	2,823	

ENGINEER

Grade	Original	Renewal
STEAM		
Chief engineer:		
Unlimited	32	513
Limited	2	68
First assistant engineer:		
Unlimited	17	189
Limited	4	17
Second assistant engineer:		
Unlimited	48	202
Limited		
Third assistant engineer:		
Unlimited	238	262
Limited		
MOTOR		
Chief engineer:		
Unlimited	4	157
Limited	19	138
First assistant engineer:		
Unlimited	3	14
Limited	9	18
Second assistant engineer:		
Unlimited	1	16
Limited	2	4
Third assistant engineer:		
Unlimited	219	193
Limited		3
Chief engineer:		
Uninspected Vessels	10	25
Assistant engineer:		
Uninspected Vessels	6	7
Total	614	1,826
Grand Total	2,440	

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	1	1			2
Ordinary Seamen for Able Seamen					
Wiper or coalpassers for qualified member engine dept	1				1
Total Waivers	2	1			3
Number of vessels	2	1			3

INVESTIGATING UNITS

Coast Guard Merchant Marine Investigating Units and Merchant Marine Details investigated a total of 3,560 cases during the Third Quarter of 1961. From this number, hearings before Examiners resulted involving 28 officers and 185 unlicensed men. In the case of officers, 2 licenses were revoked, 4 were suspended without probation granted, 15 were suspended with probation granted, 1 case was dismissed after hearing, and 1 hearing was closed with admonition. Of the unlicensed personnel, 10 documents were revoked, 12 were suspended without probation granted, 71 were suspended with probation granted, 19 cases were dismissed after hearing, and 11 hearings were closed with admonition. Five licenses and 94 documents were voluntarily surrendered.

ORIGINAL SEAMEN'S DOCUMENTS ISSUED

Type of document	Atlantic Coast	Gulf Coast	Pacific Coast	Great Lakes and Rivers	Total
Staff Officer	33	6	18	6	63
Continuous Discharge Book	244	14			258
Merchant Mariner's Documents	1,109	579	750	635	3,073
AB any waters unlimited	182	54	49	29	314
AB any waters, 12 months	39	11	18	51	119
AB Great Lakes, 18 months	6		3	26	35
AB Tugs and Towboats, any waters			5	1	6
AB Bays and Sounds	1				1
AB Seagoing Barges	1				1
Lifeboatman	308	5	56	11	380
QMED	235	44	72	47	398
Radio Officer	1	1	2		4
Certificate of Service	1,157	547	710	581	2,995
Tankerman	24	62	5	52	143
Total	3,340	1,323	1,688	1,439	7,790

MERCHANT MARINE STATISTICS

There were 917 vessels of 1,000 gross tons and over in the active ocean-going U.S. merchant fleet on August 1, 1961, 296 more than the number active on July 1, 1961, according to the Maritime Administration, U.S. Department of Commerce.

There were 38 Government-owned and 879 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 23 vessels in the custody of the Departments of Defense, State, and Interior, and the Panama Canal Co.

There was an increase of 286 active vessels and a decrease 287 inactive vessels in the privately owned fleet. Two freighters, the *Del Oro* and the *Solon Turman,* were delivered from construction. One freighter, the *Globe Progress,* was transferred back to U.S. from foreign flag. Three ships were sold foreign for scrapping, the *Danny Boy, Orient Point* and *Maracaibo,* and the tanker *Chiwawa* was converted to a dry cargo ship for Great Lakes service. The total privately owned fleet decreased to 988. Of the 109 privately owned inactive vessels, 2 combination ships, 10 freighters, and 9 tankers were undergoing repair or conversion or reactivation. The others were laid up or temporarily idle.

The Maritime Administration's active fleet increased by 10 ships, while its inactive fleet decreased by 18. A troop transport, a tanker, and seven Liberty ships were sold for scrap. Six Navy-owned ships were placed in reserve fleet custody, and two were returned to the Navy. Two troop transports were transferred to the Air Force, and the *Schuyler Otis Bland* was transferred to the Navy. This decreased the Administration's fleet by 8 to a total of 1,959. The total U.S. merchant fleet decreased by 9 to 2,947.

One new tanker shipbuilding contract and a tanker conversion were placed during the month. Two new freighters and two tanker conversions were completed. The total of large merchant ships on order or under construction in U.S. shipyards decreased by 2 to 84.

Seafaring jobs on active ocean-going U.S.-flag ships of 1,000 gross tons and over, excluding civilian seamen manning Military Sea Transportation Service ships were 31,794. Prospective officers in training in Federal and State nautical schools numbered 1,634.

CAPTAIN, PASSENGERS DISPUTE SHIP'S LOSS

When the coastal trader *Vencedor* capsized recently off Buenaventura the ship's captain blamed the passengers and the survivors blamed overloading for the casualty.

Officials said only 9 bodies have been recovered from the shark-infested waters, although earlier reports said 60 bodies had been found. Twelve persons were listed as missing.

Naval authorities said the ship probably carried 150 passengers.

Heavy seas, rain, and fog blocked frogmen from entering the ship's hull, preventing a final tally of the dead.

Shortly after departing La Bocana (a resort less than an hour's sail from Buenaventura) the vessel passed two other ships entering the bay. Passengers, apparently wishing to watch the passing ships, ran to the port side, and the ship turned over.

CONFERENCE ON WATER POLLUTION OFFERS CONTROL RECOMMENDATIONS

More than 1,000 delegates to the National Conference on Water Pollution met recently in Washington, D.C., to discuss recommendations for action on pollution control.

Some of the principal suggestions included closer governmental and industrial cooperation in solving water pollution problems, a nationwide educational program to alert the people re: The hazards of pollution, and the expansion of existing regulations on pollution control.

It was recommended that the following national credo be adopted: "(1) Users of water do not have an inherent right to pollute; (2) users of public waters have a responsibility for returning them as nearly clean as is technically possible, and (3) prevention is just as important as control of pollution."

GUESS WHO

Didn't LOOK
Didn't ASK
Didn't THINK

Courtesy of The American Waterways Operators Inc.

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 Registers containing the material referred to may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.]

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

SUBCHAPTER B—MERCHANT MARINE OFFICERS AND SEAMEN

[CGFR 61-45]

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

Subpart 10.13—Licensing of Radio Officers

APPLICANTS FOR RADIOTELEGRAPH OPERATOR LICENSES FURNISHING ADDITIONAL INFORMATION

The regulation designated 46 CFR § 10.13-19 in this document is intended to show that an applicant for a license as a radiotelegraph operator on merchant vessels may have to furnish additional information to the Coast Guard as the Commandant deems pertinent and necessary for a determination as to whether or not the applicant is a suitable and safe person to be entrusted with the powers and duties of a radiotelegraph operator on any vessel as contemplated by the act of May 12, 1948, as amended (46 U.S.C. 229a-229h).

Because the regulation in this document is a statement describing administrative practice and is to advise applicants for radiotelegraph operator licenses that additional information may be required by the Commandant prior to finally determining whether or not the applicant is entitled to receive the license desired, it is hereby found that compliance with the Administrative Procedure Act (respecting notice of proposed rule making, public rule making procedure thereon, and effective date requirements thereof), is deemed to be impracticable and contrary to the public interest.

[CGFR 61-33]

PORTABLE CARGO CONTAINERS FOR COMBUSTIBLE LIQUIDS ON DRY CARGO VESSELS

All vessels having on board inflammable or combustible liquid cargo in bulk are subject to the provisions of R.S. 4417a, as amended (46 U.S.C. 391a) (hereinafter referred to as the "Tanker Act"), and the applicable "Tank Vessel Regulations" are in 46 CFR Parts 30 to 39, inclusive (Subchapter D—Tank Vessels). The proviso in subsection (1) of the Tanker Act states this law "* * * shall not apply to * * * vessels carrying liquid cargo only in drums, barrels, or other packages."

The regulation of the carriage of explosives or dangerous articles on board vessels is pursuant to the provisions of R.S. 4472, as amended (46 U.S.C. 170) (hereinafter referred to as the "Dangerous Cargo Act"), and the applicable "Dangeous Cargo Regulation" are in 46 CFR Parts 146 and 147 (Subchapter N—Explosives or Other Dangerous Articles or substances and Combustible Liquids on Board Vessels). One of the exceptions in subsection (6), regarding transportation, etc., of explosives and other dangerous articles, of the Dangerous Cargo Act states this subsection shall not apply to "* * * (vi) inflammable or combustible liquid cargo in bulk: *Provided, however,* That the handling and stowage of any inflammable or combustible liquid cargo in bulk shall be subject to the provisions of section 4417a of the Revised Statutes, as amended" (Tanker Act). In effect, the Dangerous Cargo Act reaffirms that vessels carrying inflammable or combustible liquids in bulk are subject to the Tanker Act.

For the Tanker Act or the Dangerous Cargo Act to apply to vessels it is necessary that vessels carry cargo or hold themselves available to the public for the purpose of carrying cargo. This fact may be evidenced by the general construction of the vessel, together with arrangements for loading or discharging cargo carried, as well as having on board cargo or evidence that cargo recently had been on board; or the presence on board of bills of lading or shipping papers consigning the cargo to a definite person or company; or the presence on board of papers consigning the cargo "to order" together with the facilities for delivering cargo to customers.

In order for a vessel to come within the exemption proviso of the Tanker Act stating this law "* * * shall not apply to * * * vessels carrying liquid cargo only in drums, barrels, or other packages," the burden of proof has been and is placed upon the owner or operator to establish definitely (1) such liquids are carried as cargo; and (2) such "* * * drums, barrels or other packages * * *" are, (a) of the size commonly found in commercial practice, and (b) are not a part of the permanent fixtures of the vessel, and (c) are actually loaded and discharged with their contents intact. These general requirements have been the criteria followed since the enactment of the Tanker Act in 1936 in determining whether or not specific vessels are subject to this law. In recent years requests have been and are being received in increasing numbers from shippers and carriers with respect to the use of portable containers for hazardous liquid cargo to be transported on dry cargo vessels, and as to what determinations or rulings have been made with respect to "* * * other packages * * *," as set forth in the Tanker Act and the Dangerous Cargo Act.

Combustible liquids when shipped in "barrels, drums, or other packages" are regulated cargo under the Dangerous Cargo Act and applicable regulations in 46 CFR Part 146 if transported on board passenger vessels, but such liquids in these containers are not subject to the "Dangerous Cargo Regulations" if carried on board cargo vessels. The present problem concerns combustible liquids in portable containers which are larger than the nominal size barrels and drums, which may or may not necessarily be lifted on or off the vessel in a loaded condition or with

ACCEPTABLE COVERED STEEL ARC WELDING ELECTRODES

The following are additions and deletions 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
Air Reduction Sales Co., 42d St., opposite Grand Central, New York 17, N.Y. (Arcrods Corp., manufacturer).	Airco Easyarc 10 Mo	E7010-A1	1	1			
Do	Airco Easyarc 27 Mo	E7020-A1		2			
Do	Airco 94	E7020-A1		2		2	3
Metal & Thermit Corp., 120 Broadway, New York 15, N.Y. (Arcrods Corp., manufacturer).	Murex Type DM	E7020-A1		2		2	3
Do	Speedex 27 Mo	E7020-A1		2			
Do	Speedex 710 Mo	E7010-A1	1	1			
A. O. Smith Corp., Milwaukee 1, Wis	SW-610	E6010	1	1	2	2	
Do	SW-627	E6027	2	2	2	2	
Wilson Welder & Metal Co., Lincoln Bldg., 42d St. and Grand Central, New York 17, N.Y. (Arcrods Corp., manufacturer).	Lightening Rod 27 Mo	E7020-A1		2			
Do	Lightening Rod Alloyrod B	E7020-A1		2		2	3
Do	Lightening Rod 10 Mo	E7010-A1	1	1			
Air Reduction Sales Co., 42d St. opposite Grand Central, New York 17, N.Y. (Arcrods Corp., manufacturer).[1]	Airco 94 (½ Mo)	E7020-A1	2	2	2	2	3
General Electric Co., Schenectady 5, N.Y. (Arcrods Corp., manufacturer).[1]	W-720A	E7020-A1	2	2	2	2	3
Metal & Thermit Corp., 120 Broadway, New York 15, N.Y. (Arcrods Corp., manufacturer).[1]	Murex Type O (½ Mo)	E7020-A1	2	2	2	2	3
Wilson Welder & Metal Co., Lincoln Bldg., 42d St. and Grand Central, New York 17, N.Y. (Arcrods Corp., manufacturer).[1]	Wilson Alloyrod B (½ Mo)	E7020-A1	2	2	2	2	3

[1] Removed from the approved list.

their contents intact. The Coast Guard regulations in 46 CFR 30.01–5 (Tank Vessels) and 90.05–1 (Cargo and Miscellaneous Vessels), provide in footnote 9 to the Table therein that:

> Vessels covered by Subchapter * * * I (Cargo and Miscellaneous Vessels) of this chapter, where the principal purpose or use of the vessel is not for the carriage of liquid cargo, may be granted a permit to carry a limited amount of * * * combustible liquid cargo in bulk. The portion of the vessel used for the carriage of the * * * combustible liquid cargo shall meet the requirements of Subchapter D (Tank Vessels) in addition to the requirements of Subchapter * * * I (Cargo and Miscellaneous Vessels) of this chapter.

The Coast Guard has not prescribed specific regulations governing portable containers, either with respect to the construction thereof or the shipping requirements, including the stowage of portable containers. Large portable containers filled with combustible liquids present a primary hazard with respect to fire (because the ambient temperatures may greatly exceed the minimum 81° F. flashpoint lower limit for combustible liquids) as well as secondary hazards of toxicity and/corrosiveness. The "Tank Vessel Regulations" are primarily directed toward having the liquid containers made an integral part of the vessel. Therefore, the present operating requirements for portable containers on dry cargo vessels with respect to various aspects of the loading and discharging of cargo therefrom, as well as stowage with other cargo are not now specifically covered. In order to resolve the many technical problems involved, the American Merchant Marine Institute, Inc., established a "Portable Tank Committee" to work with the Coast Guard in developing construction standards for portable containers, as well as standards governing the transportation of portable containers including loading and discharging, on dry cargo vessels. The proposed standards for portable containers will be included in the next Merchant Marine Council Public Hearing Agenda (CG–249), for the public hearing scheduled to be held in March 1962.

As a guideline in establishing standards for portable containers, it becomes necessary to interpret the meaning of the phrase "drums, barrels, or other packages" as used in the Tanker Act and the Dangerous Cargo Act, as well as the phrase "combustible liquid cargo in bulk" as used in the Tanker Act and the Dangerous Cargo Act. This will also assist in developing regulations to govern the transportation of combustible liquids in portable containers and their stowage and transportation on board cargo and miscellaneous vessels and to be specifically provided for in 46 CFR Subchapter I (Cargo and Miscellaneous Vessels). The following interim interpretations are prescribed:

a. The phrase "drums, barrels, or other packages" as used in the Tanker Act (R.S. 4417a, as amended, 46 U.S.C. 391a), and the Dangerous Cargo Act (R.S. 4472, as amended, 46 U.S.C. 170), is interpreted to include portable containers having a maximum capacity of 110 U.S. gallons, which are actually loaded and discharged from vessels with their contents intact.

b. The phrase "combustible liquid cargo in bulk" as used in the Tanker Act (R.S. 4417a, as amended, 46 U.S.C. 391a) and the Dangerous Cargo Act (R.S. 4472, as amended, 46 U.S.C. 170), is interpreted to include portable containers of a capacity of more than 110 U.S. gallons, whether or not such containers are actually loaded and discharged from vessels with their contents intact.

Pending the establishment of construction standards for portable containers and specific requirements for the stowage and carriage of portable containers, requests for permission will be handled on an individual vessel basis by the cognizant Officer in Charge, Marine Inspection. The Officer in Charge, Marine Inspection, after determining that a combustible liquid may be carried with safety in a portable container of suitable construction when properly stowed, will permit the transportation of Grade D or E combustible liquids as defined in the "Tank Vessel Regulations," and for a U.S. vessel may so endorse or amend the certificate of inspection. If necessary, the Officer in Charge, Marine Inspection, may prescribe additional fire-fighting equipment to be carried on board vessels while transporting combustible liquids in portable containers. These instructions and interpretations will be applied to any vessel (domestic or foreign) transporting portable containers of combustible liquids within or from United States ports.

Because the rules designated 46 CFR 30.01–20, 90.05–30, and 146.02–30 in this document are interpretations or definitions or phrases used in the vesvel inspection laws, it is hereby found that the Coast Guard is exempt from compliance with the Administrative Procedure Act (respecting notice of proposed rule making, public rule making procedures thereon, and effective date requirements thereof).

(Federal Register of October 25, 1961.)

EQUIPMENT APPROVED BY THE COMMANDANT

[EDITOR'S NOTE.—Due to space limitations, it is not possible to publish the documents regarding approvals and terminations of approvals of equipment published in the Federal Register dated October 18, 1961 (CGFR 61–42). Copies of these documents may be obtained from the Superintendent of Documents, Washington 25, D.C.]

ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of ships' stores and supplies certificated from 1 October to 31 October 1961, 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

The Falcon Corp., G.P.O. Box 1035, Brooklyn 1, N.Y., Certificate No. 301, dated 16 October 1961, CALFONEX PREMIUM ELECTRIC MOTOR CLEANER.

The Falcon Corp., G.P.O. Box 1035, Brooklyn 1, N.Y., Certificate No. 386, dated 16 October 1961, CALFONEX PRACTICAL ELECTRIC MOTOR CLEANER.

Aetna Chemical Corp., Wallace St. Extension, East Paterson, N.J., Certificate No. 495, dated 25 October 1961, ACTENE D–60 or FLYING A FUEL SOLVENT C.

Aetna Chemical Corp., Wallace St. Extension, East Paterson, N.J., Certificate No. 496, dated 25 October 1961, ACTENE C or FLYING A FUEL SOLVENT B.

Crown Chemical Co., 47–06 Fifth St., Long Island City 1, N.Y., Certificate No. 497, dated 25 October 1961, DIASYN–7–C.

AFFIDAVITS

The following affidavits were accepted during the period from 15 September 1961 to 15 October 1961:

Refrigerating Specialities Co., 3004 West Lexington St., Chicago 12, Ill., VALVES & FITTINGS.

A/S Chr. Nielsens EFTF, Hoegh-Guldbergsgade 14, Horsens, Denmark, VALVES & FITTINGS.

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 parenthesis 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 (8–1–58).
115	Marine Engineering Regulations and Material Specifications (2–1–61).
123	Rules and Regulations for Tank Vessels (12–1–59). F.R. 3–30–60, 10–25–60, 11–5–60, 12–8–60, 7–4–61, 9–30–61,
129	Proceedings of the Merchant Marine Council (Monthly).
169	Rules of the Road—International—Inland (5–1–59). F.R. 5–21–59, 6–6–59, 5–20–60, 9–21–60, 4–14–61, 4–25–61.
172	Rules of the Road—Great Lakes (5–1–59). F.R. 1–7–60, 3–17–60, 5–20–60, 9–21–60.
174	A Manual for the Safe Handling of Inflammable and Combustible Liquids (7–2–51).
175	Manual for Lifeboatman, Able Seamen, and qualified Members of Engine Department (9–1–60).
176	Load Line Regulation (9–2–58). F.R. 9–5–59, 8–2–60, 11–17–60.
182	Specimen Examinations for Merchant Marine Engineer Licenses (12–1–59).
184	Rules of the Road—Western Rivers (5–1–59). F.R. 6–6–59, 5–20–60, 9–21–60, 10–8–60, 12–23–60, 4–14–61, 4–25–61.
190	Equipment Lists (4–1–60). F.R. 6–21–60, 8–16–60, 8–25–60, 8–31–60, 9–21–60, 9–28–60, 10–25–60, 11–17–60, 12–23–60, 12–24–60, 5–2–61, 6–2–61, 6–8–61, 7–21–61, 7–27–61, 8–16–61, 8–29–61, 8–31–61, 9–8–61, 9–9–61, 10–18–61.
191	Rules and Regulations for Licensing and Certificating of Merchant Marine Personnel (11–1–60). F.R. 11–30–60, 1–4–61, 4–19–61, 10–25–61.
200	Marine Investigation Regulations and Suspension and Revocation Proceedings (7–1–58). F.R. 3–30–60, 5–6–60, 12–8–60, 7–4–61.
220	Specimen Examination Questions for Licenses as Master, Mate, and Pilot of Central Western Rivers Vessels (4–1–57).
227	Laws Governing Marine Inspection (7–3–50).
239	Security of Vessels and Waterfront Facilities (8–1–61).
249	Merchant Marine Council Public Hearing Agenda (Annually).
256	Rules and Regulations for Passenger Vessels (3–2–59). F.R. 4–25–59, 6–18–59, 6–20–59, 7–9–59, 7–21–59, 9–5–59, 1–8–60, 5–6–60, 8–18–60, 10–25–60, 11–5–60, 11–17–60, 12–8–60, 12–24–60, 12–29–60, 4–19–61, 7–4–61, 9–30–61.
257	Rules and Regulations for Cargo and Miscellaneous Vessels (3–2–59). F.R. 4–25–59, 6–18–59, 6–20–59, 7–9–59, 7–21–59, 9–5–59, 5–6–60, 5–12–60, 10–25–60, 11–5–60, 11–17–60, 12–8–60, 12–24–60, 7–4–61, 9–30–61, 10–25–61.
259	Electrical Engineering Regulations (12–1–60) F.R. 9–30–61.
266	Rules and Regulations for Bulk Grain Cargoes (5–1–59).
268	Rules and Regulations for Manning of Vessels (9–1–60). F.R. 5–5–61, 6–28–61.
269	Rules and Regulations for Nautical Schools (3–1–60). F.R. 3–30–60, 8–18–60, 11–5–60, 7–4–61, 9–30–61.
270	Rules and Regulations for Marine Engineering Installations Contracted for Prior to July 1, 1935 (11–19–52). F.R. 12–5–53, 12–28–55, 6–20–59, 3–17–60.
293	Miscellaneous Electrical Equipment List (3–7–60).
320	Rules and Regulations for Artificial Islands and Fixed Structures on the Outer Continental Shelf (10–1–59). F.R. 10–25–60.
323	Rules and Regulations for Small Passenger Vessels (Not More than 65 feet in Length) (7–1–61).
329	Fire Fighting Manual for Tank Vessels (4–1–58).

Official changes in rules and regulations are published in the Federal Register, which is printed daily except Sunday, Monday, and days following holidays. The Federal Register is a sales publication and may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. It is furnished by mail to subscribers for $1.50 per month or $15 per year, payable in advance. Individual copies desired may be purchased as long as they are available. The charge for individual copies of the Federal Register varies in proportion to the size of the issue and will be 15 cents unless otherwise noted in the table of changes below.

CHANGES PUBLISHED DURING OCTOBER 1961

The following have been modified by Federal Registers:

CG–190 Federal Register, October 18, 1961.
CG–123, CG–191, and CG–257 Federal Register October 25, 1961.

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