

PROCEEDINGS

OF THE MERCHANT MARINE COUNCIL



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OF THE MERCHANT MARINE COUNCIL

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The Merchant Marine Council of the United States Coast Guard

**This Copy FOR NOT LESS THAN
20 Readers PASS IT ALONG**

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FRONT COVER

Riding light on a glassy sea the SS *California* approaches her loading berth at Port Arthur, Texas. Photo courtesy J. Alex Langley from *The Texaco Star*.

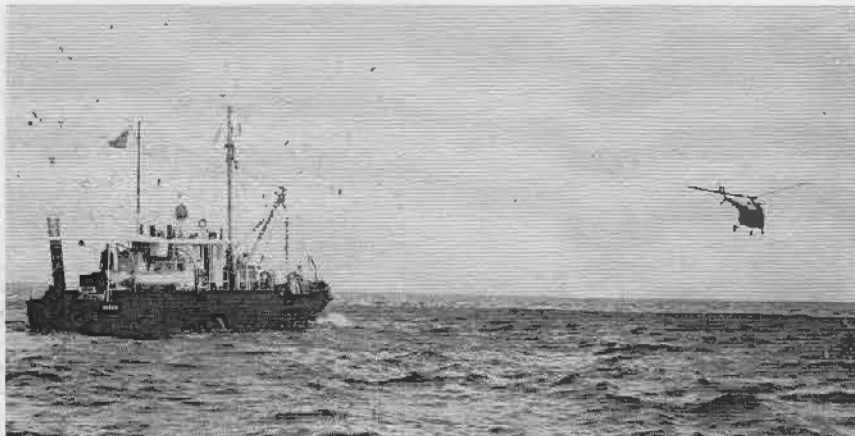
BACK COVER

Busy tugs hustle alongside the new SS *Santa Rosa* as she makes her maiden visit to New York. Photo courtesy Moran Towing and Transportation Co., Inc.

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TUGBIRD



EFFECTIVE LAST MONTH every Coast Guard air station has a specially fitted helicopter available for towing fishing vessels, pleasure boats, and other types of surface craft. Perfected after extensive tests on surface craft 794 tons and under, the helicopters are capable of towing for the duration of their fuel supply at speeds between 12 and 15 knots. In the above picture an HO4S-3 type helicopter tows the 75-ton buoy tender *Birch* during tests at the Coast Guard Air Station, St. Petersburg, Fla.

BARGE AND TOWING INDUSTRY SAFETY WINNERS NAMED



SIX OF THE EIGHT winning companies in the 1957 Barge and Towing Vessel Industry Safety Contest are pictured above at the award ceremony held in New York. Left to right: N. L. Caruthers, American Waterways Operators, Inc., vice president Region 3; Capt. R. E. Mackey of The Texas Company of New York; Capt. A. C. Ingersoll, Jr., Chairman of the Board, The American Waterways Operators, Inc.; Leslie H. Quackenbush, general chairman of the Marine Section of the National Safety Council; Braxton B. Carr, president of The American Waterways Operators, Inc.; Alan Gumbert of United States Steel Corporation, Pittsburgh, Pa.; James McW. Kellers of The New Haven Towing Company, New Haven, Conn.; Gerald Johnson of Ashland Oil & Refining Company, Inc., Ashland, Ky.; and Capt. Joseph S. Means of the Standard Oil Company (Indiana), Chicago, Ill.

THE NATIONAL Safety Council presented awards to 12 winning companies in the 1957 Barge and Towing Vessel Industry Safety Contest at a luncheon sponsored by The American Waterways Operators, Inc., which is a co-sponsor with the Safety Council of the contest.

The awards were presented by Leslie H. Quackenbush, general chairman of the Marine Section of the National Safety Council.

Representatives of 8 of 12 award-winning companies were at the meeting to accept the presentation of honors in the contest devoted to establishing high standards of safety on the nation's inland waterways. The other four awards were made earlier.

The Safety Council honored three contestants in Group A, which includes companies that worked more than 8,000 man-days between January 1 and April 1, 1957. Nine companies won awards in Group B for smaller companies.

Alan Gumbert, division superintendent of marine ways of the River Transportation Department of United States Steel Corporation, Clairton, Pa., accepted a plaque for his company's first place finish in Group A. United States Steel maintained an accident free record in 1957.

A second place certificate in Group A was presented to Gerald Johnson,

marine safety supervisor of Ashland Oil & Refining Company, Ashland, Ky.

J. L. Diggs, D. M. Martin and R. E. Mackey, all of The Texas Company, New York, N. Y., were in attendance for the presentation of a third place certificate.

First prize in Group B, based on the most man-days worked without accident, went to Armco Steel Corporation, Huntington, W. Va.

A perfect safety record also won a second place certificate for Greenville Transportation Company, Greenville, Miss. N. L. Caruthers, an AWO regional vice president, accepted the award for the company. J. D. Streett & Company, Inc., St. Louis, Mo., finished in third place in Group B.

Perfect record certificates were also awarded to six other companies in Group B that compiled unblemished safety records in 1957.

Captain Joseph S. Means, master of the towboat *Stanolind "A"*, was present for the award to Standard Oil Company (Indiana), Chicago, Ill.

James McW. Kellers of The New Haven Towing Company, New Haven, Conn., accepted for his company.

Other companies that won perfect record certificates were Marquette Cement Manufacturing Company, Chicago, Ill.; Boat 1801, Inc., of the B & M Towing Company, Houston, Tex.; Dalehite Boat Service and Ellis Towing Company, both of Galveston, Tex.

DON'T DROWN YOURSELF

Perhaps you've heard that falls are the No. 2 accidental killer, ranking right behind motor vehicle accidents.

Think you can identify the next most frequent cause of accidental death?

It may come as a surprise, but, according to the National Safety Council, the main cause of nonmotor vehicle death to persons in the "active" years—5-44 years of age—is drowning.

Drowning deaths result not only from swimming accidents, but from falls into the water when working or playing near it, and from boating mishaps. More than 6,000 persons of all ages die each year from drowning.

It's not surprising, either, that the number of drownings is highest during the warm months—July, June, August and May, in that order. An average of more than 525 persons a month die of drowning, ranging from a July high of almost 1,500 deaths to a February low of 160.

How can drowning deaths be prevented?

1. Don't swim alone or in unprotected areas.
2. Don't swim too far, or after dark, or right after eating.
3. Know the depth of the water you swim in.
4. Don't get chilled—get ashore.

8 COMPANIES RECEIVE PUBLIC HEALTH AWARDS



THREE-TIME WINNER of the Public Health Award for ship sanitation is the Luckenbach Steamship Co. In ceremonies held aboard the SS *Robert Luckenbach* are, left to right, R. J. Tarr, operating manager, Luckenbach Steamship Co.; Joseph B. O'Connor, regional director of the Department of Health, Education and Welfare for New York; James Sinclair, president and general manager of Luckenbach; and Dr. Richard F. Boyd, regional medical director, Region II, New York.



THE SECOND three-time winner of the coveted Public Health Award is American Export Lines. Officials at the award luncheon aboard the SS *Exeter* are: Left to right, Frazer A. Bailey, managing director of the Line; Rear Admiral David E. Price, Assistant Surgeon General of the United States; and L. S. Andrews, vice president, operations, American Export Lines.

EIGHT American-flag steamship companies have won U. S. Public Health Service *Special Citations for Vessel Sanitation* for 1957, all with ratings of 95 or better on 166 items of sanitary construction and maintenance.

Luckenbach Steamship Co. and *American Export Lines* head the list with awards of sanitary excellence for the third consecutive year. *Esso Ship-*

ping Co., *United States Lines*, *Ore Navigation Corp.*, and *Farrell Lines*, all for the second time, and *Seatrains Lines* and *Ore Navigation Corp.* winning initial honors.

The Special Citation of the Public Health Service is a symbol of excellent sanitation. It was created in 1953 by the Surgeon General of the PHS to recognize those companies who maintain high levels of sanitation aboard

all their vessels. Eligibility is based on detailed inspections by experienced PHS inspectors of all construction and operation items having a sanitary significance.

Surg. Gen. Leroy E. Burney pointed out that each steamship company winning a citation attests to their concern for the health and safety of passengers and crew sailing on their ships. "Any winner of the award," he



ADMIRAL GEORGE WAUCHOPE, executive vice president, Farrell Lines, is shown at the right receiving the Public Health Citation from Wesley L. Gilbertson, deputy chief, Division of Sanitary Engineering Services of the Public Health Service for the 16 vessel Farrell Line Fleet, all of which earned a rating of 95 or better for 1957.



UNITED STATES LINES officials received their award for vessel sanitation aboard the super liner SS *United States*. Left to right, Dr. E. H. Linnehan, director, Medical Department, United States Lines; Rear Admiral Leroy E. Burney, Surgeon General; Captain Jones F. Devlin, vice president, operations, United States Lines; and Commodore John W. Anderson, of the SS *United States*.



H. W. WARLEY, president of the Ore Navigation Corporation and the Calmar Steamship Company is pictured at the right receiving Public Health Awards made to each of his companies for 1957 by Omar C. Hopkins, assistant chief, Division of Sanitary Engineering Services of the Public Health Service.

said, "makes them a most welcome partner in the efforts of the Public Health Service to reduce incidents of communicable disease and to improve the health and well-being of the American people."

"These awards have also benefited the Public Health Service as well. Many companies in striving to attain this award have developed their own self-inspection programs, which require less surveillance by our personnel and allow us more time to help other companies develop programs to raise their sanitation levels," he concluded.

In reporting receipt of the Public Health citation for the third consecutive year, R. J. Tarr, operating manager, Luckenbach Steamship Co., paid tribute to his "masters, chief engineers, chief stewards, and all unlicensed seagoing personnel, together with those in supervisory shore positions," which made the award possible.

American Export Lines, the other triple winner, achieved a rating of 95 or better on each of its 37 vessels, which include the SS *Constitution* and SS *Independence*.

A NOTE ON FIRE-FIGHTING

Recently, an unseaworthy crew member committed an act of almost unbelievable carelessness. Apparently smoking in bed, he had allowed his mattress to catch fire. He paddled out the flame, turned the mattress over, and left the foc'sle without telling anybody about it.

Deep-seated embers reignited the mattress.

Fortunately, a shipmate, passing in the alleyway, smelled smoke, summoned help and the fire was properly extinguished, which included throwing the mattress over the side.

The gravest error in this series of sins, we believe, was the bed smoker's failure to report his fire, either himself or through somebody else.

The general principle when you discover fire aboard ship: report it at once, then fight it with whatever first aid measures (water, portable fire extinguisher, blanket, etc.) you find at hand.

A second, and specific, fact to be understood from this quoted comedy of errors is that mattress fires are a special breed of cats—with almost the proverbial nine lives, they're tough to kill. Firemen ashore tear mattress and cotton bales apart in order to quench all embers. Aboard ship, the best bet is to soak them completely with water; or, if at sea, throw them overboard.

Don't fool around with fire aboard a tanker. Take all the commonsense precautions, even if they seem extreme at the moment.

From *The Range Light*, The Texas Co.

METALLIC REFLECTORS

Operators of disabled wooden craft that are, or may consider themselves to be, the object of a search are requested to hoist on a halyard or to otherwise place aloft any metallic object that would assist their detection by radar. All Coast Guard patrol vessels, planes, and some buoy tenders utilize this equipment and thus can continue searches in darkness and during other periods of low visibility if it can be assumed that the object of the search can be detected through the use of this aid.

Actual observations have shown that wooden hulls or other nonmetallic objects are suited as radar targets according to the size, orientation, shape, and other radar-reflecting qualities of the object. Their value as radar targets may be enhanced by the use of special radar-reflecting devices properly oriented and placed as high above the waterline as possible. The largest metallic object available should be used.

THE PAMIR INQUIRY

A MARINE Board of Inquiry at Lubeck, Germany, into the loss of the four-masted auxiliary training barque *Pamir* in a hurricane off the Azores on September 21, 1957, with the loss of 80 lives, has found that it was due to the handling and trim of the sails, a shift of cargo and the loss of stability through shipping water in the holds.

Captain Eckhart Luhmann, the chairman, said that the ship, her rigging and equipment were in good condition. The radio and lifeboats were adequate and in good working order.

"It is possible," he said, "that the lack of familiarity the Master had with the crew and with the rigging and stability of the *Pamir* had unfavourable effects. The limited sailing ship experience of the First Officer may have contributed to this."

Captain Johannes Diebitsch was on his first voyage in the *Pamir* in place of Captain Hermann Eggers, who was ill. Capt. Diebitsch had served 12 years in sail, including 18 months as an Able Seaman in the *Pamir* before the 1914-18 war, and had been Master of smaller sailing vessels. Rolf Koehler, the First Officer, had no previous experience in sail before joining the *Pamir* as Second Officer in 1955. He was promoted to First Officer after two voyages.

Capt. Luhmann said it would never be satisfactorily cleared up why storm preparations were made so late. It was possible that the fine weather had caused the Master to neglect weather reports. Even after sending out the first distress call he apparently did not think the *Pamir* would sink. Only in the last message did he say she was sinking and call on all ships in the vicinity to come to her aid. Much valuable time was lost.

COULD HAVE BEEN AVOIDED

The Board, four of whose members were former Masters, stated: "All decisions in commanding a ship cannot be judged with 100 per cent accuracy, because it is impossible to know exactly what was behind them." But it added that the *Pamir* could have avoided the worst areas of the hurricane if she had changed course when warnings were first broadcast. If one assumed that the hurricane warning was known to the Master the course of the *Pamir* did not correspond to the recognised rules. The handling of the sails and their trim in the last hours had been contrary to these rules, and had extremely unfavourable results.

The Board's findings on the shifting of the *Pamir's* grain cargo were in

agreement with the experts who had said that the cargo was probably not stowed as well as it should have been because of the dock strike in Buenos Aires. Soldiers and the crew probably did not stow the grain into all the corners and left space into which it could shift. They also thought that the ballast tanks should have been filled with water and not grain. This affected the ship's stability as the tanks held 750 tons of water but only 450 tons of grain.

Among the Board's recommendations were:

Sail training ships should be commanded by masters and officers with sailing ship backgrounds, and they should be aware of the stability factors of their ships.

Grain should be stowed in sacks, not loose.

Lifeboats should be of unbreakable plastic painted in luminous colours and strong enough to withstand battering by the sea. They should carry several small water containers, not

Battered by Hurricane Carrie, the steel-hulled German training bark *Pamir* sank with a loss of 80 lives last September 21 about 780 miles west of the Azores. In one of the widest sea searches in peacetime history five survivors were rescued. Four were picked up by the SS Saxon, Aspin Steamship Co., and one by the Coast Guard Cutter Absecon. This is the first authoritative report of the inquiry held into this tragic loss. Reprinted courtesy *The Merchant Navy Journal*, Spring 1958.

just one large one. They should have waterproof radios, automatic SOS transmitters, and dye to mark the sea. Flares and other signals should be better waterproofed. Boats should have radar reflecting materials.

Capt. Hermann Eggers, the regular Master, told the court that he was convinced of the ship's reliability.

Capt. Hans Dominik, inspector of the Pamir-Passat Foundation, said he had chosen Capt. Diebitsch as a substitute for Capt. Eggers because "you could not want a better man."

Folkert Anders (19), one of the survivors, said that the Second Officer had crawled into every nook and cranny to see that the cargo was properly trimmed. Gunther Hasselhack (20), Assistant Sailmaker, and Klaus Friedrich (19) said that the holds were opened and checked a few days after leaving Buenos Aires.

PASSAT'S EXPERIENCE

Capt. Helmut Grubbe, Master of the *Passat*, sistership of the *Pamir*, said that a month after leaving Buenos Aires with a cargo of barley, when south of the Azores, on November 3rd, the sea began to get rough. During the next two days the *Passat* heeled over sometimes as much as 60 degrees and shipped a lot of water. The waves were up to 38 ft. high and the entire deck was awash. The ship became increasingly sluggish and began to settle to port. Cargo and equipment in No. 1 hold was trimmed, but they could not get to the other three holds because the deck was constantly under water. When they arrived in Lisbon they found they had a permanent list of about 7½ degrees.

Capt. Karl Groeschel, a maritime safety expert, who inspected the ship at Lisbon, found the only damage to be a broken wooden door in the crew's quarters. When Nos. 2, 3 and 4 holds were opened the barley was found to be completely dry, but about 160 tons had shifted from the starboard to the port compartments through the shifting boards and other openings.

Eckhart Rock (19), of the *Pamir*, who had been left in South America because of an injury, was asked whether he had noticed any difference between Capt. Eggers and Capt. Diebitsch. He replied that Capt. Diebitsch was not as friendly as Capt. Eggers, but he did not notice any difference in their sailing methods though Capt. Diebitsch "sailed very cautiously."

Asked if it were true that members of the crew had drunk alcohol on the outward voyage, Rock said that he did not know of any instance. Asked whether Capt. Diebitsch was drunk when the ship crossed the equator on the outward voyage, Rock said he knew nothing of it and did not notice anything. He said that crossing the line ceremonies were not rougher than usual. From time to time they had a little celebration but they did not drink excessively and only drank "Vermouth and the like."

Herr Martin Rodewald, of the Hamburg Sea Weather Office, said Capt. Diebitsch had unfortunately taken the wrong "safe" side of a hurricane. He had successfully avoided the "eye" of the hurricane "Carrie" and reached the hurricane's left front, generally regarded as the "safe" side. Owing to abnormal weather the hurricane was asymmetrical and the "safe" side in this case would have been the right side. Capt. Diebitsch

could not have known this. He estimated that when the *Pamir* sank she had encountered winds of about 70 knots and a sea 36 ft. high.

CHANGE OF DIRECTION

He said that the United States Weather Bureau had sent out the unusual number of 62 warnings during the 19-day life of "Carrie." "Carrie" changed direction during the night of 20th September, but this change was not noticed by U.S. reconnaissance planes until it was too late to be of help to the *Pamir*. From the morning of the 21st it was simply a race between *Pamir* and "Carrie," and it was not known whether Capt. Diebitsch had received the reports about "Carrie's" change of direction which brought her path again towards the *Pamir*. The *Brandenstein* sighted the *Pamir* well to the south of the predicted path of "Carrie" and carrying

PAMIR

Length overall, 377 ft. 4 in.; breadth extreme, 46 ft., draught (summer), 23 ft. 2 in.; gross tonnage, 3,103. Built in 1905 by Blohm & Voss, Hamburg, for Ferdinand Laeisz's Flying "P" Line. While in the Chilean nitrate trade in 1906, she made a passage from Scilly to Valparaiso in 64 days. After being sold to shipbreakers in 1951 she was repurchased and towed back to the Howaldtswerke yard for repairs and alterations, which increased her tonnage by 83 tons gross. Her machinery was aft and consisted of a Krupp oil engine 45A 6 Cy. 400×460 mm.

only her staysails on the 19th. *Pamir* at that time must have been passed by a ridge of high pressure which brought absolute calm—the proverbial calm before the storm.

A message picked up in a bottle off the coast of Cornwall, purporting to be from a cadet in the *Pamir* and written when she was sinking, was regarded as a fake. It accused the captain and officers of being incapable.

Guenther Haselbach (20), who was picked up alone in a lifeboat, said: "The crew and officers were very disciplined and courageous. About 10 minutes before we capsized the Master ordered us to put on life-jackets. We could not get away the wooden lifeboats because of the ship's list. At about 1 p.m. the ship turned over to port and lay on her side for about half a minute. Many of the crew fell into the water."

COMMENDATION



AT MARITIME DAY ceremonies in Boston, Mass., Rear Admiral E. J. Roland, Commander, 1st Coast Guard District, presented a Letter of Commendation to Lawrence B. Jones, retired Chief Engineer of the *SS Esso Paterson*. Mr. Jones began his seagoing career in 1914, and upon his retirement last January had been with the Esso Shipping Company for over 30 years. He was assigned as Chief Engineer of the *Beaconlight* in 1929 and for the last 12 years was Chief of the *Paterson*. A copy of the Commendation is reproduced below:

MR. LAWRENCE B. JONES
Post Office Box 173
Waquoit, Massachusetts
DEAR MR. JONES:

The U. S. Coast Guard, as the principal agency of the United States charged with the safety of life and property at sea, takes pleasure in this opportunity to commend you for the courageous and competent leadership which you displayed on March 29, 1956 while serving as Chief Engineer of the *SS Esso Paterson*.

The record of the Marine Board of Investigation which inquired into the circumstances discloses that on March 29, 1956 two almost simultaneous explosions and a fire occurred on the *Esso Paterson* while that vessel was loading at Baytown, Texas. Despite the conditions of extreme danger existing at the time, you proceeded immediately to the engine-room, placed the firefighting equipment in operation and, then, disregarding further personal danger, went to the main deck where you directed and actively participated in extinguishing the fire.

Your skill and courage, your calm and determined leadership did much to prevent possible further explosions and incalculable damage. Your actions on this occasion were in keeping with the highest traditions of the American Merchant Marine.

Very truly yours,

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

EVOLUTION OF THE INLAND BARGE

MOVING DAILY over the inland waterways of the nation are over 14,000 barges, many of which are as diverse in purpose and construction as the vast array of cargoes they carry.

Since the heyday of the packet boat when the first barges were tied alongside to carry extra loads, the cargo-carrying partner of the water carrier team has undergone revolutionary changes. The crude, open, and boxy containers which first appeared on the waterways have been replaced with a large number of specially designed and constructed barges that move huge tonnages of a diversified group of bulk and packaged commodities at the lowest possible cost in a service that is safe, reliable, and efficient.

Just as with ocean ships or lake vessels, barges are built to operator specifications, with the type of movement and kind of cargo among the most important considerations in the construction. Other factors that must be taken into account include the operating areas, channel conditions, terminal capacity, towing speeds, fleet arrangements, and lock and bridge clearances.

According to the latest official tabulation, 12,600 dry cargo barges and scows, with a capacity of nearly 10 million net tons, operate on the inland waterways system. In addition, 2,225 tank barges, with a cargo capacity of more than three million net tons, are available for carrying liquid commodities.

TYPES OF BARGES

The types of barges can be best illustrated by a discussion of the industries they serve and the cargoes they carry.

The most familiar are the multi-purpose hopper barges, which are put to a variety of uses such as the movement of coal directly from the coal fields to steel mills, coking plants and steam generating electric utilities, as

This is the third of a series of articles on our inland waterways prepared especially for the *Proceedings* by the American Waterways Operators, Inc., a nonprofit trade association of domestic carriers and operators on the inland waters, intracoastal canals and waterways, bays, sounds, and harbors of the United States.

well as to points for domestic consumption and for export.

The open hopper barges carry ores, steel products and other commodities with equal versatility. For example, steel products are moved distances of up to 2,400 miles over the nation's waterways for domestic use or export.

The welded steel barge was the first important step in the evolution of the hopper barge as it is known today. Replacing the wooden cargo carriers,

the steel barges offered shippers maximum protection for their cargoes.

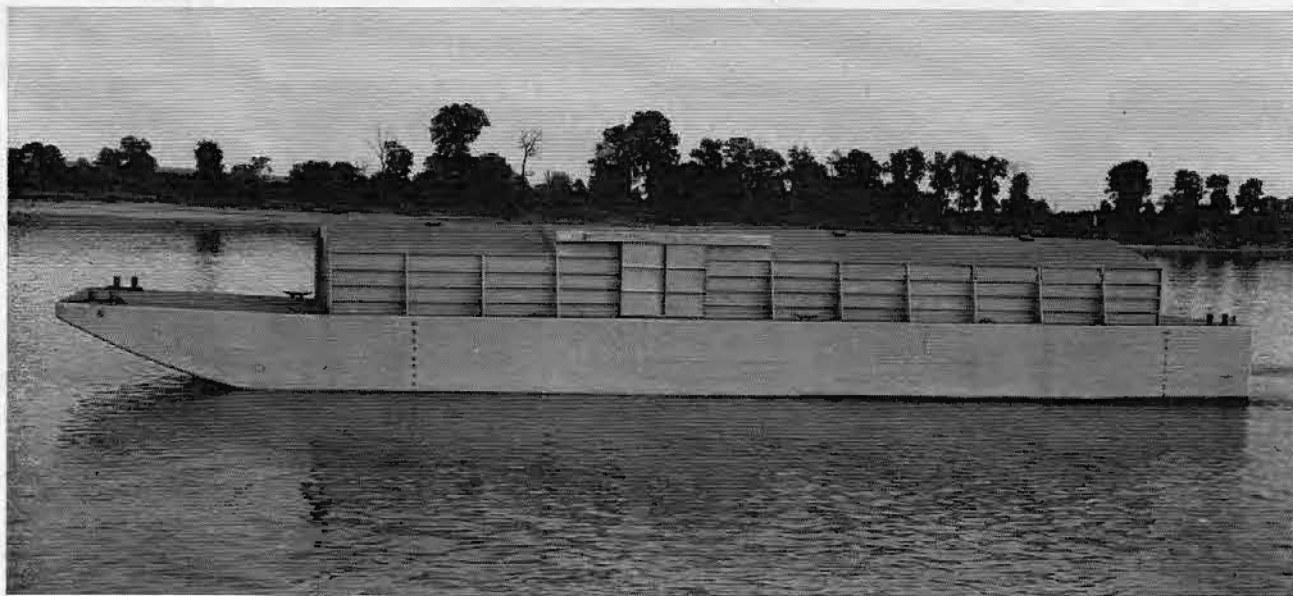
Needing only minimum maintenance, the hopper barges are constructed to resist heavy external impacts, as well as blows of unloading buckets in the hopper. Internal bracing for the wing bulkheads prevents deformation of the side shell by transmitting the impact force of the buckets to large areas of the deck and bottom.

The hopper barges range in capacity from 800 tons to 3,500 tons, with the load of the largest equivalent to that of 70 railroad freight cars.

Covered hopper barges, used in a variety of roles including transportation of grains and other agricultural products, salt, steel products, paper products, minerals and in some cases package goods, feature steel hatch covers operating on roller bearings that can be opened and closed quickly and easily. Interlocking construction makes the covers weathertight, protecting cargoes against the elements without the use of expensive gaskets or seals.

The farm regions have as much at stake in the nation's waterways as any other shipper as witnessed by the vast number of hopper barges that move from the grain elevators that dot the navigable waterways to connect with both internal marketing routes as well as external world trade routes.

Vertical loading and discharging can be accomplished along the entire



SPECIALLY DESIGNED to enable high-lift trucks to unload at the job site, this bulk cement barge is 150' x 35' x 11' with a cargo capacity of 1,500 tons. Photo Courtesy St. Louis Shipbuilding and Steel Co.

length of the hopper barge, since the covers can be moved to expose half of the hold at one time.

DECK BARGES

Deck barges, with capacities up to 1,500 tons, carry machinery, trucks, military vehicles and other heavy equipment. The most widely used deck barge is the flush-deck type with cargo box, used extensively by the building industries for shipment of sand, gravel, shell, and crushed rock.

Vast quantities of sand and gravel are dredged from the bottoms of navigable waters and shipped by this type of barge to nearby industrial areas for construction purposes.

Trim and stability are important safety factors in designing a deck barge or scow because the cargo, stowed on the deck, causes the barge to have a high center of gravity. A relatively small amount of free water in the hold can cause the barge to list. To prevent this hazard, one or more watertight keelsons, partial bulkheads, are installed longitudinally, preventing the free water in the hold from rushing to one side or the other.

Deck-type scows are used extensively in harbor areas as well as on the rivers for the transshipment of heavy lift, railroad and highway cargoes to ocean-going vessels.

The barges that have made the biggest impact on inland water transportation in recent years are the tank barges, which are used for transporting petroleum and chemical products. However, many other liquid cargoes are river-bound now because of specially-designed tank barges.

From the oil fields crude petroleum is carried thousands of miles to the refineries. As the chief commodity carried by inland water carriers, many types of petroleum products make their way along the rivers and waterways for both industrial and domestic use.

TANK BARGES

Regardless of size, there are three distinct types of tank barges:

1. The single skin vessel in which cargo is loaded directly against the hull plating, such as in the movement of petroleum products where, in effect, the barge itself is a large container.

2. The double skin barge with inner compartments separate and distinct from the hull plating such as those used in the movement of chemical cargoes that are frequently explosive or corrosive and require pressurized, lined or insulated tanks.

3. The barge with independent tanks which are specifically designed for special cargoes such as the rubber-lined tanks for carrying hydrochloric



A COMMON SIGHT on the inland waterways is the propane or anhydrous ammonia barge seen above. Carried "piggy-back" in a typical hopper type barge they permit the use of smaller barges with more economical drafts. Photo Courtesy St. Louis Shipbuilding and Steel Co.

acid or the pressurized tanks for liquid chlorine.

One of the most publicized developments for safety and efficiency in river transportation was the advent of barge integration. Basically, integration means joining two or more barges end-to-end to form a smooth, unbroken hull line, which brings about less water resistance and results in better operating control and ease of handling.

The first fully integrated and semi-integrated barge fleets were built about 1936. The petroleum industry with its terminal-to-terminal hauls of complete tows, ranging in capacity up to 35,000 tons or more today, was the first to take advantage of the reduced water resistance and greater cargo capacity of the integrated units. Integrated petroleum tows with as many as 15 barges have been designed for the special purpose hauling tasks of the oil and gasoline industry. The most common of the tank barges carry either 12,500 or 20,000 barrels of cargo.

The largest of today's tank barges is capable of carrying up to 50,000 barrels of cargo or the equivalent of one-third of the load carried by the workhorse of World War II, the T-2 tanker.

CHEMICAL CARRIERS

The increasing number of chemical products that are being hauled by barges has led to many innovations in the design of floating equipment.

A good portion of the chemical industry has located facilities on navigable waterways.

Barges adapted for use in chemical carriage include those which carry

cargoes such as chlorine and anhydrous ammonia under pressure of 250 pounds per square inch and refrigerated barges which carry liquefied methane at temperatures as low as minus 258 degrees Fahrenheit.

Other chemicals which are transported by specially built barges include styrene, caustic soda, dry sulphur, acetic acid, ethyl ether, tar, ethylene oxide, hydrochloric acid, sulphuric acid and organic chemicals.

Many different types of vessels are required for operations in harbors, coastal waterways, lakes, canals and rivers. Among this specialized equipment are carfloats, lighters, special-purpose barges, such as the thermos-type which carries molten sulphur at a temperature of 350 degrees Fahrenheit or the steam-coiled barges which move asphalt, bunker C and molasses at temperatures high enough to flow them.

Special automobile carrying barges have been built for river carriage; railroads use carfloats for ferrying freight cars in harbor areas and floating crane barges are used for loading and discharging heavy equipment.

Another is the refuse-carrying scow used in large metropolitan port areas which transports the waste materials of the large cities far into the ocean for dumping.

The barges of today are assigned to many types of work and they do their job well.

(The next article will deal with the combination of the towboat and barge into the modern tow, and will investigate the relationship of terminal facilities to the inland water transportation industry.)



MARITIME SIDELIGHTS

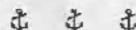
Sixty-two nations have accepted invitations to attend the atoms for peace conference in Geneva next month. Japanese scientists are expected to discuss a passenger ship and a submarine tanker, both planned for nuclear propulsion.



A bridge to provide speedier access from Panama's capital city will be built over the Pacific portal of the Panama Canal. The \$20 million span will have a 201-foot clearance, and will provide a link in the Pan American highway nearing completion.



Newest and largest ship on the Great Lakes is the 729-foot *Edmund Fitzgerald* being readied for service late this summer. Owned by Northwestern Mutual, the ship has a 75-foot beam and a 7,500 horsepower geared turbine engine. Launched sideways because of her great length at River Rouge, Michigan, the ship is registered in Milwaukee, Wis.



Biggest ships under construction in the world's shipyards to American Bureau classification are three tankers being built in Kure, Japan. They are 900 feet x 135 feet x 67 feet 6 inches and will have a dead weight of 104,500 tons each. The largest under construction in the United States is a tanker of 70,000 tons dead weight. This one measures 820 feet x 115 feet x 80 feet and its keel was laid late in 1957.



First assembly of the Inter-Governmental Maritime Consultative Organization will be held in London on January 6, 1959, it has been agreed by member countries. Made up of 21 nations, the organization is one of the United Nations twelve specialized agencies, and will undertake the task of examining existing international measures and strengthening them where possible.



SUNK WITH A PURPOSE: The Liberty ship *SS William C. Ralston* was towed 120 miles West of San Francisco and sunk with a final cargo of 8,000 tons of deteriorating cans of war gas. The *Sea Ranger* bid farewell to the dismantled veteran of World War II. Photo Courtesy *MSTS Magazine*, Department of the Navy.



The Maritime Administration and the Atomic Energy Commission have approved a contract with General Dynamics Corporation for development work in connection with a gas-cooled nuclear power plant for merchant ship propulsion. The work will be done by two divisions of General Dynamics—General Atomic Division, San Diego, California, and Electric Boat Division, Groton, Connecticut.



An "Engineering Study of the Effects of the Opening of the St. Lawrence Seaway on the Shipping Industry" has been prepared for the Maritime Administration by H. C. Downer & Associates, Inc., of Cleveland, Ohio.

The study, which is numbered PB 131736, may be obtained from the Sales and Distribution Section, Room 6327, U. S. Department of Commerce Building, Washington 25, D. C., for \$2.75 per copy.



The *SS Virginia* is the sixth Texas Company ship to attain the notable

safety record of over 1,000 contest-injury-free days of operation. Others are the *New Jersey* with 1,906 days; *Colorado*, 1,703; *Michigan*, 1,543; *Indiana*, 1,323; and *Georgia*, 1,041.



Thirty-two Great Lakes engineering officers from seven fleets have been awarded certificates of satisfactory completion in special classes on turbines and electricity held at the Merchant Marine Academy, Kings Point, N. Y. Rear Admiral Gordon McLintock, academy superintendent, presented the certificates after 120 hours of classroom and laboratory work.



The Bradley Transportation fleet has won a National Safety Council top award for its 350 seamen having worked 2,228,755 man-hours, from April 1955 through December 1957 without a lost time injury, it was announced in the *Bulletin*, published by the Lake Carriers' Association.

ACCIDENTS IN BRIEF

Here is a condensation of some accidents reported to Coast Guard Headquarters during the past month. A capsule glimpse into the cause . . . and effect. In each case the victim was incapacitated for at least 72 hours.

CAUSE

EFFECT

Slipped on ladder while wearing Japanese slippers

Cuts and bruises on face and right foot.

Soap on shower deck

Injured back.



Icy foredeck

Lacerated head.

Oil soaked shoes

Back injury.

Leaned against empty barrel

Hip fractured.

Slipped on longitudinal beam

Skull fractured.



Dropped dinner plate

Fragment injured right eye.

Orange peel on ladder

Contusion on posterior.

Bight of line

Amputation of lower left leg.

Gas line ruptured

Second degree burn.

Shirt sleeve caught on shaft coupling

Multiple lacerations.

Cutting frozen meat

Laceration of hand.



Heavy sea struck catwalk

Bruised leg and hip.

Sudden roll

Cuts and bruises.

Sea enters garbage port

Fractured wrist and head.

Stepped on hot water relief valve

Scalded.

BOOT NETS



Slips and falls account for a large percentage of all shipboard accidents. Wet decks, poor housekeeping, and carelessness are some of the causes. Embarrassment, pain, lost-time, and expense are some of the effects.

One way to avoid those nasty falls when wearing rubber boots is by using boot nets. These nets are simple to make, easy to put on, and have proven themselves invaluable on wet decks.

The "avoidable accident" section of the California Shipping Company *Safety Bulletin* discusses two shipboard accidents which could have been prevented by wearing boot nets. In the first case, a mate was unlocking the port wildcat on the anchor windlass on a dark, rainy night. When he pulled on the releasing bar, his feet slipped and in his effort to regain balance, he arched his back sharply, resulting in pain and discomfort in the back vertebrae.

"The mate was wearing rubber boots without boot nets and the sudden release of the locking ring caused his feet to slip," the report said.

In the second accident, an ordinary seaman was carrying a tank cleaning light from one tank to another when he slipped and fell, cutting his right elbow. "The deck was wet from spray and walking was difficult. This man should have been wearing boot nets."

Photo courtesy California Shipping Company.

UNITED STATES COAST GUARD

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



MVI
22 MAY 1958

Commandant's Action on

Marine Board of Investigation; *Drilling Barge Mr. K*, capsizing of, 17 April 1957, in the Gulf of Mexico, with loss of life

Pursuant to the provisions of Title 46 CFR, Part 136, the record of the Marine Board of Investigation convened to investigate subject casualty has been reviewed.

Nine lives were lost, three persons injured and substantial property damage occurred when, on the morning of 17 April 1957, while being towed, the *Drilling Barge Mr. K* suddenly capsized in the Gulf of Mexico about 1½ mile ExN from the entrance to South Pass at the mouth of the Mississippi River.

The *Drilling Barge Mr. K*, Official Number 272256, owned and operated by the Golden Meadow Well Service Co., New Orleans, La., was a manned, uninspected, steel, slotted type mobile platform, the hull 1026 g. t., length 164', breadth 54', depth 11'10". The elevated superstructure included living quarters, machinery spaces, and a helicopter deck and was fitted with a drilling derrick having a height, when raised, of 183'10" above the keel. The structure had been designed and built in 1956 by the Bethlehem Steel Co., Beaumont, Texas, for oil drilling offshore in depths not exceeding 14 feet. Ballast tanks within the hull of the barge enabled it to be sunk to the bottom within the 14' range and subsequently refloated for shifting to other locations.

On 15 April this barge had been positioned near the entrance to South Pass in the Gulf of Mexico, resting upon a prepared foundation of shells. On 16 April adverse weather caused damage to the shell bed, necessitating the removal of the barge so that this foundation might be repaired. At 0700 on 17 April refloating was commenced; the ballast tanks were pumped, the spuds holding the barge in position were raised and shortly before 0900, on an even keel with drafts of 8 feet, towing began with the derrick in the raised position. Because drilling had been prematurely discontinued there was on board a large quantity of heavy steel pipe and other supplies considerably in excess of that normally carried when under tow. An undetermined amount of water remained in the ballast tanks. The fresh water tanks were cross connected with sluicing valves open. At 0938, while proceeding at about 3 knots on a SSW course, wind SE to SSE 10 to 15 mph, with SE ground swells estimated at 3 feet, the barge suddenly began listing to port, and within 2 minutes capsized and floated bottom up. Of the 15 men aboard, 5 were reportedly asleep in their quarters when the accident occurred.

Although the derrick had been designed for lowering to a horizontal position, it had never been lowered while under tow, on at least four prior shiftings. Operating personnel apparently were unaware of the hazards involved in the ballasting, deballasting and movement of this vessel, particularly with regard to stability. The Board concluded that the instability resulted from the combined effect of the unusual topside weight of pipe and supplies, the raised position of the derrick, and the water in the ballast and fresh water tanks. The Board further concluded that the upsetting force was derived from the effect of the SE ground swells on the beam of the hull and the probable effect of the wind upon the upper portions of the derrick.

The Board recommended (a) that all mobile platforms located beyond the headlands but less than three miles offshore be made subject to the regulations promulgated for mobile platforms on the Outer Continental Shelf; (b) that these Regulations be amended to require the approval of plans, stability tests, and inspection during construction; (c) that these platforms while under tow shall have the least possible number of persons aboard, not to exceed two; (d) that the lowering of such derricks be mandatory, and (e) that the submerging, refloating and movement of these platforms, including preparation therefor, be only under the direct supervision of competent personnel having marine engineering experience and a practical knowledge of stability.


REMARKS

Although there appears to have been a possibility that certain design features of this equipment may have created conditions contributory to the casualty, the fact that this rig had been moved on at least four previous occasions without accident strongly suggests the probability that the causative error was operational. Plan approval and inspection during construction will not eliminate operational errors stemming from inadequate knowledge of stability. It is recognized that these mobile platforms are unique in many respects; they are not vessels in the usual sense but the forces and moments affecting equilibrium are constantly present. Stability in this particular type of structure becomes critical when buoyancy is dissipated during the submerging operation and, similarly, foundational stability is lost as flotation is resumed.

The problems of safety associated with the operation of these off-shore drilling rigs have been under study by the industry, by various governmental agencies and by others. The equipment, of various types and with many different operating systems, must continue to be regarded as experimental to a great extent. The optimum of safety is often thwarted by conditions necessarily present during any experimental stage. It follows logically that any regulations, safety codes or operational guidelines, to be effective, must be based upon a recognition of all the practical factors involved and the peculiarities of each individual rig.

With this in mind, and in view of our favorable experience with the encouragement of industry self-regulation whenever it is consistent with the safety objectives being sought, the Panel of Advisors on Offshore Operations to the Commander 8th Coast Guard District was invited to consider and submit recommendations for a comprehensive code of safe operating practices or other effective means which would reduce the probability of similar accidents in the future. In response thereto a special committee representing the industry made a study of the problem and drafted a "Manual of Safe Operating Practices for Offshore Mobile Drilling Platforms" which was distributed in the industry for additional study and comment. This proposes certain rules, minimum standards and recommended procedures applicable in general to all such platforms but taking into account the special features and characteristics of the individual rigs. It encompasses the determination of stability; the moving, raising, refloating and submerging of the rig; special hurricane procedure, etc., and includes the correlated subjects of manning, personnel qualification, supervision and responsibilities, use of safety equipment, etc.

In view of the progress being made toward the development and industry wide acceptance of a program which will satisfy the requirement for safe control over the movement and operation of these rigs, I find no need, at this time, for further action on the recommendations of the Board. Accordingly, subject to the foregoing remarks, the Findings of Fact, the Conclusions, and the Recommendations of this Marine Board of Investigation are approved.



A. C. RICHMOND,
VICE ADMIRAL, U. S. COAST GUARD,
Commandant.



nautical queries

Q. Explain how a sense antenna is used to resolve the 180° ambiguity of a bearing obtained by means of a radio direction finder.

A. A sense antenna obtains a uniform signal from all directions. When combined with the figure 8 pattern signal of the loop antenna a cardioid response pattern is obtained which is unidirectional.

The methods of using this pattern are varied by different manufacturers. The instructions for the particular set should be known and used in order that when necessary, in such a case as aiding a vessel in distress, the proper bearing can be quickly determined.

Q. (a) How is "night effect" usually manifested?

(b) Why is "night effect" not usually encountered when a vessel obtains a bearing from a position less than 50 miles from the radio beacon?

A. (a) "Night effect", sometimes encountered, particularly near sunrise and sunset, usually manifests itself in very wide or changing minimums.

(b) "Night effect" is not usually encountered at distances less than 30 to 50 miles from a marine radio beacon because the ground wave predominates within that distance, and night effect is caused by sky waves.

Q. When a vessel equipped with a radio direction finder hears a distress signal, what measure should be taken?

A. When a vessel equipped with a radio direction finder hears a distress signal, the radio direction finder should be manned in order to obtain a bearing and eliminate possible navigational errors in laying its course to the distressed vessel.

Q. How may a vessel in distress enable ships and radio direction finder stations in the vicinity to take radio bearings and to plot accurately its position of the distressed ship?

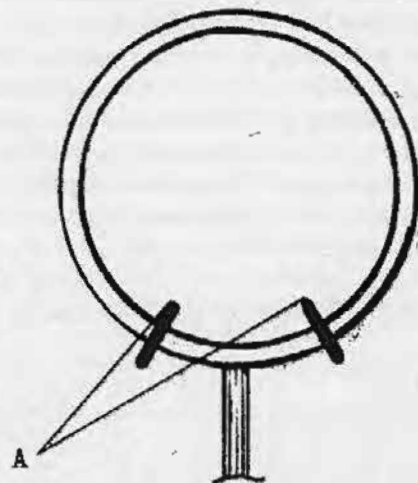
A. It is requested that approximately 10 minutes after the transmission of the original distress message, the ship in distress transmit slowly on the distress frequency "MO" and its own call signal for three minutes. This will enable ships and radio direction finder stations in the vicinity to take radio bearings and to plot accurately the position of the distressed ship.

Also, after the transmission of its distress message, the mobile station transmits two dashes of approximately 10 seconds duration each, fol-

lowed by its call sign, to permit direction finding stations to determine its position. This transmission will be repeated at frequent intervals in case of necessity.

RADIO DIRECTION FINDER

Q. Sketched is a marine type radio direction finder loop antenna. Why is it important that the insulator and gasket noted by "A" be kept in good condition and clean from paint or other material?



A. The insulators prevent resonance in the antenna shield which might cause bearing error if a full loop was present. Paint could defeat their purpose. Gaskets prevent water from entering the shield as well as insulating.

Q. What precautions must be considered prior to obtaining radio direction finder bearings on a station broadcasting entertainment programs?

A. Before taking bearings on stations broadcasting entertainment programs, a mariner should consider that its frequency may differ widely from the frequency for which his set is calibrated; that the published location of the station may be that of its studio and not that of its transmitting antenna; that if the station is synchronized with other stations, it may

be impossible to tell on which station the bearing was taken; and that as the majority of these stations are inland, the coastal refraction may be excessive.

Q. Describe briefly the use of aeronautical radio ranges for surface navigation and the signal emitted by such stations that will be heard.

A. Aeronautical radio ranges may be used in the same manner as marine radio beacons.

The signal emitted by such stations that will be heard will be an "A" or "N" or steady monotone, depending on the observer's position with respect to the range legs. The range signals are interrupted at intervals to permit broadcast of the identification signal.

Q. Describe briefly how Ocean Station Vessels' radio beacons may be located and used.

A. Normally, Ocean Station Vessels remain on station within a 10 mile square, the center of which is the geographic position assigned to the station.

The signal transmitted by the radio beacon is a continuous carrier wave with identifying letters superimposed on it. The signal consists of 4 letters; the first 2 letters comprise the characteristic signal of the station listed; the last 2 indicate its position within the 10 mile square of a grid.

The center of the grid is the geographic position assigned to the station. If the ship is on station, i. e., within the 10 mile square at the center, the last two letters of the signal are OS, the latitude and longitude designators respectively. If the ship is off the station but on the grid, the latitude and longitude designators of whatever square the ship is in are transmitted as the last 2 letters of the signal. The latitude designator is always given first. The center of each grid square should be considered the location of the station vessel for all computations, thus giving a maximum error of 7½ miles and an average probable error of 2½ miles.

CORRECTION

Under "Nautical Queries" in the April 1958 issue of the *Proceedings* the following correction should be made:

The answer to Question 4 (2) should read "120.1°" instead of "117.7°".

AMENDMENTS TO REGULATIONS

EDITOR'S NOTE.—The material contained herein has been condensed due to space limitations. Copies of the Federal Registers containing the material referred to may be obtained from the Superintendent of Documents, Washington 25, D. C.

TITLE 46—SHIPPING

Chapter 1—Coast Guard, Department of the Treasury

[CGFR 58-10]

MISCELLANEOUS VESSEL INSPECTION AMENDMENTS

Notices regarding proposed changes in the navigation and vessel inspection regulations were published in the *FEDERAL REGISTER* dated February 12, 1958 (23 F. R. 905-910), and March 1, 1958 (23 F. R. 1268-1270). Pursuant to these notices a public hearing was held on March 18, 1958, by the Merchant Marine Council at Washington, D. C.

This document is the fifth of a series covering the regulations and actions considered at this public hearing and annual session of the Merchant Marine Council and contains the final actions taken with respect to Items V, VI, VII, XI, and XVII, and portions in Item IX. The first document, identified as CGFR 58-8 (23 F. R. 2604), contained miscellaneous amendments to inspection requirements to implement the act of May 10, 1956, as amended (46 U. S. C. 390-390g), which were based on Item III of the Agenda. The second document, identified as CGFR 58-17 (23 F. R. 3376-3384), contained the requirements governing private aids to navigation on the outer Continental Shelf and waters under the jurisdiction of the United States, which were based on Item I of the Agenda. The third document, identified as CGFR 58-18 (23 F. R. 3447, 3448), contained new requirements regarding radar observers and miscellaneous changes respecting renewal of merchant mariner's licenses, which were based on Item IV of the Agenda. The fourth document identified as CGFR 58-9, contains miscellaneous amendments and requirements respecting dangerous cargoes, which were based on Items XIV, XV, and XVI of the Agenda.

All the comments, views, and data submitted in connection with the items considered by the Merchant

Marine Council at this public hearing have been very helpful to the Coast Guard and are very much appreciated. On the basis of the information received certain proposed regulations were revised. The following items considered at the public hearing held March 18, 1958, as revised, are adopted and included in this document:

Item V—Load Lines: Basic Minimum Freeboards for Vessels; and Variances for Steam Colliers, Barges, and Self-Propelled Barges (46 CFR Parts 43, 44, 45)

Item VI—Rules and Regulations for Tank Vessels; Miscellaneous Amendments (46 CFR 32.50, 33.05, 38.01)

Item VII—Electrical Engineering Regulations; Miscellaneous Amendments (46 CFR Parts 110-113, 32.45, 35.30)

Item XI—Deep Sea Sounding Devices for Passenger, Tank, Cargo, and Miscellaneous Vessels and Public Nautical School Ships (46 CFR 32.15, 77.27, 96.27, 167.40)

Item XVII—Equivalents Allowed for Vessels Loading Grain (46 CFR Part 144)

Portions of the following item considered at the public hearing held March 18, 1958, as revised, are adopted and included in this document:

Item IX—Fire Precautions for Passenger, Tank, Cargo, and Miscellaneous Vessels (46 CFR 32.60, 72.03, 72.05, 72.10, 76.10, 92.05, 92.10, 95.10)

The proposals in Item V of the Agenda, regarding load lines, were modified on the basis of some of the information received. Changes were made in 46 CFR 44.01-5 (b), and 44.05-25 (e). The proposal designated 46 CFR 44.01-13 was not adopted. In addition, amendments to 46 CFR 43.01-40 and 45.01-30 (a) were adopted. These changes clarify the regulations with respect to assigning authority.

The proposals in Item VI of the Agenda with respect to the remote manual shut down for engine driving cargo pump on tank barges and for materials used in construction of lifeboats were modified on the basis of some of the comments received. Changes were made in 46 CFR 32.50-35 and 33.05-35.

The proposals in Item VII of the Agenda, respecting the Electrical Engineering Regulations, were modified after consideration of the information received. The class designations of insulation materials in 46 CFR 111.05-30 were revised to agree with the latest changes to section 12 of AIEE No. 45 standards. The sug-

gestion that a warning should be added to the footnotes in certain tables since the temperature rise allowance is based only on consideration of insulation was accepted and changes were made in 46 CFR Tables 111.10-30 (a1), (a2), 111.25-10 (a1), (a2). With respect to the other proposals, changes were made in 46 CFR 111.35-1 (d), regarding switchboard construction; 111.35-15 (b), regarding equipment for direct-current switchboards, and equipment for alternating-current switchboards; 111.40-1 (g), regarding overcurrent protection of and number of overcurrent devices on one panel board; 111.45-15, regarding heater circuits; 111.50-5 (c), regarding ventilation systems; 111.50-20, regarding interrupting rating of fuses and circuit breakers; 111.60-26, regarding shore connection boxes; and 111.70-90, regarding lighting on tank vessels. The general requirements for emergency lighting and power system in 46 CFR Table 112.05-1 (a) was modified to permit manual starting for small vessels. The provisions of 46 CFR 112.05-5 (c), regarding emergency source of power, were made applicable to all vessels contracted for on or after October 1, 1958. With respect to requirements for emergency diesel-engine driven generator sets, the proposals in 46 CFR 112.50-1 were revised. With respect to electric cables, "mineral insulated metal sheathing" cable was added to 46 CFR 113.10-5 (b), 113.15-5 (b), 113.20-5 (c), 113.25-15 (d) (1), 113.50-25 (a), and 113.70-5 (b). With respect to rudder angle indicator systems, changes were made in 46 CFR 113.40-5 (a) so that these requirements will agree with 46 CFR 57.25-35 (c).

The proposals in Item IX of the Agenda, respecting fire precautions other than those pertaining to fire detecting, extinguishing equipment and portable fire extinguishers, have been considered and actions thereon are included in this document. With respect to segregation of spaces containing the emergency source of electric power in 46 CFR 32.60-45, 72.03-20, 92.05-15, and 112.05-5 (c), these provisions will become effective on and after October 1, 1958 for all vessels contracted for after that date. With respect to the requirements for stairways, ladders, and elevators, changes were made in 46 CFR 72.05-20 and 92.10-25 (b). The major changes increased the maximum angle of inclination for types 2 and 3 stairways used by crews to 50 degrees and type 4 stairway used by crews to 55 degrees,

while permitting curved, spiral or winding stairways when it is considered by the Commandant as equivalent with respect to safety and dimensions to the stairways described in the regulations.

The proposals in Item XI of the Agenda, regarding deep sea sounding devices, are accepted without change.

The proposals in Item XVII of the Agenda, regarding equivalents allowed for vessels loading grain, are accepted with minor changes made in 46 CFR 144.40-10 (a), which deal with construction of feeders and bin bulkheads.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Orders 120, dated July 31, 1950 (15 F. R. 6521), 167-9, dated August 3, 1954 (19 F. R. 5915), 167-14, dated November 26, 1954 (19 F. R. 8026), 167-20, dated June 18, 1956 (21 F. R. 4894), and CGFR 56-28, dated July 24, 1956 (21 F. R. 5659), to promulgate regulations in accordance with the statutes cited with the regulations below, the following amendments and regulations are prescribed and shall become effective 90 days after the date of publication of this document in the FEDERAL REGISTER unless otherwise specifically provided in the text of the regulations:

(Federal Register of June 26, 1958)

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

[CGFR 58-9]

MISCELLANEOUS AMENDMENTS RESPECTING DANGEROUS CARGOES

Notices regarding proposed changes in the navigation and vessel inspection regulations were published in the FEDERAL REGISTER dated February 12, 1958 (23 F. R. 905-910), and March 1, 1958 (23 F. R. 1268-1270). Pursuant to these notices a public hearing was held on March 18, 1958, by the Merchant Marine Council at Washington, D. C.

This document is the fourth of a series covering the regulations and actions considered at this public hearing and annual session of the Merchant Marine Council and contains the final actions taken with respect to Items XIV, XV, and XVI of the Agenda. The first document, identified as CGFR 58-8 (23 F. R. 2804), contained miscellaneous amendments to inspection requirements to implement the act of May 10, 1956, as amended (46 U. S. C. 390-390g), which were based on Item III of the Agenda. The second document, identified as CGFR 58-17 (23 F. R. 3376-3384),

contained the requirements governing private aids to navigation on the outer Continental Shelf and waters under the jurisdiction of the United States, which were based on Item I of the Agenda. The third document, identified as CGFR 58-18 (23 F. R. 3347, 3348), contained new requirements regarding radar observers and miscellaneous changes respecting renewal of merchant mariner's licenses, which were based on Item IV of the Agenda.

All the comments, views, and data submitted in connection with the items considered by the Merchant Marine Council at this public hearing have been very helpful to the Coast Guard and are very much appreciated. On the basis of the information received, certain proposed regulations were revised. The following items considered at the public hearing held March 18, 1958, as revised, are adopted and included in this document:

Item XIV—Detailed Regulations Governing the Transportation of Military Explosives on Board Vessels (46 CFR 146.29-1 to 146.29-100).

Item XV—Dangerous Cargo Regulations: Miscellaneous Amendments (46 CFR 146.02, 146.03, 146.04, 146.05, 146.06, 146.08, 146.09, 146.20, 146.21, 146.22, 146.23, 146.24, 146.25, 146.27, 147.05).

Item XVI—Inspection and Certification of Cargo and Miscellaneous Vessels Transporting Certain Dangerous Cargoes in Bulk (46 CFR 24.05, 30.01, 31.01, 70.05, 90.05, 91.20, 91.25, 98.01-98.25, 110.05, 146.22, 146.23, 146.24, 175.05).

(Federal Register of June 28, 1958)

DEPARTMENT OF THE TREASURY

United States Coast Guard

[CGFR 58-24]

WITHDRAWAL OF APPROVALS OF MODELS 2 AND 6 KAPOK LIFE PRESERVERS AND MODELS 51 AND 55 FIBROUS GLASS LIFE PRESERVERS

Tests of kapok life preservers have indicated that gasoline and light oils have a detrimental effect on the buoyancy of models 2 and 6 kapok life preservers which do not have a protective inner bag of vinyl film. Tests of fibrous glass life preservers have indicated that gasoline and light oils have a detrimental effect on the buoyancy of models 51 and 55 life preservers which do not have a protective inner bag of vinyl film covering the pads inserts.

A notice of proposed withdrawal of approvals of models 2 and 6 kapok life preservers and models 51 and 55 fibrous glass life preservers was published in the FEDERAL REGISTER of February 12, 1958 (23 F. R. 909), in conjunction with a notice of proposed rule making to revise the specifications respecting the manufacture of

kapok life preservers and fibrous glass life preservers. In accordance with this notice the Merchant Marine Council held a public hearing at Washington, D. C., on March 18, 1958. With respect to those models of life preservers now in service, the tests conducted indicated that no corrective action would be necessary at this time because of the excess buoyancy provided in these models. However, further studies are being made and if corrective action is considered necessary, the marine industry will be notified by means of a Navigation and Vessel Inspection Circular.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Orders 120, dated July 31, 1950 (15 F. R. 6521), 167-14, dated November 26, 1954 (19 F. R. 8026), 167-15, dated January 3, 1955 (20 F. R. 840), 167-20, dated June 18, 1956 (21 F. R. 4894), and CGFR 56-28, dated July 24, 1956 (21 F. R. 5659), to prescribe requirements with respect to safety equipment in accordance with the statutes cited with the specifications designated 46 CFR 160.002 and 160.005:

It is ordered, That all approvals for models 2 and 6 kapok life preservers granted under the specification designated 46 CFR Subpart 160.002 and all approvals for models 51 and 55 fibrous glass life preservers granted under the specification designated 46 CFR Subpart 160.005 are withdrawn, effective on the ninety-first day after the date of publication of this document in the FEDERAL REGISTER: *Provided*, That any such life preservers manufactured prior to this date may be placed in service and/or continued in service so long as in good and serviceable condition.

Dated: June 18, 1958.

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

[F. R. Doc. 58-4798; Filed, June 24, 1958;
8:52 a. m.]

TITLE 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of the Treasury

Subchapter K—Security of Vessels

[CGFR 58-21]

PART 124—CONTROL OVER MOVEMENT OF VESSELS

ADVANCE NOTICE OF VESSEL'S TIME OF ARRIVAL TO CAPTAIN OF THE PORT, U. S. COAST GUARD

By Executive Order 10173 the President found that the security of the United States is endangered by reason

of subversive activities and prescribed certain regulations relating to the safeguarding against destruction, loss, or injury from sabotage or other subversive acts, accidents, or other causes of similar nature of vessels, harbors, ports, and waterfront facilities in the United States, and all territory and waters, continental or insular, subject to the jurisdiction of the United States exclusive of the Canal Zone.

Pursuant to the authority of 33 CFR 6.04-8 in Executive Order 10173 (15 F. R. 7007; 3 CFR, 1950 Supp.) the Captain of the Port may supervise and control the movement of any vessel and shall take full or partial possession or control of any vessel or any part thereof within the territorial waters of the United States under his jurisdiction whenever it appears to him that such action is necessary in order to secure such vessel from damage or injury or to prevent damage or injury to any waterfront facility or waters of the United States or to secure the observance of rights and obligations of the United States. The purpose for amending 33 CFR 124.10 is to permit the masters of merchant vessels (except on coastwise voyages of 24 hours or less) reporting in accordance with the U. S. Coast Guard's voluntary "Merchant Vessel Reporting Program" to be considered in constructive compliance with the requirements of paragraph (a) of this section and, therefore, will not require additional "advance notice of vessel's arrival" reports to the Captain of the Port. This amendment to 33 CFR 124.10 shall be effective on and after the date of publication of this document in the *FEDERAL REGISTER*.

Since the security interests of the United States call for the aforesaid application of the provisions of 33 CFR 6.04-8 in Executive Order 10173 and because of the national emergency declared by the President, it is found that compliance with the Administrative Procedure Act respecting notice of proposed rule making, public rule making procedures thereon, and effective date requirements thereof is impracticable and contrary to the public interest.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Executive Order 10173, as amended by Executive Orders 10277 and 10352, § 124.10 is amended by redesignating paragraphs (d), (e), (f), and (g) to (e), (f), (g), and (h), respectively, and by inserting a new paragraph (d), so that this section as revised reads as follows:

§ 124.10 *Advance notice of vessel's time of arrival to Captain of the Port.*

(a) The master or agents of every vessel (foreign and domestic) shall give at least 24 hours' advance notice of the time of such vessel's arrival to the Captain of the Port where the vessel is to arrive. The master or agents of every foreign vessel, as well as every documented vessel of the United States, destined from one port or place to another port or place shall give at least 24 hours' advance notice of the time of such vessel's arrival to the Captain of the Port where the vessel is to arrive. For such foreign and domestic vessels, this 24 hours' advance notice of time of arrival is applicable at every port of call. In any case where the port of arrival is not located within the geographical area assigned to a particular Captain of the Port, this advance notice of time of arrival shall be made to the Commander of the Coast Guard District in which such a port or place is located. In a case of force majeure, if it is not possible to give at least a 24 hours' advance notice of time of arrival, then an advance notice as early as practicable shall be furnished.

(b) The master and agents of a vessel entering the Great Lakes shall be exempt from the requirements of paragraph (a) of this section, but the master or agents of such vessel if bound for a United States port shall:

(1) Immediately on the vessel's entry into Lake Ontario inbound, advise the Commander, 9th Coast Guard District, of the vessel's first intended United States port of call and estimated time of arrival in that port.

(2) Upon the vessel's arrival in the first United States port cause to be delivered to the Captain of the Port an itinerary giving the vessel's foreign ports of call during the preceding six months or last visit to a U. S. port whichever is later, the intended ports of call on the Great Lakes, and the estimated dates of arrival.

(3) Thereafter, immediately advise the Commander, 9th Coast Guard District, when the necessity of a deviation from that itinerary becomes known.

(c) The master or agents of a vessel engaged upon a scheduled route need not furnish the advance notice of arrival in individual instances if a copy of the schedule is filed with the Captain of the Port for each port of call named in the schedule and the times of arrival at each such port are adhered to.

(d) The masters of merchant vessels (except on coastwise voyages of 24 hours or less) reporting in accordance with the U. S. Coast Guard's voluntary "Merchant Vessel Reporting Program" shall be considered to be in con-

structive compliance with the requirements of paragraph (a) of this section, and no additional advance notice of vessel's arrival reports to the Captain of the Port are required. The master or agent of a vessel on coastwise voyages of 24 hours or less shall report the advance notice of vessel's arrival as provided in paragraph (a) of this section.

(e) In the case of a vessel which is engaged in operations in and out of the same port, either on voyages to sea and return without having entered any other port, or on coastwise voyages within the same Coast Guard District, or from ports within the First, Ninth, Thirteenth or Seventeenth Coast Guard Districts to adjacent Canadian ports, and where no reason exists which renders such action prejudicial to the rights and interests of the United States, the Coast Guard District Commander having jurisdiction may prescribe conditions under which Coast Guard Captains of the Ports may consider such a vessel as being in constructive compliance with the requirements of this section without the necessity for reporting each individual arrival.

(f) Failure to give advance notice will subject the master or agents of a vessel to the penalties of fine and imprisonment, as well as subject the vessel to seizure and forfeiture, as provided in section 2, title II of the act of June 15, 1917, as amended, 50 U. S. C. 192. In addition, such failure may result in delay in the movement of the vessel from the harbor entrance to her facility destination within the particular port.

(g) The requirements of this section do not apply to the following:

(1) Vessels which, during the course of their voyages, do not navigate any portion of the high seas; and

(2) Vessels which are numbered by the Coast Guard.

(h) The term "high seas", as used in this section, shall be construed to mean any portion of the open sea below the low water mark along the coasts and projections of the land across the entrances of bays, sounds and other bodies of water which join the open sea.

(Sec. 1, 40 Stat. 220, as amended; 50 U. S. C. 191, E. O. 10173, Oct. 18, 1950, 15 F. R. 7005, 3 CFR, 1950 Supp., E. O. 10277, Aug. 1, 1951, 16 F. R. 7537, 3 CFR, 1951 Supp., E. O. 10352, May 19, 1952, 17 F. R. 4607, 3 CFR, 1952 Supp.)

Dated: June 5, 1958.

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

[F. R. Doc. 58-4448; Filed, June 11, 1958;
8:49 a. m.]

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

Subchapter O—Regulations Applicable to Certain Vessels During Emergency

[CGFR 58-25]

PART 154—WAIVERS OF NAVIGATION AND VESSEL INSPECTION LAWS AND REGULATIONS¹

VESSELS OPERATED BY PACIFIC MICRONESIAN LINES, INC.

The Deputy Secretary of Defense in a letter to the Secretary of the Treasury dated May 23, 1958, requested a general waiver of navigation and vessel inspection laws of the United States as follows:

Each year since 1951, the Secretary of Defense has recommended waiver of the vessel inspection laws of the United States for certain vessels operating in the waters of the Trust Territory. This is to recommend a limited waiver similar to the one recommended last year.

In the interest of national defense it is requested pursuant to the provisions of Public Law 891, 81st Congress, that the requirements of the vessel inspection laws relating to licensed and unlicensed personnel, passengers' quarters, crews' quarters, lifesaving equipment and the number of passengers allowed to be carried on freight vessels be waived for the period July 1, 1958, to June 30, 1959, for vessels which are or will be operated by the Pacific Micronesian Lines, Incorporated, for the Department of the Interior in Trust Territory waters.

Section 1 of the act of December 27, 1950 (64 Stat. 1120; 46 U. S. C., note preceding 1), states in part as follows:

That the head of each department or agency responsible for the administration of the navigation and vessel inspection laws is directed to waive compliance with such laws upon the request of the Secretary of Defense to the extent deemed necessary in the interest of national defense by the Secretary of Defense. * * *

In a document published in the FEDERAL REGISTER dated October 12, 1957 (22 F. R. 8125), the Secretary of Defense, the Honorable Neil McElroy, delegated to the Deputy Secretary of Defense, the Honorable Donald A. Quarles, full power and authority to act for and in the name of the Secretary of Defense and to exercise the powers of the Secretary of Defense upon any and all matters concerning which the Secretary of Defense is authorized to act pursuant to law.

The purpose for the following waiver order designated § 154.35, as well as 33 CFR 19.35, is to waive the

navigation and vessel inspection laws and regulations issued pursuant thereto which are administered by the United States Coast Guard as requested by the Deputy Secretary of Defense and to publish this waiver in the FEDERAL REGISTER. 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 impracticable and contrary to the public interest.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by an order of the Acting Secretary of the Treasury dated January 23, 1951, identified as CGFR 51-1, and published in the FEDERAL REGISTER dated January 26, 1951 (16 F. R. 731), the following waiver order is promulgated and shall be in effect to and including June 30, 1959, unless sooner terminated by proper authority, and § 154.35 is revised as follows:

§ 154.35 *Department of the Interior vessels operated by Pacific Micronesian Lines, Inc.* Pursuant to the request of the Deputy Secretary of Defense in a letter dated May 23, 1958, made under the provisions of section 1 of the act of December 27, 1950 (64 Stat. 1120; 46 U. S. C., note prec. 1), I hereby waive in the interest of national defense compliance with the provisions of the navigation and vessel inspection laws relating to licensed and unlicensed personnel, passenger quarters, crew quarters, lifesaving equipment, and the number of passengers allowed to be carried on freight vessels, administered by the United States Coast Guard, as well as the regulations issued thereunder and published in 33 CFR Chapter I or in this chapter, to the extent necessary to permit the operation of vessels of the Department of the Interior and now operated by Pacific Micronesian Lines, Inc., or other vessels which may be used as substitutes for such vessels, in the Trust Territory of the Pacific Islands, as well as between the Trust Territory of the Pacific Islands and all the ports of the United States, including its territories and possessions, and foreign ports. This waiver order shall be in effect from July 1, 1958, to and including June 30, 1959, unless sooner terminated by proper authority.

(Sec. 1, 64 Stat. 1120; 46 U. S. C., note prec. 1)

Dated: June 13, 1958.

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

[F. R. Doc. 58-4683; Filed, June 19, 1958;
8:49 a. m.]

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 6-58

June 16, 1958

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

1. *Purpose.* The purpose of this circular is to permit the use of Underwriters' Laboratories, Inc. Inspected Marine Type Electric Fixtures on merchant vessels inspected by the Coast Guard and to discontinue further listing of lighting fixtures in CG-293, "Miscellaneous Electrical Equipment List."

2. *Background.* Underwriters' Laboratories, Inc. is prepared to investigate, list and label Marine Type lighting fixtures under their standard for Marine Type Electric Lighting Fixtures, which in substance complies with CG-259, U. S. Coast Guard "Electrical Engineering Regulations". Underwriters' Laboratories, Inc. has for many years listed and labeled fixtures for domestic and industrial occupancies as well as explosion-proof locations. Some of these are suitable for use on merchant vessels but have not been labeled as such. Underwriters' Laboratories, Inc. is now prepared to identify marine type electric fixtures by means of a special label. Previously the U. S. Coast Guard has listed certain marine lighting fixtures along with other miscellaneous electrical equipment in CG-293.

3. Installation Instructions.

a. If a particular lighting fixture has an Underwriters' Laboratories, Inc. marine label, this does not mean that it may be installed in any location on an inspected vessel. For example in hazardous locations the fixture must be of suitable explosion proof construction and so labeled; in galleys and in engine spaces watertight lighting fixtures are required; and obviously a Underwriters' Laboratories, Inc. Marine Type Inside Labeled fixture would not be suitable for all locations. Underwriters' Laboratories, Inc. listings will be divided into two classes, namely: *Marine Type Outside* and *Marine Type Inside*. In general, in other than hazardous locations, Underwriters' Laboratories, Inc. Marine Type Outside fixtures are permitted topside and Marine Type Inside fixtures are permitted underdeck in dry locations. In damp or wet locations, defined in 46 CFR 110.15-115 (b) and including machinery spaces, cargo spaces, refrigerated spaces, galley, laundry, public washrooms, and similar locations, either Marine Type Outside or Marine Type Inside Watertight fixtures are permitted. One

¹ This is also codified as 33 CFR Part 19.

other exception is made where the regulations permit only Incombustible Materials in passageways and stairway enclosures—here only Incombustible Materials, such as metal and glass, are permitted in fixture housings.

b. Shipboard cable used to connect Underwriters' Laboratories, Inc. Marine Type lighting fixtures must have the type insulation required by Underwriters' listing.

4. Action.

a. The Coast Guard will accept Underwriters' Laboratories, listed and labeled Marine Type lighting fixtures for installation in accordance with the above instructions; however, the Coast Guard reserves the right to reject any fixture not considered suitable for a specific application. Submission of drawings to the Coast Guard for approval will not be required for fixtures so listed and labeled.

b. Lighting fixtures presently listed by the Coast Guard in CG-293, "Miscellaneous Electrical Equipment List" will continue to be accepted without Underwriters' labels for a period of five years from the date of this circular. New listings of lighting fixtures in CG-293 are discontinued as of this date.

H. T. JEWELL

Rear Admiral, USCG

Chief, Office of Merchant Marine Safety

By direction of the Commandant

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 June 3, 1958 (CGFR 58-20). Copies of these documents may be obtained from the Superintendent of Documents, Washington 25, D. C.]

FUSIBLE PLUGS

The regulations prescribed in Subpart 162.014, Subchapter Q, Specifications, require that manufacturers submit samples from each heat of fusible plugs for test prior to plugs manufactured from the heat being used on vessels subject to inspection by the Coast Guard. A list of approved heats which have been tested and found acceptable during the period from 15 May 1958 to 16 June 1958 is as follows:

The Lunkensheimer Co., Cincinnati 14, Ohio. Heat Nos. 581, 582, and 583.

MARINE SAFETY PUBLICATIONS AND PAMPHLETS

The following publications and pamphlets are available and may be obtained upon request from the nearest Marine Inspection Office of the United States Coast Guard, except for cost publications which may be obtained upon application to the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Date of each publication is indicated following title.

CG No.	Title of Publication
101	Specimen Examinations for Merchant Marine Deck Officers. 1-50
108	Rules and Regulations for Military Explosives. 5-15-54
115	Marine Engineering Regulations and Material Specifications. 3-1-58
123	Rules and Regulations for Tank Vessels. 4-1-58
129	Proceedings of the Merchant Marine Council. Monthly
	Motorboat Safety. 1957-1958
169	Rules to Prevent Collisions of Vessels and Pilot Rules for Certain Inland Waters of the Atlantic and Pacific Coasts and of the Coast of the Gulf of Mexico. 4-1-58
172	Pilot Rules for the Great Lakes and Their Connecting and Tributary Waters. 4-1-58
174	A Manual for the Safe Handling of Inflammable and Combustible Liquids. 7-2-51
175	Manual for Lifeboatmen and Able Seamen, Qualified Members of Engine Department, and Tankerman. 6-1-55
176	Load Line Regulations. 11-1-53
182	Specimen Examinations for Merchant Marine Engineer Licenses. 5-1-57
184	Pilot Rules for the Western Rivers. 7-1-57
190	Equipment Lists. 3-1-56
191	Rules and Regulations for Licensing and Certifying of Merchant Marine Personnel. 9-15-55
200	Marine Investigation Regulations and Suspension and Revocation Proceedings. 4-13-53
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. 6-16-52
249	Merchant Marine Council Public Hearing Agenda. Annually
256	Rules and Regulations for Passenger Vessels. 3-1-57
257	Rules and Regulations for Cargo and Miscellaneous Vessels. 6-1-55
258	Rules and Regulations for Uninspected Vessels. 7-1-55
259	Electrical Engineering Regulations. 6-1-55
266	Rules and Regulations for Bulk Grain Cargo. 2-13-53
267	Rules and Regulations for Numbering Undocumented Vessels. 1-15-53
268	Rules and Regulations for Manning of Vessels. 9-3-57
269	Rules and Regulations for Nautical Schools. 11-1-53
270	Rules and Regulations for Marine Engineering Installations Contracted for Prior to July 1, 1935. 11-19-52
290	Motorboats. 7-1-57
293	Miscellaneous Electrical Equipment List. 4-15-58
320	Rules and Regulations for Artificial Islands and Fixed Structures on the Outer Continental Shelf. 1-2-57

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 \$15.00 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 on the table of changes below.

Changes Published During June 1958

The following have been modified by Federal Registers:
 CG-190 Federal Register, June 3, and June 25, 1958.
 CG-239 Federal Register, June 12, 1958.
 CG-123 Federal Register, June 26, and June 28, 1958, Part II; 35 cents.
 CG-176, CG-256, CG-257, CG-259, CG-266 and CG-269 Federal Register, June 26, 1958.
 CG-258, CG-257, CG-258 and CG-259 Federal Register, June 28, 1958, Part II; 35 cents.

THE SS SANTA ROSA



PARTICULARS

- Length overall—583 feet 7 inches
- Length between perpendiculars—534 feet 9 inches
- Beam molded—84 feet
- Draft—26 feet
- Propulsion—Twin screw steam turbines—20,000 S. H. P.
- Contract Speed—20 knots
- Total Dry Cargo Capacity, cubic feet (bale)—Over 300,000
- Refrigerated Cargo Capacity, cubic feet—Over 80,000
- Gross Tonnage—15,366
- Net Tonnage—8,118
- Naval Architects—Gibbs & Cox, Inc., New York.
- Builders—Newport News Shipbuilding & Dry Dock Co., Newport News, Va.
- Owners—Grace Line, Inc., New York
- Home Port—New York, N. Y.
- Keel Laid—Jan. 15, 1957
- Launched—Aug. 28, 1957
- Delivered to Grace Line—June 12, 1958, Newport News, Va.
- Estimated Cost of Ship—\$25 million
- Official Number—276598
- Signal and radio—Call letters KHCJ