PROCEEDINGS OF THE MERCHANT MARINE COUNCIL



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PROCEEDINGS

OF THE

MERCHANT MARINE COUNCIL

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FRONT COVER

FEATURE

Photograph of a portion of the facilities at the Port of Toledo. Ohio. Three grain-loading terminals are shown, each one capable of loading ships' holds at the rate of 50,000 bushels per hour. Toledo is the largest port on Lake Erie, the second largest Great Lakes port, and the ninth largest port in the United States. The port also contains a foreign trade zone for the holding of materials free from duty charges and quota limitations.

BACK COVER

Diagram showing the standard AMVER routing within the Gulf of St. Lawrence. One of the benefits of participating in the AMVER program is that most vessels are thereby in constructive compliance with the 24hour advance notice of arrival required by 33 USCFR 124.10(b) as revised. For vessels inbound to the Great Lakes it is necessary, to comply with the regulation, that they include the estimated time of arrival at both the Snell Lock and the first U.S. port of call.

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

AMVER-GREAT LAKES

Although the AMVER Center does not maintain a plot of vessels on the St. Lawrence River or Great Lakes, vessels are plotted while in the Gulf of St. Lawrence. Since the cooperation and coordination between Canadian and U.S. Coast Guard search and rescue organizations is of the highest order, an accurate and comprehensive plot in this area is important. All vessels departing the St. Lawrence River on an offshore passage are encouraged to send the Type 1 AMVER report to Coast Guard Radio Station NJN at Argentia, Newfoundland, or to any one of the other 17 radio stations in the AMVER communication network. The AMVER Center terminates inbound passages and commences outbound plots in the mouth of the St. Lawrence River abeam Pointe des Monts at 49.2° N. latitude, 67.1° W. longitude. A standard routing is used within the Gulf of St. Lawrence, as indicated in the diagram on the back cover of this issue, unless specific information to the contrary is included in the AMVER message. The points labeled identify the "turn points" used by the AMVER plot. They may also be used for alternate departure points. Vessels using phrases such as "usual coastal," should include an appropriate routing indication where there is more than one possibility—for example: "via Cabot Strait" or "via Strait of Belle Isle."

Additional information concerning the AMVER System, or the requirements for advance notice of arrival, may be obtained from the Commander, Ninth Coast Guard District, Main Post Office Building, West Third and Prospect Streets, Cleveland 13, Ohio.

DIST. (SDL No. 78) A: a aa b c(2); remainder (1) B: n(35); c(16); e(5); f(4); h(3); g(2); remainder (1) C: a b (less Quonset Pt.) c d e f g i m ou (1) D: i(5); a b c d e f g h k l q r (1) E: o(New London only) (1) F: p(13) List 141M

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U.S. COAST GUARD-PORT SECURITY AND THE CAPTAIN OF THE PORT

BY LIEUTENANT COMMANDER W. E. WEST, USCG, CAPTAIN OF THE PORT, JACKSONVILLE, FLA.

A REGISTERED VESSEL of the United States or a foreign vessel fails to report 24 hours in advance of arrival at an American port. The master of a vessel planning to load commercial class A explosives requests a permit for the operation. A "desig-nated waterfront facility" does not meet the requirements set forth in Title 33, Code of Federal Regulations, Subpart 126.15. An agent for a steamship company wants permission to load 2.000 curies of radioactive material. Another shipper has nitro carbo nitrate in paper bags for transportation. A tanker handling JP-4 fuel has a spill. An unidentified anchored merchantman is obstructing a channel. An inbound vessel reports a fish meal fire in #2 tween decks. A collision within a harbor between two tankers endangers other marine traffic requiring the port to be closed. These are some of the continuing problems of port security for today's Captains of the Port, U.S. Coast Guard.

DEFINITION AND AUTHORITY

By definition the Captain of the Port is the officer of the Coast Guard, under the command of a District Commander, so designated by the Commandant for the purpose of giving immediate direction to Coast Guard law enforcement activities within the general proximity of the port in which he is situated.

In October 1950, with the Korean conflict at hand, by virtue of Executive Order 10173 as amended by Executive Orders 10277 and 10352 the President of the United States found the security of the nation endangered by reason of subversive activity and prescribed regulations relating to safeguarding vessels, harbors, ports, and waterfront facilities. This Executive order rested upon the Magnuson Act approved in August 1950, amending the Espionage Act, 50 USC 191. Chapter I, Title 33, Code of Federal Regulations, Parts 121, 122, 124, 125, and 126 contains the detailed regulations issued by the Commandant, U.S. Coast Guard, for security of vessels and waterfront facilities.

Port security reached maturity during WW II when the Coast Guard protected all ports of the United States. Thousands of Coast Guardsmen assisted by other thousands of "temporary" Coast Guardsmen, unpaid volunteers, enforced security regulations throughout the maritime regions of the country. One particularly successful phase of WW II port security activity was the supervision of the handling of explosives on merchantmen; over 17 million tons in some 17,000 vessels were supervised by the Coast Guard explosive loading details without a serious casualty.

Port security is of primary concern to the U.S. Coast Guard. The Commandant through the various District Commanders utilizes Captains of the Port to execute port security programs. This program basically consists of law enforcement, particularly parts of Title 33 and 46 Code of Federal Regulations. The Captain of the Port, within the capabilities of the Coast Guard forces available to him, maintains control over the movement of merchant vessels entering or departing; supervises and controls explosives and other dangerous cargo; insures security of vessels and waterfront facilities; and maintains close liaison with the maritime industry, local, State and Federal authorities, and the other Armed Forces.

Control over the movement of merchant vessels is set forth in 33 CFR 124, requiring all registered U.S. and all foreign merchantmen to file 24 hour advance arrival notices with the Captain of the Port at every American port of call. Noteworthy is the fact that vessels participating in the Coast Guard's Atlantic Merchant Vessel Report (AMVER) System are considered to be in constructive compliance with 33 CFR 124.

Supervision and control of explosives and other dangerous cargo is required by the Dangerous Cargo Act (46 USC 170). The Captain of the Port administers this portion of the program by regular inspection of waterfront facilities, issuing permits to vessels and facilities for certain dangerous cargoes (explosives, oxidizing materials, radioactive materials, etc.) and actual "on scene" supervision of vessels handling "designated dangerous cargo" (explosives, commercial or military, class A). All dangerous cargo must be handled at a "designated waterfront facility", these are commercial facilities meeting the requirements of 33 CFR 126.15, "conditions for designation as a designated waterfront facility." Once a facility has met these safety demands a "general permit" is automatically issued for handling, storing, stowing and transporting of dangerous cargo, except those materials requiring "special permits". Limitations as to quantities of dangerous cargoes that may be at a facility without written notification to the Captain of the Port are set forth in 33 CFR 126.27. Dangerous cargoes necessitating special permits include commercial or military class A explosives, ammonium nitrate (organic coated), ammonium nitrate (no organic coating), ammonium nitratephosphate and nitro carbo nitrate under certain conditions of packaging. These permits are all issued by the Captain of the Port after certain requirements on the vessel and at the facility have been met. Permits for radioactive materials are handled by the Commandant directly from Washington. It is well to remember that the Dangerous Cargo Regulations are permissive, i.e., unless a procedure or

method is provided for, it is not permissible, and also that these regulations are self policing with heavy penalties for violations.

The security of vessels and waterfront facilities is a primary responsibility, (and so stated in the Code of Federal Regulations) of the masters, owners, operators, and agents. To assist in this matter vessels and waterfront facilities are visited and inspected by the Captain of the Port. Designated waterfront facilities, mentioned previously, must adhere to the requirements of 33 CFR 126.15. Some of these requirements are: guards assigned, safety precautions, satisfactory housekeeping procedures, adequate firefighting equipment, and proper cargo stowage. If a facility fails to meet the standards set forth in title 33 then the general permit to handle dangerous cargo is terminated. Considering that there are better than 1,900 items that are considered dangerous, from acetaldehyde to zirconium, the establishment and maintenance of proper standards by a facility is of prime importance to a commercial operator.

Vessels, both foreign and domestic, are boarded by the Captain of the Port for dangerous cargo inspections. "Every day" cargo vessels regardless of flag must have a dangerous cargo manifest or list aboard and available to the Coast Guard. A quick check of this manifest or list will reveal what dangerous articles are aboard, where stowed, what label if any, quantity, etc. This is a most valuable document to the Captain of the Port, par-

ABOUT THE AUTHOR



LIEUTENANT COMMANDER WEST is presently assigned as Captain of the Port of Jacksonville, Fla. He is a graduate of the U.S. Merchant Marine Academy and holds an unlimited master's license. On previous duty assignments in the Coast Guard, Commander West has served as commanding officer of Coast Guard vessels in the Atlantic and Pacific Oceans, and in the Gulf of Mexico.

ticularly in an emergency such as a fire. Tank vessels and barges, especially those handling flammable liquids, are of concern to the Captain of the Port. Visits to these for a check of safe operations are beneficial to the Coast Guard and to the vessel or barge involved. Special interest is given to T/Vs with flammable liquids, grades "A" or "B", aboard or with cargo tanks empty but not gas free. Security for vessels and facilities is further enhanced by preventing persons without proper identification from entering a facility or boarding a vessel under certain circumstances. While only a few such restricted areas are presently designated by the Captain of the Port, as directed by the Commandant, terminals handling class "A" explosives do fall in this category. Civilian personnel working at those facilities must have a valid Coast Guard Port Security Card or entry is denied. The Coast Guard encourages persons engaged in waterfront activities to apply for a Coast Guard Port Security Card and to keep cards current. Security of vessels and waterfront facilities requires close cooperation of the masters, owners, operators and the Coast Guard plus other interested local and Federal agencies.

Close liaison with all interested groups, both industry and government, in the area under his supervision is a "must" for the Captain of the Port. Knowledge of local maritime happenings is of tremendous importance to the Captain of the Port. Data regarding present and planned operations is thus available, cargoes to be handled can be ascertained, vessel movements readily observed, and port developments watched. Aid from and cooperation with city police, fire and safety departments cannot be overestimated. County assistance, particularly the sheriff's organization. should be encouraged. On the State level various units, including the State fire marshal, are beneficial in port security operations. Close support and complete mutual understanding is absolutely necessary between the local Bureau of Customs personnel and the Captain of the Port, and this relationship does exist. The Immigration and Naturalization Service, Federal Bureau of Investigation, U.S. Public Health Service, U.S. Department of Labor, and others work with the Captain of the Port in keeping the harbors safe. Every branch of the armed service contributes in some way to the Coast Guard's efforts in port security. Military liaison from the Commandant's level to the Captain of the Port is fostered and encouraged. Since the Coast Guard



becomes a part of the U.S. Navy in time of national emergency or war it is vitally important for these services to work closely in all activities that may, under emergent conditions, affect the U.S. maritime position. The Naval Control of Shipping Organizations and the offices of the Coast Guard Captains of the Port have interrelating problems and work in harmony in everyday operations.

TEXAS CITY DISASTER

No discussion of port security and the potential hazards would be complete without a résumé of one of the worst peacetime catastrophes to befall an American port-TEXAS CITY. In April 1947, the SS Grandcamp, a Liberty class vessel of French registry, exploded at Texas City killing some 550 persons and injuring over 3,000 persons in a community of 15,000 residents-killing or injuring one person out of every four. Property and contingent losses were known to have exceeded \$50 million. A brief breakdown of events surrounding this disaster is as follows. Shortly after 8 a.m. on 16 April 1947, longshoremen discovered a fire in #4 hold of Grandcamp. Impotent efforts to extinguish the fire in this hold containing 880 tons of bagged ammonium nitrate fertilizer were further hindered by fear of cargo damage. (Had abundant quantities of water been promptly applied in all probability there would have been no explosion in Texas that morning.) About 8:30 a.m. the ineffective efforts to extinguish the blaze were worsened by securing ventilation to the hold and activating the steam smothering system, a classic maritime firefighting operation but 180 degrees out of phase for ammonium nitrate which is an oxidizing material. The unfortunate municipal fire department arrived just before the Grandcamp disintegrated with an earthshaking explosion. Nearby the American Liberty ship High Flyer (ironi-

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cally well named) laden also with a quantity of nitrates, plus sulphur, was blown free from her mooring against a third vessel, an American Liberty, Wilson B. Keene. She contained no dangerous cargo and was loading with flour and rice. About 6:00 p.m. the same day the sulphur cargo in the High Flyer took fire from falling embers. Rescue crews heroically continued to try to separate the fouled ships. All efforts failed. At 1:10 a.m. 17 April 1947, the SS High Flyer exploded carrying the SS Wilson B. Keene to her demise. There was no U.S. Coast Guard Captain of the Port Organization in the port of Texas City during this dreadful ordeal.

With constant concern for maritime safety the Coast Guard through Captain of the Port Offices and Merchant Marine Inspection Offices attempts to prevent maritime disasters in port and at sea. For such a momentous task the assistance of all the marine fraternity is required. To this end every master and licensed deck officer must be familiar with the Dangerous Cargo Regulations (based on 46 USC 170 and found in Title 46, Code of Federal Regulations, Part 146-"Transportation or storage of explosives or other dangerous articles or substances, or combustible liquids on board vessels"). Agents, operators and owners of waterfront facilities must also have a working knowledge of 46 CFR 146 and detailed knowledge of "Security of Vessels and Water-front Facilities", CG-239. In the all encompassing term "Port Security", no avenue can be left unexplored by the Captain of the Port in his efforts to protect his port and the vessels therein. Whether it be peacetime seaport activity, the cold war, a limited war or a general war the requirements for a vigilant, well trained, and competent Captain of the Port organization for port security, as defined by national and local need, is a broad and challenging responsibility of the U.S. Coast Guard.

NOTES ON CASUALTIES

By LCDR William B. Clark, USCG

Recently a merchant vessel experienced flooding of her No. 3 hold while underway. Cargo consisting of a heavy lift generator weighing seventyfour (74) tons broke loose and caused a puncture in the ship's skin.

The generator had been stowed on the port forward side of No. 3 lower hold. Inboard of this was stowed a turbine weighing thirty-six (36) tons. The rest of the lower hold was filled with various types of motor vehicles.

The generator's cradle was built on skids which ran parallel to the rotor shaft. The coupling on the shaft extended beyond the generator casing. The generator was stowed with the shaft and skids in an athwart-ship position and with the coupling within a few feet of the vessel's side plating.

The generator and turbine were secured to the satisfaction of ship's personnel and a cargo surveyor by the use of heavy chain lashings, pelican hooks, turnbuckles, shackles, and shoring to pad eyes, stanchions, web frames, and intermediate frames in the ordinary and routine fashion.

While underway with wind force eight (8) and a rapidly falling barometer, the vessel fell into the trough of a freak sea and rolled heavily three times with a maximum roll to starboard of 32°. The snap rolls had a duration of 3 to 5 seconds, and caused lashings on cargo vans stowed on deck to part. After resecuring the deck cargo, the holds were examined as much as possible. Because of a possible chlorine leak in the hold, the inspecting mate wore an oxygen breathing apparatus, the face piece of which fogged up in use. However, the mate considered the heavy lift cargo to be secure.

Two days later while laboring in very rough seas, the vessel was rolling 20° to either side. In a duration of approximately one-half hour the roll changed to about 5° to 10° to starboard and at least 25° to port. An investigation revealed No. 3 lower hold was then flooded to the lower tween deck with the water level rising rapidly.

After reaching a harbor of safe refuge and dewatering the hold, it was determined that both the turbine and generator had broken loose. The generator's coupling was found resting against frame 55 having damaged same and pushed it outboard causing a protruding gash in the hull. The vehicles in the lower hold had smashed together and were completely demolished.

TANK EXPLOSION

BY G. D. WASHBURN California Shipping Co.

OVER THE PAST decade there have been reports of mysterious explosions in ship's cargo tanks, often while tank cleaning. Frequently, the casualty occurred on the other side of the world and such reports as were received were vague and uncertain. The results were concrete enough. A number of fine vessels were badly damaged or destroyed and in some cases there was a large loss of life. On vessels operated by Calship, there had been no such explosions. Lacking information, we concluded that these explosions were probably the result of failure to follow good operating practices and that we had nothing to worry about. This comfortable state of mind was rudely shattered by a

tank explosion. Here is the story. On October 25, 1962, the SS Paul Pigott had an explosion in No. 7 port wing tank while Butterworthing. Two men were nearby the tank at the time. One was slightly injured, the other was unharmed. The explosion was one of relatively low magnitude compared to some cargo tank explosions. Physical damage to the ship consisted of the deck blown upward a foot or so, a large bulge in the side of the tank outboard, the longitudinal bulkhead between No. 7 port wing and No. 7 center blown down, and broken lines on deck. Direct cost of repairs was around \$300,000.

Details are briefly as follows. The ship had left Saint John and was en route to Venezuela. The last cargo had been Gach Saran Crude. The ship was Butterworthing tanks for clean ballast. They completed a number of tanks without incident. At 12:40 p.m. two machines were placed in No. 7 port wing through the Butterworth holes and at a level of about 10 feet from the deck.

All hands, with the exception of the two men mentioned above, were aft eating lunch. There were no activities other than Butterworthing. There were no electric lights, no steam or air hose, no smoking. There was nothing being done that could have provided a source of ignition.

After 20 minutes Butterworthing, the tank exploded. There were considerable quantities of black smoke but no observable fire. Nevertheless, steps were taken to fight fire. Hose was led out. Foam was applied. Steam smothering was turned on. This action was canceled when it became apparent that there was no con-



... well, something happened ! "

Mr. Washburn is editor of Calship's Safety Bulletin. This discussion of the results of an explosion in No. 7 port wing tank on the SS Paul Pigott is reprinted from the March 1963 issue of the Bulletin—Ed.

tinuing fire. The master and the crew handled the emergency in a most commendable manner.

INVESTIGATION

A detailed investigation was made of this explosion and related matters. This investigation took over 2 months and required the efforts of a number of people. The line of inquiry adopted was to find out what, if anything, was different about the tank being Butterworthed or the manner in which it was being done that was different from a normal operation as defined by the way this operation is and has been done thousands of times on Socal vessels.

Only two differences could be found. 1. The tank hatch cover was opened 6 inches or so.

2. The tank had magnesium anodes for control of corrosion.

In exploring any explosion the method is to investigate the source of fuel and the source of ignition.



PHOTOGRAPH of Magnesium Spark Produced by Falling Anode. Note sufficient light is produced by the spark to take a picture of box holding steel plate.

SOURCE OF FUEL

After the vessel reached port, tests on the tanks that had not been gas freed showed that the atmosphere of all of the tanks was too rich to ignite. It seems reasonable to conclude that the atmosphere of No. 7 port was also too rich to ignite when Butterworthing started. The hatch cover being raised and the wind being slightly forward of the port beam, it would appear that wind was scooped down into the tank where it diluted the atmosphere into the explosive range.

The magnitude of explosions varies. One of the factors governing the strength of an explosion is the composition of the explosive mixture. If the mixture is in the middle of the explosive range, the strength of the explosion is at its maximum. As the mixture approaches the upper or lower limits of the explosive range, the strength of the explosive range, the strength of the explosion diminishes. It seems likely that the mixture in No. 7 port tank had been diluted down to just under the upper explosive limit.

The lesson to be drawn from this part of the accident is to avoid ventilation of a tank that is being Butterworthed. If the tank is too rich to ignite, it should be left that way. Specific instructions have been issued to Caltransport vessels to keep tank hatch covers down and to restrict ventilation of tanks to a minimum while Butterworthing.

SOURCE OF IGNITION

Common possible sources of ignition such as electric lights, smoking, and the like were quickly eliminated leaving two possibilities.

1. A static ignition connected with the Butterworth operation.

2. An ignition produced by a magnesium anode.

There has been considerable research done on the problem of static generation in tanker operations. These studies have shown conclusively that there is no hazard from static

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during water washing by machine; i.e., during Butterworthing with water. Theoretically, should there be an insulated object in the tank that could act as an accumulator of static, then there could be a static buildup. Such an accumulator could, for example, be a 5-gallon can floating on a nonconductive oil surface.

Investigation of tank No. 7 port showed nothing in the tank that might act as an accumulator of static, hence it is concluded that the source of ignition was not static.

Investigation of Tank No. 7 port did show that four pieces of anodes had fallen and were in the bottom of the tank.

TESTING OF ANODES FOR INCENDIVE SPARKS

A program for testing for the production of incendive sparks produced by falling magnesium anodes was conducted at the Richmond Refinery by the Socal Engineering Department with Calship and Calresearch participating.

The magnesium anodes found in the *Pigott's* tank were used. These anodes were dropped from various heights into a barrel where they struck a rusty inclined steel plate. This steel plate was covered with Gach saran crude oil, which was then washed off with salt water to simulate the steel of a ship's tank being Butterworthed. An explosive mixture was



REPAIR INSPECTOR Joe Christopher dropping anode into barrel containing an explosive atmosphere.



ANODES from Piggott's Tanks Used in Tests.

placed in the barrel and the anode dropped. Ignitions, that is, explosions followed by fire, occurred regularly.

To make the production of an explosion even more difficult, a garden hose was adjusted to give a fine spray and played on the steel plate as the anode contacted the steel plate. Ignitions were produced even under these conditions.

A bed of magnesium anodes was placed in the barrel and a Butterworth machine dropped on them from a 37-foot height. In a series of three drops, there were two ignitions.

As a result of these tests, it was decided that while it could not be definitely proven that the falling of a magnesium anode caused the explosion of the *Pigott*, this was the most likely source of ignition. It was further decided, since it could not be shown that a falling magnesium anode did not cause the explosion, and since the lives of men were involved, that such anodes would be removed from all cargo and ballast tanks with the exception of the after peak tank on all Caltransport vessels.

CONCLUSION

Magnesium anodes were suspect in some of the explosions mentioned in our opening paragraph. With these anodes out of the Caltransport vessels, we know that company vessels can clean tanks safely by following our standard operating procedures, particularly as they relate to the control of smoking, the proper use of portable electrical equipment, thoroughness of tank washing and ventilating, and the proper use of combustible gas indicators as set forth in Marine Regulation No. 2, "Tank Cleaning." The record proves this can be done.

As stated above, tank ventilation should be restricted while Butterworthing. The pressure/vacuum relief valve should be in the open position, but all other openings should be closed.



There were 914 vessels of 1,000 gross tons and over in the active oceangoing U.S. merchant fleet on April 1, 1964, 13 less than the number active on March 1, 1964, according to the Maritime Administration of the U.S. Department of Commerce.

There were 9 Government-owned and 905 privately owned ships in active service. These figures did not include privately owned vessels temporarily inactive. They also exclude 26 vessels in the custody of the Departments of Defense, State, and Interior, and the Panama Canal Company.

There were 12 fewer active vessels and 10 more inactive vessels in the privately owned fleet. One bulk freighter was transferred to ocean from Great Lakes service. Two freighters were transferred foreign, and a tanker was a marine loss. This made a net loss of 2 to a total of 972. Of the 67 privately owned inactive vessels, 1 passenger-cargo ship, 8 freighters, and 12 tankers were being repaired or overhauled. The others were laid up or temporarily idle.

The Maritime Administration's active fleet decreased by 1, while the inactive fleet decreased by 11. The total Government fleet decreased by 12 to 1,785. The total U.S. merchant fleet decreased by 14 from March 1, 1964, to 2,757. No new contracts were placed. No ships were delivered. The number of large oceangoing ships under construction in U.S. shipyards remained at 49.

\$ \$ \$

The American Association of Port Authorities has published a 174-page manual of basic material on the layout and construction of marine terminals.

Entitled "Port Design and Construction," the publication was developed by the organization's standing Committee on Construction and Maintenance, headed by John M. Kyle, chief engineer of the Port of New York Authority, and is intended to provide basic and authoritative reference material on the functional and engineering design of general cargo marine terminal installations.



CAPT. C. H. BROACH, USCG, Third Coast Guard District Merchant Marine Safety Division Chief, is shown receiving a plaque from D. L. Buchanan, General Chairman of the Marine Section of the National Safety Council. The plaque recognizes Captain Broach's service in advancing the cause of maritime safety, and was presented at ceremonies during the spring meeting of the Marine Section. Also present for the award ceremony were R. W. Berry, vice president of United Fruit Co. (left), and Capt. R. E. Mackey, Assistant Manager for Operations, Marine Department, Texaco, Inc. Captain Broach, who will retire shortly, has been Chief of the Merchant Marine Safety Division, Third Coast Guard District, since 1961.

1 1 1

The recent completion and opening of Pier 94 in the North River, Manhattan, represents the 12th new waterfront facility to be completed in New York City's waterfront rebuilding program. The pier, under lease to Cunard Lines, is 775 feet long and 150 feet wide. The interior of the shed is free of supporting columns to aid in cargo stowage and movement of cargo handling equipment.

\$ \$ \$

The Lykes Bros. Steamship Co. recently announced that the Port Staff Safety Committee unanimously selected the SS *Frederick Lykes* as winner of the Annual Safety Award Plaque. Captain Leonard G. King, Chief Engineer H. J. Rosendale, the officers and unlicensed crew are congratulated for their outstanding record and achievement in accident prevention during 1963.

The winner was determined after a thorough study and comparison of each individual vessel's record. The selection was governed by the National Safety Council Frequency Rate, the Lykes Frequency Rate and the overall record of performance, attitude, cooperation, and initiative.

Fourteen other vessels completed 1963 without a National Safety Council lost-time injury. These ships have earned Commendation Certificates and the privilege of displaying the green safety cross throughout 1964 as a symbol of their excellent record during the past year.



DECK 19

Q. What is the minimum length of lifeboat falls?

A. Falls shall be of such length that the lifeboat may be lowered to the water with the vessel at its lightest draft and listed 15 degrees.

Q. In the event of any collision with a lightship, buoy or other aid to navigation, what is the duty of the person in charge of the colliding vessel?

A. Whenever a vessel collides with a lightship, buoy, or other aid to navigation under the jurisdiction of the Coast Guard, or is connected with any such collision, it shall be the duty of the person in charge of such vessel to report the accident to the nearest Officer in Charge, Marine Inspection.

Q. What is the difference between a bottomry bond and a mortgage?

A. A bottomry bond is entered into by the master. The money so raised must be spent upon the necessary repairs of the ship only, and be repaid with interest on the completion of the voyage. A mortgage is entered into by the owner. The money raised may be spent as he likes, and the interest and principal paid at the time stated in the deed.

Q. (a) What is quadrantal deviation?

(b) By what is it caused?

(c) How is it compensated for?

A. Quadrantal deviation is caused by the magnetism induced in horizontal soft iron by the horizontal component of the earth's total force. It is zero at the cardinal points, maximum at intercardinal points, and its direction is opposite in successive quadrants. It is compensated for by hollow soft iron spheres on opposite sides of the compass.

E'ly dev. on NE & SW, move balls in. W'ly dev. on NW & SE, move balls in.

Q. What is the effect, on the ship's magnetism, when the ship's head is turned in the opposite direction immediately after being launched?

A. Some of the sub-permanent magnetism built into the ship will be lost or neutralized.

Q. On a voyage of 3,700 miles a steamer has gone 1,250 miles and has burned 180 tons of fuel making speed of 12 knots. There are only 80 tons of fuel remaining. At what speed

THE SAILINGS

Q. A vessel with a speed of 10 knots is proceeding through a current setting NE true with a drift of 6 knots.

a. What course should be steered to make good a course of NW true?

b. What speed will the vessel make on this course?



must the vessel proceed in order to arrive in port with 10 tons of fuel remaining?

A. $X^{2} = \frac{70 \times 12^{2} \times 1,250}{180 \times 2,450}$

 $X = \sqrt{28.57} = 5.34$ knots (5.345)

Q. Your vessel is on course 165° True at a speed of 17 knots. At 1900 a vessel is observed on the PPI scope bearing 244° True at a range of 2.2 miles.

At 1915 the vessel is observed bearing 225° True at a range of 1.4 miles.

(a) Assuming that both your vessel and the vessel observed maintain course and speed, determine the distance between your vessel and the vessel observed at their closest point of approach.

(b) Determine the course and speed of the vessel observed.

A. (a) The distance between your vessel and the vessel observed at the closest point of approach, assuming that course and speed were held, would be 1 mile (at 1930). (b) The course of the vessel observed is 153° True.

The speed of the vessel observed is 18.5 knots.

ENGINE

Q. Within the permissible voltage variations a three-phase motor operating on high voltage will have the following:

(a) Decreased power factor, increased torque and an increased efficiency

(b) Decreased slip, increased power factor, decreased efficiency

(c) Decreased power factor, decreased efficiency, increased torque

(d) Decreased power factor, increased efficiency, decreased temperature

(e) None of the above statements

A. (c) Decreased power factor, decreased efficiency, increased torque Q. Indicate the proper procedure

for mixing battery electrolyte.

(a) Use alkaline water, add water to acid

(b) Use alkaline water, add acid to water

(c) Use distilled water, add water to acid

(d) Use distilled water, add acid to water

(e) All of the above would be satisfactory

A. (d) Use distilled water, add acid to water

Q. Which of the following could indicate that a battery on normal charging rate is fully charged:

(a) Gas is liberated in large quantities (boiling)

(b) The full charge value of specific gravity has been constant for one hour

(c) Voltage at the proper value has been constant for an hour

(d) All of the above

(e) None of the above

A. (d) All of the above

Q. Low specific gravity readings after charging lead-acid batteries for a normally sufficient time could be caused by which of the following:

(a) Sulfation

- (b) Acid Loss
- (c) High rate of self-discharge

(d) (A) and (B) above

(e) (A), (B), and (C) above

A. (e) (A), (B), and (C) above

TREASURY DEPARTMENT UNITED STATES COAST GUARD

ADDRESS REPLY TO: C O M M A N D A N T U.S. COAST GUARD HEADQUARTERS WASHINGTON, D.C. 20226



Commandant's Action on

Marine Board of Investigation; capsizing of the M/V Diversity in the Gulf of Mexico on 23 January 1963 with loss of life

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

The M/V Diversity, O.N. 269278, is an uninspected steel constructed flat bottom barge type supply vessel of 132 gross and 90 net tons used primarily for the transportation of offshore drilling supplies. At the time of the casualty there were 5 persons on board, 4 of whom represented the regularly assigned crew.

On 21 January 1963, Offshore Mud Movers Inc., a marine transportation company having a contract to deliver drilling mud to "Movible Rig 4," an offshore drilling platform in the Gulf of Mexico off the Coast of Louisiana, communicated with Twenty Grand Towing Co. Inc., owners of the *Diversity*, and requested the services of a vessel to transport the cargo. Twenty Grand Towing Inc., contacted Pan Marine Service Inc., operators of the Diversity, and arranged for the vessel to proceed to Berwick, Louisiana for installation of deck tanks to hold the cargo. The following day three steel tanks measuring $7' \times 7' \times 18'$ and three others measuring $8' \times 8' \times 16'$, each of which were equipped with two 8-inch I-beams welded to the bottoms, were positioned on the vessel's deck, 4 of which were athwartship immediately abaft the forward deck house while the remaining two were fore and aft near the stern of the vessel. A pump unit was positioned immediately forward of the two after tanks. When positioned, each corner of the skids beneath the tanks were welded to the deck using a single bead approximately $3\frac{1}{2}$ inches long at each corner. In addition, a $2'' \ge 2'' \ge \frac{1}{4}''$ angle was welded to the deck in a vertical position at each tank corner and welded to the tanks. The pump unit was also secured by means of welding. It is estimated that the combined weight of tanks and pump was 22.4 tons. Upon completion of this installation, the vessel proceeded to Southwest Pass, Vermillion Bay, Louisiana where approximately 565 barrels of drilling mud were transferred to 4 or possibly 5 of the deck tanks. This caused the vessel to trim approximately 6 feet by the stern.

The Diversity departed Southwest Pass at about 1730, 22 January 1963 and arrived at "Movible Rig 4," bearing approximately west southwest and 60 miles distant, at about 0600 hours on 23 January 1963. After repositioning the vessel to more effectively cope with worsening weather. efforts were made to pump used mud from a tank on the platform to an empty tank on board the Diversity. However, after receiving approximately 100 barrels of old mud, the master of the vessel reported to the platform that he had a loose tank on deck and would have to seek shelter at Cameron, Louisiana, some 30 miles northwest. Upon departure, the vessel was observed to be laboring heavily on a northwesterly heading with a rolling motion. Radio communication was maintained with the vessel at about half hourly intervals until met by the M/V Movible S-4, another supply vessel on an outbound course. The two vessels communicated by radio telephone concerning the Diversity's destination and, upon determining that the magnetic steering compass had been affected by the positioning of the deck tanks, the master of the *Diversity* was advised to head more into the sea in order to make shore and then to remain close inshore until arrival at Cameron. The *Movible* S-4 then proceeded to the drilling platform and the *Diversity* continued on, seeking a safe haven.

MVI-3

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At about 1645, 23 January 1963, the Movible S-4, inbound from the drilling platform, sighted an overturned hull, later identified as the Diversity, in a position approximately 81/2 miles west by north from the platform and approximately 27 miles from the nearest land. One of the empty deck tanks was subsequently found floating in an upright position approximately 1/2 mile distant from the vessel. Despite an immediate and extensive search, no additional equipment or parts were located. The body of one crewman was recovered on 15 February 1963 while the remaining 4 persons known to have been on board are still missing. The *Diversity* was salvaged on 5 February 1963 at which time all of the deck tanks and the pump unit were found to be missing. Subsequent examination revealed evidence of severe battering by heavy objects and the deck plating was torn or fractured in several areas. An inclining experiment and stability study were per-formed based upon loading conditions assumed to have existed prior to the casualty.

REMARKS

Concurring with the Board, it is concluded that the *Diversity* capsized as the result of one or more deck tanks breaking loose from their fastenings and, due to the vessel's rolling in the seaway, moving athwartships and bringing about the capsizing moment.

The Board's conclusion that the method used to secure the tanks to the deckplates was a poor and potentially dangerous practice is concurred in and further qualified in that the placing of four of the tanks with their long axes athwartships was also a dangerous practice since liquid mud free surface effect of the tanks was thereby increased to the detriment of the vessel's stability.

The Board's findings that a charter to transport the drilling mud was arranged between the operating company (Pan Marine Service, Inc.) and Offshore Mud Movers, Inc., is not supported by the record and cannot be concurred in. The record shows that the arrangements for use of the *Diversity* were made verbally between the Secretary-Treasurer of Offshore Mud Movers, Inc., and the Vice President of Twenty Grand Towing, Inc., owners of the vessel. The latter then communicated with Pan Marine Service, Inc., which maintained and operated the vessel for the owners, requesting that the vessel be moved to Berwick, Louisiana, to make a trip for Offshore Mud Movers, Inc. The record also shows that the crew, supplies, fuel and insurance were all furnished by Pan Marine Service, Inc. It is concluded that the arrangement did not constitute a bareboat charter of the vessel to Offshore Mud Movers, Inc.

The record further shows that the mud being transported was owned by Baroid, a division of National Lead.

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Whether the vessel was operating under a bareboat charter or not, it was therefore "carrying freight for hire" and, being in excess of 15 gross tons, was required to be inspected and certificated under the provisions of R.S. 4426 as amended (46 U.S.C. 404).

Since the above is considered to constitute evidence of a violation on the part of the owners of the M/V Diversity, the matter is hereby referred to Commander, Eighth Coast Guard District for possible assessment of monetary penalties as provided by R.S. 4499 (46 U.S.C. 497). While not determined by the Board, nor contained in

While not determined by the Board, nor contained in the record of investigation, the records in the Office of the Commandant indicate that only two of the crewmembers on board the M/V *Diversity* at the time of the casualty possessed Merchant Mariners' Documents as required by R.S. 4451, as amended (46 U.S.C. 643) and section 13 of the Act of March 4, 1915, as amended (46 U.S.C. 672(1)). Therefore, since this is considered to constitute evidence of violation on the part of the operators, this matter is also referred to Commander, Eighth Coast Guard District for possible assessment of monetary penalties against Pan Marine Service Inc.

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

D. MCG. MORRISON, Vice Admiral, U.S. Coast Guard, Acting Commandant.

PROCLAMATION 3574

NATIONAL SAFE BOATING WEEK, 1964

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

WHEREAS recreational boating has become a leading outdoor activity for millions of Americans who enjoy this healthful and relaxing use of leisure time; and

WHEREAS education of the boating public in safe practices contributes to the enjoyment of the sport and reduces the likelihood of accidents; and

WHEREAS continuing cooperation between organizations and individuals interested in boating is necessary to insure safe boating throughout the year; and

WHEREAS the Congress of the United States, in recognizing the need for emphasis on boating safety, by a joint resolution, approved June 4, 1958 (72 Stat. 179), has requested the President to proclaim annually the week which includes July 4 as National Safe Boating Week:

NOW, THEREFORE, I, LYNDON B. JOHNSON, PRESIDENT OF THE UNITED STATES OF AMERICA, do hereby designate the week beginning June 28, 1964, as National Safe Boating Week.

In furtherance of the objectives of this proclamation, I strongly urge that all individuals, boating organizations, the boating industry, and Government agencies, both State and Federal, dedicated to safer recreational boating, publicize and observe National Safe Boating Week, and extend their effort throughout the year.

I also invite the Governors of the States, the Commonwealth of Puerto Rico, and other areas subject to the jurisdiction of the United States to join in the observance of this Week in order to draw nationwide attention to the importance of safety in recreational boating.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DONE at the City of Washington this twelfth day of February in the year of our Lord nineteen hundred and sixty-four, and of the Independence of the ISEALI United States of America the one hundred and eighty-eighth.

By the President:

LYNDON B. JOHNSON

DEAN RUSK,

Secretary of State.

[F.R. Doc. 64-1617; Filed, Feb. 14, 1964; 10:35 a.m.]

A STRANGER IN YOUR MIDST

By ALVIN ROBINSON





"The union sent me-this is my first ship." Every head of a depart-ment and watch officer has, and will continue, to experience such a confrontation. Do you realize that new men who lack experience also have a kind of fear that makes them likely prospects for accidents, and that the young ones will usually cover up with a facade of overconfidence? Do not let pass this golden opportunity of selling the new man on safety consciousness and the benefits of adopting management's policy that safety is a vital part of everything he does aboard ship. Usually, in the strain and stress of preparing a ship to get underway, the only safety instructions a new crewmember receives is "because you are new-be especially That exhortation just careful." doesn't penetrate, because he's scared and frozen and that's exactly what his mother, wife, or girl friend told him. Bluntly, if this is your disposition, you are ducking your responsibility.

Masters of vessels by practice, custom, and management directives have accepted responsibility for safety. This duty is passed down the line of authority to department heads who, in turn, share this concern with their watch officers who have to depend on their bos'ns, unlicensed Juniors or cooks. Note that we do not use the word *delegate* because safety is an allhands burden. To leave out anyone, in the supervisory chain of command, from a safety program would be like leaving the yeast out of a loaf of bread. This is a logical distribution of responsibility. It's unrealistic to place the job on one hook and safety on another. Everyone accepts the rule that the individual should take orders from only his immediate supervisor. The latter not only has to know the materials, machinery, and the work areas, but should know the hazards peculiar to the particular job and these should be an integral facet of his instructions.

What we are stressing here is starting a new man off on the right, safe foot with initial indoctrination by the first person on the supervisory level with whom he comes in contact. If a lasting impression is to be made this is the time, for a new man will remember his first few hours and first "sales pitch" longer than he will his first cruise. Selling is not a mysterious process. In every activity involving other people we are being salesmen, even though we may not identify what we are doing as selling. Call it counseling, educating, moti-vating, advising, or just plain "shooting the breeze"-it all means we are attempting to encourage or win over a person to do or act in a manner we feel they should.

That's why we strongly recommend you take a few minutes from your busy day when a new man reports. Have him wait, if necessary, till you can get him to your cabin. Put him at ease with some personal chatter or questions. Tell him of the general safety policy and program and where he can find the bulletin boards with safety posters, etc. Discuss briefly some of the garden-type hazards; i.e., cuts, burns, slipping, safe shoes, foreign bodies in the eyes, the importance of using protective equipment aboard, the proper way of going up and down ladders, the hernias and back injuries from improper lifting, care in the use of detergents, etc. Stress how he should take care of himself, including cleanliness and housekeeping, and the necessity and duty of promptly reporting all injuries and illnesses no matter how minor he may consider them. Assure him that his immediate supervisor will explain later the precise dangers of the equipment he will have to operate and the perils peculiar to his working area. Then, if possible, assign him to a watch with men who may have a common interest, such as language, locale, or hobby.

Of course it takes time to instruct men—but it also takes time to treat the injured, to make out the required reports and to repair the damage that results from accidents. The cost of an accident far exceeds the cost of preventing it.

MERCHANT MARINE PERSONNEL STATISTICS MERCHANT MARINE OFFICER LICENSES ISSUED

QUARTER ENDING MARCH 31, 1964

DECK

Grade	Original	Renewal	Grade	Original	Renewal
Master:			3d mate:		
Ocean	44	441	Ocean	11	38
Coastwise	11	40	Coastwise	7	10
Great Lakes	12	119	Pilots:		
B.S. & L	15	93	Great Lakes	14	56
Rivers	14	44	B.S. & L.	56	28
Radio officer licenses issued			Rivers	118	36
Chief mate:			Master: Uninspected vessels	21	9
Ocean	28	88	Mate: Uninspected vessels	9	
Coastwise	2	1	Motor Boat Operators	653	1.666
Mate:	-	-	hidron Doub o peroterbilities		
Great Lakes	1	3	Total	1,080	2,811
B.S. & L.	6	11			
Rivers	6	31	Grand total	3,	891
2d mate:					
Ocean	52	97			

ENGINEER

Grade	Original	Renewal	Grade	Original	Renewal
STEAM Chief engineer: Unlimited Ist assistant engineer: Unlimited 2d assistant engineer: Unlimited 3d assistant engineer: Unlimited Limited Limited	52 6 46 1 66 1 46 4	558 80 174 23 246 9 170 7	MOTOR—continued lst assistant engineer: Unlimited. 2d assistant engineer: Unlimited. Limited. 3d assistant engineer: Unlimited. Limited. Chief engineer: Uninspected vessels. Assistant engineer; Unin- spected vessels.	3 21 3 7 4 1 23 8	17 24 15 4 78 5 5 .9 4
MOTOR			Total.	337	1,625
Chief engineer: Unlimited Limited	5 40	80 122	Grand total	1,	962

MERCHANT SEAMEN'S DOCUMENTS ISSUED

Type of Document	Atlantic coast	Gulf coast	Pacific coast	Great Lakes and rivers	Total
Staff officer Continuous discharge	85	7	33		125
book	1	9			10
Merchant mariner's documents	1, 285	614	744	490	3, 133
limited AB any waters, 12	89	64	54	35	242
months AB Great Lakes, 18	41	34	33	4	112
monthsAB tugs and towboats,	1	1	8	9	19
AB bays and sounds	4	1	9	1	15
AB seagoing barges	2	1			3
Lifeboatman	99	13	50		162
Q.M.E.D	93	60	78	38	269
Tankerman	1, 242	58	6	428	2, 986
Total	2, 956	1, 471	1,722	1.069	7.218

INVESTIGATING UNITS

Coast Guard Merchant Marine Investigating Units and Merchant Marine Details investigated a total of 2,655 casualty cases and 2,007 complaint cases during the first quarter of 1964. During this pe-riod 719 licensed and 2,237 unlicensed seamen were subject to investigation and remedial action involving 83 licenses and 539 merchant mariner's documents were completed. In the case of licensed personnel, 1 license was revoked, 2 suspended outright, 12 suspended outright plus an additional suspension on probation, 19 suspended on probation, 9 cases were closed with an admonition, and 36 warnings were issued. Nine cases were dismissed after a hearing. Of the unlicensed personnel, 15 merchant mariner's documents were revoked, 21 suspended outright, 62 suspended outright plus an additional suspension on probation, 101 suspended on probation, 9 cases were closed with an admonition, and 297 warnings were issued. Sixteen cases were dismissed after a hearing. Four licenses and 34 documents were voluntarily surrendered in lieu of a hearing. Eleven licenses and 161 documents were voluntarily deposited due to temporary unfitness for sea duty and 7 licenses and 88 documents returned upon a finding of fit for duty.

AMENDMENTS TO REGULATIONS

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

Title 46—SHIPPING

Chapter 1—Coast Guard, Department of the Treasury

SUBCHAPTER E-LOAD LINES

[CGFR 64-16]

STABILITY CONSIDERATIONS; SUB-DIVISION; AND MIDSUMMER SEASONAL LOAD LINES FOR GREAT LAKES

Miscellaneous Amendments

Pursuant to the notices of proposed rule making published in the Federal Register of January 30, 1964 (29 F.R. 1572-1586), and February 13, 1964 (29 F.R. 2426), and the Merchant Marine Council Public Hearing Agenda, dated March 23, 1964 (CG-249), the Merchant Marine Council held a public hearing on March 23, 1964, for the purpose of receiving comments, views and data. The proposals considered were identified as Items I to XVI, inclusive. Item III contained proposals regarding stability considerations in load line assignments and subdivision load lines for passenger vessels (CG-249, III, pages 28 to 32, inclusive). Item XVI contained the proposals regarding midsummer seasonal load lines for the Great Lakes (CG-249, XVI, page 340). Several comments supported the proposals. While not proposing specific language changes, some comments opposed proposals if specific actions would reduce safety standards. The proposals in Items III and XVI in the Agenda are adopted without change and set forth in this document, which is the first of a series covering the proposals considered by the Merchant Marine Council.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by section 632 of Title 14, U.S. Code, and Treasury Department Orders 120, dated July 31, 1950 (15 F.R. 6521), and 167-48, dated October 19, 1962 (27 F.R. 10504), the following actions are ordered:

1. The load line regulations shall be

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amended in accordance with the changes in this document.

2. The amendments to 46 CFR 45.01-75 (a) and (c), regarding a new spring date for midsummer seasonal load lines for the Great Lakes, shall be effective May 1, 1964.

3. The amendments to 46 CFR 43.40-10, 44.05-35, and 45.25-5, which revise the various load line certificates, shall be effective July 1, 1964: *Provided, however*, That load line certificates issued prior to that date without the notes as required by these amendments need not be amended nor reissued to show the change in notes, but shall remain valid and in effect until the expiration dates given thereon or until otherwise canceled or superseded by competent authority.

4. The other regulations and amendments in this document shall become effective on the 30th day following the date of publication in the Federal Register.

5. With the exception of the use of the midsummer seasonal load lines for the Great Lakes, the regulations in this document may be complied with during the interim prior to the applicable effective date specified in lieu of existing requirements; however, the new or revised requirements in this document shall be met by no later than the applicable effective date specified herein and shall be followed thereafter.

(Federal Register of April 14, 1964)

Title 33—NAVIGATION AND NAVIGABLE WATERS

Chapter 1—Coast Guard, Department of the Treasury

[CGFR 64-17]

SUBCHAPTER K-SECURITY OF VESSELS

PART 124—CONTROL OVER MOVEMENT OF VESSELS

SUBCHAPTER L—SECURITY OF WATERFRONT FACILITIES

PART 126—HANDLING OF EXPLO-SIVES OR OTHER DANGEROUS CARGOES WITHIN OR CONTIG-UOUS TO WATERFRONT FACILI-TIES

Miscellaneous Amendments

Pursuant to the notice of proposed rule making published in the Federal Register of January 30, 1964 (29 F.R. 1572-1586), and the Merchant Marine Council Public Hearing Agenda, dated March 23, 1964 (CG-249), the Merchant Marine Council held a public hearing on March 23, 1964, for the purpose of receiving comments, views and data. The proposals considered were identified as Items I to XVI, inclusive. Item IX contained proposals regarding security of vessels and waterfront facilities (CG-249, IX, pages 138 to 144, inclusive). The Merchant Marine Council considered the proposals and comments submitted and recommended adoption of the proposals regarding ammonium nitrate products handled and stored on waterfront facilities (Item IXc) as set forth in the Agenda. In line with comments received, 33 CFR 124.16 in the proposals regarding advance notice of arrival of vessel when laden with explosives (or certain specified dangerous cargoes) or when fire (or other abnormal conditions) exist on the vessel (Item IXd) was revised. The proposals in Items IXc and IXd. as revised are adopted and set forth in this document, which is the second of a series covering regulations considered at this public hearing.

The proposals regarding power-operated equipment or waterfront facilities (Item IXb) were commented on extensively. Many comments discussed problems of maintenance and the difficulties in upgrading existing equipment to the proposed standards. It is also understood that a study of power-operated equipment is being made by a recognized professional group for the purpose of developing acceptable industrial standards for the maintenance of such equipment. Therefore, final actions on these proposals are postponed for the time being.

The proposals regarding hot work on waterfront facility or vessel (Item IXa), were commented on and questions raised concerning applicability of the proposals in view of other similar requirements presently prescribed in 46 CFR Chapter I. The many factors spoken to in the comments received indicate a need for further study of this proposal. Therefore, Item IXa is withdrawn for further study.

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

CORRECTION

The article by W. N. Nations on Telecommunication Equipment published in the May 1964 issue of the "Proceedings" neglected to state that it was extracted from a speech delivered by Mr. Nations at the 1963 Assembly Meeting of the Radio Technical Commission for Marine Services-Editor. certain regulations relating to the safeguarding against destruction, loss, or injury from sabotage or other causes of similar nature to vessels, ports, and waterfront facilities in the United States and all its territories 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 vessels from damage or injury or to prevent damage or injury to any waterfront facility on waters of the United States or to secure the observance of rights and obligations of the United States.

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 I hereby prescribe the following amendments in this document which shall become effective 30 days after the date of publication in the Federal Register; however, during the interim prior to this effective date, the regulations in this document may be complied with in lieu of existing requirements.

(Federal Register of April 17, 1964)

Title 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of the Treasury

SUBCHAPTER D-NAVIGATION REQUIRE-MENTS FOR CERTAIN INLAND WATERS

[CGFR 64-21]

PART 80-PILOT RULES FOR INLAND WATERS

- PART 84-TOWING OF BARGES
- SUBCHAPTER F-NAVIGATION REQUIRE-MENTS FOR WESTERN RIVERS PART 95-PILOT RULES FOR WESTERN RIVERS

Towing of Barges

Pursuant to the notice of proposed rule making published in the Federal Register of January 30, 1964 (29 F.R. 1572–1586), and the Merchant Marine Council Public Hearing Agenda, dated March 23, 1964 (CG–249), the Merchant Marine Council held a public hearing on March 23, 1964, for the purpose of receiving comments, views and data. The proposals considered were identified as Items I to XVI, inclusive. Item XI contained proposals regarding Rules of the Road. The Merchant Marine Council considered the proposals and comments submitted and recommended adoption of the proposals regarding towing of barges as set forth in the Agenda (Item XI), except for 33 CFR 84.10(a) which was revised in line with comments received. The proposals in Item XI, as revised, are adopted and set forth in this document, which is the fifth of a series covering regulations considered at this public hearing.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by section 632 of Title 14, U.S. Code, Treasury Department Orders 120, July 31, 1950 (15 F.R. 6521), and 167–33, September 23, 1958 (23 F.R. 7592), and the statutes cited with regulations below, the following amendments are prescribed and shall become effective 30 days after the date of publication of this document in the Federal Register.

(Federal Register of April 30, 1964)

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 April 29, 1964 (CGFR 64-22). Copies of these documents may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402.]

ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of ships' stores and supplies certificated from April 1 to April 30, 1964, 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

Power Plant Products Co., Inc., 23 Harvard St., Brookline, Mass., Certificate No. 349, dated April 3, 1964, POWERSOL.

Pacific Chemical Co., 4501 Shilshole NW., Seattle, Wash., Certificate No. 371, dated April 3, 1964, DE-GREASER SFD.

- Ethyl Corp., 100 Park Ave., Bldg. at 41st St., New York 17, N.Y., Certificate No. 381, dated April 6, 1964, E T H Y L CORPORATION 1,1,1-TRICHLOROETHANE STABIL-IZED.
- Chemclean Corp., 128-07 18th Ave., College Point 56, N.Y., Certificate No. 511, dated April 22, 1964, CHEMCLEAN N.
- Alken-Murray Corp., 111 Fifth Avenue, New York 3, N.Y., Certificate No. 513, dated April 28, 1964, ALKEN EVEN-FLO 910.
- Pennsalt Chemicals Corp., 2700 South Eastern Ave., Los Angeles, Calif., 90022:
 - Certificate No. 455, dated April 9, 1964, PENNSALT 3007 POW-DERED DETERGENT.
 - Certificate No. 456, dated April 9, 1964, PENNSALT 3016 INJEC-TOR & BURNER TIP CLEANER.
 - Certificate No. 457, dated April 9, 1964, PENNSALT 3020 Oil Spill Emulsifier.
 - Certificate No. 458, dated April 9, 1964, PENNSALT 3021-A OIL SPILL EMULSIFIER.
 - Certificate No. 459, dated April 9, 1964, PENNSALT 3023 HEAVY FUEL ADDITIVE
 - Certificate No. 460, dated April 9, 1964, PENNSALT 3024 DIESEL FUEL ADDITIVE
 - Certificate No. 478, dated April 9, 1964, PENNSALT 3025 SAFETY DEGREASER.

AFFIDAVITS

The following affidavits were accepted during the period from March 15, 1964, to April 15, 1964:

Anderson, Greenwood & Co., 5425 South Rice Ave., Houston, Tex., VALVES.

Armstrong Machine Works, 816 Maple St., Three Rivers, Mich., FTT-TINGS.

Ashton Valve Co., 43 Kendrick St., Wrentham, Mass., VALVES.

Diamond Power Specialty Corp., P.O. Box 415, Lancaster, Ohio, VALVES & FTTTINGS.

The American Ship Building Co., 400 Colorado Ave., Lorain, Ohio.¹

Newport News Shipbuilding & Dry Dock Co., Newport News, Va., VALVES & FITTINGS.

Russell Bolt & Mfg. Co., Division of Norris Thermador Corp., 2665 Leonis Blvd., Los Angeles 58, Calif., BOLT-ING.

Crosby Valve & Gage Co., 43 Kendrick St., Wrentham, Mass., VALVES.

¹ Change of address will be inserted in the revised edition of CG-190.

MERCHANT MARINE SAFETY PUBLICATIONS

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

CG No.

TITLE OF PUBLICATION

- 101 Specimen Examination for Merchant Marine Deck Officers (7-1-63).
- 108 Rules and Regulations for Military Explosives and Hazardous Munitions (8-1-62).
- 115 Marine Engineering Regulations and Material Specifications (3-1-63), F.R. 8-20-63, 10-26-63.
- 123 Rules and Regulations for Tank Vessels (1-2-62). F.R. 5-2-62, 9-11-62, 2-6-63, 4-4-63, 5-30-63, 8-20-63, 9-6-63, 10-8-63, 10-26-63, 12-13-63.
- 129 Proceedings of the Merchant Marine Council (Monthly).
- 169 Rules of the Road—International—Inland (6–1–62), F.R. 1–18–63, 5–23–63, 5–29–63, 7–6–63, 10–2–63, 12–13–63. 4–30–64.
- 172 Rules of the Road—Great Lakes (6–1–62). F.R. 8–31–62, 5–11–63, 5–23–63, 5–29–63, 10–2–63, 10–15–63, 4–30–64.
- 174 A Manual for the Safe Handling of Inflammable and Combustible Liquids (3-2-64).
- 175 Manual for Lifeboatmen, Able Seamen, and Qualified Members of Engine Department (9-1-60).
- 176 Load Line Regulation (7-1-63), F.R. 4-14-64.
- 182 Specimen Examinations for Merchant Marine Engineer Licenses (7-1-63).
- 184 Rules of the Road—Western Rivers (6-1-62). F.R. 1-18-63, 5-23-63, 5-29-63, 9-25-63, 10-2-63, 10-15-63. 190 Equipment Lists (4-2-62). F.R. 5-17-62, 5-25-62, 7-24-62, 8-4-62, 8-11-62, 9-11-62, 10-4-62, 10-30-62.
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- 323 Rules and Regulations for Small Passenger Vessels (Under 100 Gross Tons) (2-3-64).
- 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, D.C., 20402. 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. Regulations for Dangerous Cargoes, 46 CFR 146 and 147 (Subchapter N), dated January 1, 1964, are now available from the Superintendent of Documents, price: \$2.50.

CHANGES PUBLISHED DURING APRIL 1964

The following have been modified by Federal Registers: CG-190, Federal Register, April 29, 1964. CG-176, Federal Register, April 14, 1964. CG-239, Federal Register, April 17, 1964. CG-169 and CG-172, Federal Register, April 30, 1964.

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