PROCEEDINGS

OF THE MERCHANT MARINE COUNCIL

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PROCEEDINGS

OF THE

MERCHANT MARINE COUNCIL

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

SS RIO GRANDE CITED

THE AMERICAN LEGION recently presented its "Citation for Meritorious Service" to the SS *Rio Grande* for that vessel's part in the rescue of survivors from the ill-fated *Lakmia*. In the photograph from left to right: Captain C. H. Broach, USCG then Chief, Merchant Marine Safety Division for the 3d Coast Guard District; Captain Stanley Ungar, President of Rio Grande Transport; Mr. William Horan, Commander of the Robert L. Hague American Legion Post, who made the presentation; Mr. A. Aadal, President of American Asia Lines, charterer of the SS *Rio Grande*; and Captain George B. Lesh, Vice President, American Asia Lines.

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

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FRONT COVER

The new 545-foot Grace Line passenger and cargo ship SS *Santa Mercedes* is seen here during her final outfitting stages of construction in drydock at the Bethlehem Steel Shipyard, Sparrow's Point, Baltimore, Md. Her graceful beam is 79 feet wide, her depth 48 feet, 1 inch. She has a displacement of 14,100 gross tons, and is powered by a steam driven single screw geared turbine.

BACK COVER

Oil Pollution poster by Al Merrikin, Texaco.

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CHANGE OF COMMAND

REAR ADMIRAL CHARLES P. MURPHY has been designated by the Commandant as Chief, Office of Merchant Marine Safety as of 24 June 1964.

R. Adm. Murphy received his initial commission as lieutenant commander in the Coast Guard Reserve in 1943, and as commander in the regular Coast Guard in 1948.

R. Adm. Murphy graduated from Webb Institute of Naval Architecture in 1935 and subsequently served in the former Commerce Department Bureau of Marine Inspection and Navigation. When the Bureau was absorbed by the Coast Guard in 1942 he received a commission as rank of lieutenant commander and served as Chief of the Naval Architecture Section in headquarters until 1946. He next served as Assistant Chief of the Merchant Marine Technical Division, and then as Chief of that division until 1959 when he assumed the post of Deputy Chief, Office of Merchant Marine Safety.

In assuming his duties as Chief of the Office of Merchant Marine Safety R. Adm. Murphy relieves R. Adm. Oscar C. Rohnke who has been designated as Commander of the 5th Coast Guard District.

R. Adm. Murphy has served on a number of technical committees, in addition to his regular duties. He was adviser to the U.S. Delegation at the International Conference on Safety of Life at Sea convened in London, England in 1948 and again in 1960; Cochairman of the Atomic Energy Panel of the Society of Naval Architects and Marine Engineers; has served longtime memberships in the American Bureau of Shipping Committee on Naval Architecture, the U.S. State Department Shipping Coordinating Committee, and the U.S. Treasury Committee for studying maritime tonnage admeasurement. He is also a member of the Society of Naval Architects and Marine Engineers and the National Fire Protection Association.

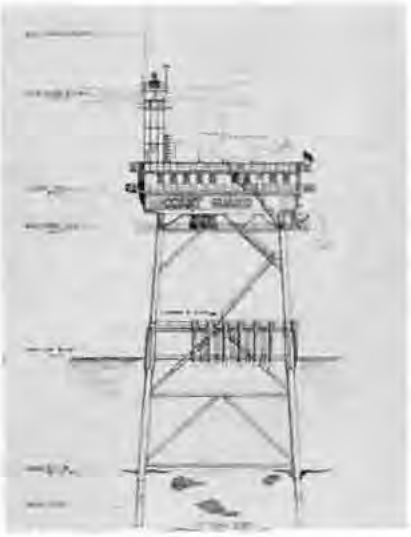
CAPTAIN BENJAMIN D. SHOEMAKER, JR. has been assigned to headquarters as Deputy Chief, Office of Merchant Marine Safety. A graduate of the Coast Guard Academy, he received his initial commission as ensign in 1938. After serving in varied capacities, including Commanding Officer, aboard Coast Guard cutters during World War II he subsequently was assigned to duties in Merchant Marine Safety.

In 1959 Captain Shoemaker was assigned to headquarters as Assistant Chief of the Merchant Vessel Inspection Division and then as Executive Secretary of the Merchant Marine Council. In 1962 he was assigned as officer in charge of Marine Inspection in New Orleans, and then served as Chief of the Merchant Marine Safety Division for the 8th Coast Guard District until he was recalled to headquarters for his present assignment.

AMBROSE LIGHTSHIP MAY BE REPLACED

The Coast Guard proposes to replace *Ambrose* and *Scotland* Lightships, which guard the entrance to the Port of New York, by a single "Texas Tower" type of fixed structure. The tower would consist basically of a platform supported by four legs sunk into bedrock on the ocean floor and equipped with the navigation light tower and a helicopter landing deck. The new tower would be part of the Coast Guard's program which calls for eventual removal of some 25 lightships along our coastlines and replacement by either manned or unmanned light structures. The proposed light will have 3 million candlepower and be visible for 17 miles, or about 4 miles farther than the present Ambrose light.

The *Scotland* Lightship was established in 1868 to guard the southern approach to the port, and the *Ambrose* lightship was placed in its present location at the head of Ambrose Channel shortly after 1900. If the new plan goes into effect, the tower will be located approximately midway between the locations of the lightships.



PILOTAGE IN THE UNITED STATES

By LCDR R. V. CASSANI, USCG

CASUALTY REVIEW BRANCH, HEADQUARTERS

PILOTING, IN PART, might be described as the art of directing the movements of a vessel in channels, harbors, restricted waters, and other areas where navigation is often difficult or dangerous. Piloting requires a thorough knowledge of local waters and changing conditions within an area.

England's pilotage system existed as early as the 14th century and was at that time, essentially, a guild or association of mariners. The port officials had realized that a ship's captain having been away from an area for many months lacked the knowledge of recent dangers or changes in the harbor channels. They provided for the administration of a group of persons to navigate vessels in and out of port and for the prevention of unqualified individuals from undertaking to pilot vessels.

Photo Standard Oil Co. (N.J.)

HISTORY

When the English settled in America, they incorporated the system of pilotage in the colonial government. Prior to the Revolutionary War and the emergence of the United States as a nation in 1789, several States had already organized pilotage systems. Pennsylvania, for example, legislated a pilotage act in 1766 and Massachusetts in 1783. By 1789 when the first Congress met, shipping had begun to flourish, with the United States taking second place only to England. Vessels were built in great numbers for the fishing and coasting trade. In addition to the usual trade with Europe, a new commerce with the Orient developed. Congress, impressed by this great commerce and concerned with the problems of a newborn nation, enacted provisions for the continuance and expansion of the State pilotage systems by the act of August 7, 1789, found in Title 46, U.S. Code, Section 211. This statute has not materially changed and today it states: "Until further provision is made by Congress, all pilots in the bays, inlets, rivers, harbors, and ports of the United States shall continue to be regulated in conformity with the existing laws of the States respectively wherein such pilots may be, or with such laws as the States may respectively enact for the purpose."

The Constitution provides for the regulation of commerce, and jurisdiction over pilotage is within control of the Federal Government. The commerce clause of the Constitution found in section 8 of article I could have abolished State pilotage systems but, by the very enactment of the act of 1789, Congress preserved the systems without relinquishing the right of Federal control of pilotage.

CONTROL OF PILOTAGE

Impelled by squabbles among the various States, following the loss of two vessels off New York harbor due to a storm and inadequate pilotage, Congress passed an act in 1837 which permitted a master to employ any pilot upon waters which are situated between two States. This statute remains unchanged today and can be found in Title 46, U.S. Code, Section 212.

The control of pilotage was left up to the States until 1852 when the first federally licensed pilotage system was promulgated for passenger-carrying steamboats. It was part of an overall

steamboat act which brought passenger vessels under stricter inspection requirements. It primarily provided for a system of inspection and enforcement in an attempt to bring to an end a long series of disasters, particularly on the western rivers. A part of this act required that inspectors should license and classify all engineers and pilots of steamers carrying passengers. One of the first Federal licenses to be issued by local inspectors at St. Louis was to Samuel Clemens (Mark Twain) as pilot on the Mississippi River in 1852.

LEGISLATION

Congress in 1866 once again deemed it necessary to exercise control over pilotage and passed a comprehensive act which required "every" seagoing steam vessel subject to the navigation laws of the United States to be under the control of a federally licensed pilot. The effect of this act removed all doubt as to the supremacy of Federal legislation. It made the State pilotage acts inapplicable to American seagoing vessels and virtually abolished compulsory State pilotage on these vessels. The opponents to this act and to the act of 1852 claimed that the Federal pilotage acts were a poor substitute for the State pilotage acts. After more than 6 months of bitter debate, Congress amended the 1866 act by adding: "Nothing in this act, or in the act of which it is amendatory, shall be construed to annul or effect any regulation established by the existing law of any State requiring vessels entering or leaving a port in such State" to take a State pilot. The existing State laws respecting port pilotage again became operative, but Federal authority was firmly implanted. It required every seagoing steam vessel subject to the navigation laws of the United States, "when underway, except upon the high seas" to be under control of a federally licensed pilot.

Another statute which can be found in Title 46, U.S. Code, Section 213, that has virtually remained the same since its inception in July 1866, placed further restrictions on the States in that it prohibited discrimination in rate fixing. The purpose of this statute was primarily to prevent any State from granting preference in piloting charges to vessels operating solely between ports in the States as opposed to vessels engaged in trade between various States.

In 1871 a bill was drafted by the Steamboat Inspection Service which required Federal pilots on all American vessels and State pilots on all foreign vessels. Somewhere between the drafting of the bill and enactment, a limitation on Federal pilotage was inserted. The act of 1871 repealed the acts of 1852 and 1866, as amended, prescribed general regulations for licensing Federal pilots, defined the requirements as to port pilotage of "coastwise" seagoing vessels, and prohibited imposition of any obligation to employ State pilots on coastwise seagoing vessels. These provisions which are still in force can be found in Title 46, U.S. Code, Sections 214, 215, and 364. This act is often considered the most significant on the subject of pilotage. It limited Federal pilotage to "every coastwise seagoing steam vessel" and also to vessels navigating the Great Lakes. It definitely covered port pilotage, for it related to such vessels, "when underway, except on the high seas" and it applied only to those vessels, "not sailing under register."

CLASSES OF VESSELS

At this time it might be proper to note that U.S. vessels are of four classes: those that are numbered, those that are public, those registered, and those enrolled and licensed. Numbered vessels are generally pleasure vessels and miscellaneous vessels that are motorboats and can be excluded from this discussion. Public vessels are those owned by local, State, or Federal governments, such as ships of war, fireboats, and police boats. These are excluded from all pilotage laws, but they may avail themselves of the service of Federal or State pilots. Registered vessels are documented within the U.S. customs laws, to enable them to declare and assert their nationality and to engage in trade with foreign nations. An enrollment and license is evidence of national character of a vessel engaged in coastal or home trade. The distinction between these latter two classes of vessels has been consistently adhered to by Congress in its legislation. The Supreme Court in a decision in 1901 said, "The general object of these provisions seems to be to license pilots upon steam vessels engaged in the coastwise or interior commerce of the country, and at the same time, to leave to the States the regulation of pilots upon all vessels engaged in foreign commerce." Coastwise seagoing vessels sailing under registry, having the privilege of touching at foreign ports are required to take compulsory State pilots. Coastwise seagoing vessels enrolled and licensed and not sailing under register, which have on board in their employ pilots licensed by the Coast Guard for the vessels route, are not required to take a compulsory State pilot. Many court decisions have continually held that masters and mates of registered vessels, making extended trips to foreign ports, lack up-to-date knowledge; while a master and mate of a coastwise vessel under enrollment and license, engaged in the home trade, is adequately familiar with changing conditions within the ports being navigated.

The Federal laws regarding pilotage have remained substantially fixed since 1871 but, as various other type of vessels were brought under inspection, their applicability was increased to include these vessels. The act of 1905 prescribed federally licensed pilots on motor vessels of over 15 gross tons carrying freight or passengers for hire, and in 1936 Federal pilot requirements were extended to tank vessels.

PILOTAGE IN WORLD WAR II

World War II brought about a "Coast Guard Pilot" as a result of various studies on pilotage and a directive authorizing the Coast Guard to assume complete military control of State pilots in order to obtain the maximum war effort. This directive dated December 4, 1942, read in part, "It is intended that each association of State-licensed pilots operate as a group of temporary members of the Coast Guard Reserve." There were no radical changes made in the piloting procedure. A notary system of assignments was not rigidly adhered to, and the senior pilots were instructed

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ABOUT THE AUTHOR

LCDR Rudolph V. Cassani graduated from the New York State Maritime College, Fort Schuyler, N.Y., in 1946, at which time he was commissioned Ensign, U.S. Naval Reserve, and licensed as a Merchant Marine Officer (deck). His last assignment in the Merchant Marine was with the Grace Lines, Inc., as a deck officer. LCDR Cassani entered the Coast Guard as a LTJG, in 1954 and after serving on board the USCGC *Spencer* he reported to the Chicago Marine Inspection Office for Merchant Marine Safety duties. He is presently assigned within the Office of Merchant Marine Safety at Coast Guard Headquarters.

to assign to the most competent officers the most difficult tasks. This plan provided a means of operational control, kept the units intact for the duration, and gave them military authority. This control provided assurance that the pilots would arrive without delay on board the vessel to be piloted, and that they were militarily responsible for the vital war information daily entrusted to them. While actually maneuvering the vessel, the pilots were still acting as State pilots rather than as Coast Guard officers. The State pilots' relationship to the master or commanding officer, the vessel, and the owner, remained as established in maritime law. There were no substitutions of command by reason of the membership of the pilots in the Coast Guard Reserve. Masters and commanding officers were still responsible for the navigation of their vessels and could have relieved or superseded the pilots whenever in their judgment it was necessary. The United States was still not responsible for any negligence of the pilots. They were still entitled to their fees as prescribed by the State and those fees were collected in the usual manner.

The federally licensed pilots also operated in groups, and in 1942 the total number of such pilots was 942. While the States controlled pilotage of American registered and foreign vessels on inland waters, every commercial vessel above 15 gross tons on the Great Lakes, bays, sounds, and rivers was required to be under control of a federally licensed pilot licensed for the waters in which the vessel was operated. Most coastwise and intercoastal steamship lines required their master and mates to hold pilotage endorsements on their licenses, and during the war emergency many of these officers joined pilot groups of federally licensed pilots. This system was also time tested and appeared satisfactory. As an additional wartime measure the Coast Guard insisted that in such important areas as the Cape Cod Canal, vessels could only move under the direction of an accredited pilot, one who was judged to be exceptionally qualified.

When piloting resumed on a civilian basis, both the Federal and State pilots could look back on success in achieving the maximum war effort. There had been no serious accidents and the number of groundings had been negligible compared to the large volume of shipping that was involved. Examples of excellent pilotage records were the handling of sometimes as many as 100 vessels a day, by 16 Federal pilots through the Cape Cod Canal, and the movement of 14,539 vessels through the treacherous Hell Gate at New York without a grounding. A serious accident could have blocked these waterways and forced vessels to use the outside submarine-infested waters. Twenty-four pilots at Boston were often faced with the necessity of piloting 40 vessels, making a convoy. This was solved by removing the pilots by picket boat from the first, second, and third vessels outbound at a point where they were not necessary and taking them back to the 25th, 26th, and 27th vessel which had not at that time been called to move. This procedure was repeated until all the vessels had been provided with pilots. Many other significant and outstanding records were made by the pilots, and their contribution to the allied victory has been well documented in history.

GREAT LAKES PILOTAGE

Pilotage on the Great Lakes was usually confined to Canadian and United States vessels which were engaged in domestic trade. Navigation of these vessels, commonly referred to as "lakers," across boundary waters and into ports of the United States and Canada was free and open. Both nations satisfactorily held to the Treaty Relating to Navigation of the Great Lakes which was signed in 1909 and ratified April 1, 1910. By law these U.S. lakers had to be manned by officers licensed by the Coast Guard for pilotage on the various routes. The State compulsory pilotage systems were never applied to this area and are to this date not applicable. Prior to the opening of the St. Lawrence Seaway in 1959 there was little or no navigation of U.S.-registered vessels (those engaged in foreign trade) on the lakes. Foreign shipping had always navigated the Great Lakes without any compulsory pilotage. During the navigation season of 1949, 73 foreign vessels navigated the lakes while in 1955 the count was 329 foreign vessels. In the face of this constant increase, the contemplated completion of the St. Lawrence Seaway, as well as attendant projects for deepening the channels in the Great Lakes system, it was felt that some control over the competent manning of foreign- and U.S.-registered vessels was necessary. With the opening of the St. Lawrence Seaway, in addition to the 2,206 lakers operating exclusively on the lakes, there were also 1,033 foreign commercial vessels and 61 U.S.-registered vessels that made round-trip voyages during 1959 on the Great Lakes.

As early as 1957 the Coast Guard sponsored legislation to require competent pilotage on the Lakes. There was considerable debate in the years that followed and it was not until 1 year after the St. Lawrence Seaway opened that the Great Lakes Pilotage Act of 1960, Title 46, U.S. Code, Section 216, was enacted into law. The Great Lakes Pilotage Act of 1960 established pilotage requirements on the Great Lakes and connecting tributary waters for U.S.-registered vessels and foreign vessels within a regulated and coordinated system with Canada. It provides standards of qualifications for registered pilots in that they have to possess an unlimited Great Lakes master's license suitably endorsed for pilotage on routes specified thereon. Licenses are issued by the Coast Guard and they are registered with the Department of Commerce which regulates rates, charges, and pilotage pools. The Coast Guard assures the pilot's professional competency, while the Department of Commerce assures adequate service and equitable participation by the pilots. The act requires registered pilots, either Canadian or American, to direct the navigation of these vessels through certain designated waters. It also requires registered pilots or other officers qualified for the waters concerned, to be on board and available while traversing undesignated areas.

By proclamation No. 3385, dated December 23, 1960, the President of the United States designated specific waters on the Great Lakes where registered U.S. vessels or foreign vessels are required to have in their service a registered pilot. These areas are designated District 1, which included the St. Lawrence Seaway; District 2, which included the western end of Lake Erie, the Detroit River, Lake St. Clair, and the St. Clair River; and District 3, which included the St. Marys River and Sault Sainte Marie Locks. All other waters (of the Great Lakes) are undesignated waters. The statute prohibits any State, municipal, or other local authority to require the use of pilots or to regulate any aspect of pilotage on the Great Lakes. The Great Lakes Pilotage Act of 1960 is the latest legislation concerning pilotage in the United States.

STATE PILOT ORGANIZATIONS

Pilotage has evolved from its historical beginnings into the system of service and safety we have today, composed of trained men organized into associations covering the navigable routes requiring this service. These associations, developed within the past 80 years, are important factors in the conduct of pilot service. Up until about 1880 competition was intense and there was no restriction on the number of pilots permitted for any port. Pilot boats jointly owned by

groups of pilots cruised far out to sea to be the first to speak to an inbound vessel and offer service. Competition resulted in the pilots exposing themselves to unnecessary dangers, and the rendering of unprofitable, unsafe, and inefficient service. The pilots eventually realized this and took steps toward forming associations. These associations were organized in the manner of guilds, and are still, in effect, closed corporations. Probably in State pilotage more than in any other occupation in the United States the male member of the family follows the same work from generation to generation. Shipping, commercial, and insurance interests seem to have encouraged the formation of these associations, and from the evidence at hand appear to be satisfied with the services rendered. Since these associations have been formed, pilot stations have been established off the major ports convenient to incoming and outgoing traffic. A vessel can then be assured of finding a qualified pilot.

State pilots are often enrolled and organized into local associations of which about 90 percent are members of a national association. This national association called the American Pilots Association was formed in 1884 and today it is an organization comprised of about 42 State pilot associations. The American Pilot Association is instrumental in conducting negotiations among member groups, to effect uniformity and to protect the employment and livelihood of the pilots. In many States the restrictions imposed on pilots are by State laws and the local pilotage authorities or commissioners. These authorities oversee the pilot associations to make certain that the State gets service at a high standard in return for permitting the pilots to enjoy monopoly rights. As a rule the pilots are also licensed by these overseeing authorities.

TRAINING

The qualifications and training of pilots vary from State to State; however, the primary qualification is actual experience in piloting and ship handling. Generally, on the west coast, new members are almost always ex-shipmasters who having been found acceptable buy into the associations. On the east and gulf coasts, the practice is to recruit new members through an apprentice system. The apprenticeship usually consists of a period of service on board the pilot boats and pilot launches and as an observer with a senior pilot. After he has completed his training, consisting of from 2 to 6 or more years, he is licensed by the State for the lowest grade of pilotage. As he gains experience his grade is increased, until he can pilot any deep-draft, large-size vessel. Sometimes his first license is called a fourth-grade license and the newcomer is referred to as a deputy pilot, while a senior pilot is referred to as a full branch pilot. Prior to licensing, the apprentice must undergo an examination to test his proficiency in rules of the road, lights, fog signals, aids to navigation, courses, depth of water, shoals, tides, currents, seamanship, shiphandling, and other allied subjects. In many instances, a prerequisite to State licensing requires the pilot to hold a Federal Pilot license for the waters involved. In effect this means that many State-licensed pilots also have a Federal license.

FEDERAL PILOTS

Federal pilots are often organized into groups or working organizations who offer their services to vessels that are not required to obtain compulsory State pilotage. These groups provide the Federal pilot requirements for such places as the Cape Cod Canal and along the coast and inland waters. If the vessel is enrolled (engaged in domestic trade) and is navigating waters for which the master or mates do not have pilotage, then the vessel could engage a Federal pilot. However, most of these vessel operators insist that their masters have pilotage endorsements for all U.S. ports at which their vessels call. These groups are not organized in the manner that the State pilot associations are except for the method of maintaining a central office. They seldom maintain pilot vessels and their services are usually contracted for in advance. These groups accept new members as needed and usually have contracts for pilotage with various steamship companies. Federal pilots gain their prerequisite training and experience by sailing as a ship's officer, and while doing so they qualify for and take examinations administered by the Coast Guard. Upon satisfactory completion of these examinations, they receive endorsements on their master's or mate's license specifying the routes for which qualified.

The master or commanding officer-pilot relationship while in pilotage waters is unique and should receive comment. Court decisions have consistently held, in effect, that the master is in command and at all times ultimately responsible for the vessel's safety. He does not relinquish command by employing a pilot and therefore he should not blindly rely on the pilot but should reject his advice when he deems such action necessary for the safety of his vessel. The point at which the master should reject a pilot's advice is often difficult to ascertain and each incident has to be judged on its own merit.

CONCLUSION

With passage of the Great Lakes Pilotage Act of 1960, pilotage in the United States completed its development and presently provides coverage on all four coasts. State and federally regulated pilotage, brought into existence by various mediums, provides adequate and experienced service and it appears that these systems will continue to provide safe navigation on our waterways.

READERS INVITED TO SUBMIT MATERIAL FOR FUTURE ISSUES

ALL READERS are invited to submit comments, safety suggestions, cartoons, articles, or similar material for publication in future issues of this publication. Submissions should concern the promotion of maritime safety and will be selected and edited at the editor's discretion. Credit for published material will be given to the author, as appropriate, but unused items will not be returned. A brief biographical sketch is requested of the author of any article in excess of 1,000 words.

Articles or requests for further information should be directed to:

Editor
Merchant Marine Council Proceedings
U.S. Coast Guard Headquarters
Washington, D.C. 20226

ON THE USE OF THE ANCHOR IN SHIPHANDLING

By CAPT. IRBY F. WOOD
MASTER, SS "ALCOA RUNNER"

THE PRETTIEST THING in the world is to see a large ship handled skillfully in congested harbors and around crowded docks. When a ship is berthed under such conditions without a tugboat, it is an unheralded marvel. When it is done not only without the assistance of a tug but also without using an anchor (sometimes referred to as "the poor man's tugboat"), it is a real masterpiece of shiphandling.

Docking a ship without employing a tugboat or using the anchor is done only by the most skilled and experienced shiphandlers. For the man who docks his ship at rare intervals, and for the beginner, the anchor is the best safeguard when no tugboat is available.

There is an argument for not using the anchor. It is generally espoused by real artists at shiphandling who have had continuous, often daily, experience in handling ships of all types and sizes.

The argument in favor of using the anchor is very well made in the U.S. Navy textbook, "Naval Shiphandling."

> The art of anchoring and the use of the anchor tends to be neglected in the U.S. Navy. Foreign men-of-war and merchant ships use their anchors a great deal more than our Navy ships, and often our shiphandlers deny themselves the use of this important tool. It should always be remembered that the anchor represents the only means at our disposal to work directly upon the bow of our ship unless we are using mooring lines. If one doubts the utility of the anchor as a shiphandling aid, he should watch a capable master maneuvering his single-screw, lightly loaded merchantman in a confined harbor without tugs. The anchor combined with the wind and tide solves many problems that would otherwise be beyond the capacity of the ship and her engines.

It is a fact, although not generally known or suspected, that most shipmasters have never docked or undocked a ship on their own. It is not their fault. They are employed by shipping companies who provide first-class pilots and tugboats at every port.

Only in a very few companies where the captain is permitted to perform his own piloting and docking does a man really have a chance to learn the art of shiphandling. It can be learned only by actually doing it, and by suffering the usual trials and errors, frustrations, and heartbreaks.

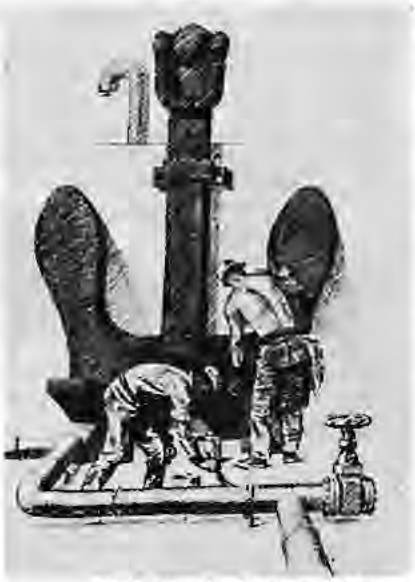

Photo Standard Oil Co. (N.J.).

BEGINNERS v. EXPERIENCE

Use of the anchor by beginners will minimize some of the frustrations and errors. Study the use of the anchor and its different applications. Then, don't be too timid; use it when approaching a tight berth, no matter how many times Captain Joe Blow or Pilot John Doakes may have done it by omitting the use of an anchor. The chances are that they are the real Mickey Mantles, Sammy Sneads, or Man o' Wars of shiphandling. Most of us cannot hope to reach their acmes of perfection.

In docking a ship most men of experience know the startling suddenness with which the wind and/or current may shift, or a harbor craft thwart one's best laid plans for approaching the dock. No matter what sudden emergency confronts you, if your anchor is down, you have your ship under control. The whims of nature are unpredictable; likewise the movements of harbor craft. Many an unconsolable shiphandler, when surveying a smashed dock or a crushed bow, has sighed, "If I had only had an anchor out."

If there were no such things as winds and currents, or if the actions of all other waterborne craft were controlled by some all-wise, immortal deity, then the problem of maneuvering a ship around docks would be a much simpler and easier affair. Unfortunately, those three phenomena are almost certain to be present in one form or another, just waiting for the unwary to drop his guard. Save yourself from the grip of inner panic, and increase your average chances for safety by having a grip on the earth with your trusty old mudhook.

SITUATIONS

At one time or another you will approach certain docks and encounter situations where it would be practically impossible to dock the ship without the aid of an anchor. One example would be those areas where a strong prevailing wind blows almost continually off the dock. The old municipal pier at Ponce, P.R., is one such place. The trade winds blow across that pier with great severity 24 hours a day, with the exception of a few minutes during the curious tropical dawn and twilight lull. It is a marvel to see experienced shiphandlers bring their big, light freighters alongside this pier with a force 6 wind blowing. They'd never make it without an anchor.

On many occasions, with a strong on the dock wind, it would be foolhardy to attempt docking without the use of an anchor to avoid smashing the dock or denting a hull plate or worse. By the sensible use of an anchor in such situations, a large vessel can be taken alongside so easily that the docking impact wouldn't break a peanut shell.

AMOUNT OF CHAIN TO USE

The question "How much chain should I use?" is often asked. There is no hard-and-fast rule. It is governed by the strength of the wind and tide, the size of the vessel, the nature of the bottom, depth of water, amount of draft, and the maneuvering room. Normally, one shot of chain outside the hawsepipe or at the water's edge is sufficient to dock an average-size ship under normal conditions.

There may arise a condition that would warrant using two shots of chain at the water's edge, or even more, but it must be remembered and never forgotten that the more chain

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NOTE: The question of whether and when a vessel should use an anchor in maneuvering to approach a dock is a subject that is rife with ayes, nays, suggestions, counter-suggestions, and sometimes hot tempers. In a letter to the Editor, Capt. Sidney E. Garry, a Great Lakes master since 1934, strongly advocates the use of anchors as a common practice when making a dock, a thought which is in general agreement with this article.—*Editor.*

one has out, the more revolutions one will need to make headway. Use of more than one shot is generally frowned upon except under extreme conditions. The safest way to approach a dock is at the slowest speed that will insure maneuverability. The old sea adage, "You can always come ahead on her, but if you get too much way on her, you might not have time to come astern," holds true here.

THOROUGH PREPARATION NECESSARY

A thorough study of harbor charts, depths of water, and nature of the bottom cannot be too strongly stressed. The nature of harbor bottoms varies. Some are soft, some are hard, some are viscous, and many have fine textures which have small retarding effect.

By study and experience the shiphandler will soon discover that in many harbors there is a fine line between too much and too little chain. He will find that there is a certain limit in some harbors that is just right, and that he can make his ship do anything required of her with the "just right" amount of chain out.

A COMMON MISTAKE

A common mistake made in the use of an anchor for docking is neglecting to consider the draft of the vessel. The right amount of chain for docking a light ship is often insufficient for docking a deep-draft one. Many unwary shiphandlers have discovered this, to their dismay, when a very real possibility of hitting the dock or the ship ahead became imminent. What was sufficient chain for docking last trip in the same berth under light condition was not nearly enough for bringing her alongside with 10,000 tons of cargo in her holds. Here, again, the allowance of chain is a matter of individual experimentation.

In spite of what has been written here, there are men who disdain the use of an anchor in docking. Do not be fooled by their demonstrations. They are usually master shiphandlers possessing much more practical experience than the average shiphandler.

There is another type of seafarer who disdains the use of the anchor, but for a radically different reason—fear. An anchor used improperly can often cause more damage than the trouble you tried to avoid by using it. There is a case on record where a shipmaster dropped his anchor to retard the way of his ship when faced with the possibility of grounding. The ship grounded on a sandy beach and suffered no harm from the grounding, but her anchor punched several holes in her hull.

Newport News Shipbuilding photo by Nixon.

EXAMPLES

Snagging the anchor on an uncharted obstruction is always an ever-present possibility, loaded with peril. Capt. Harry Grattidge in his book, "Captain of the Queens," tells a profound story of how he almost lost one of the world's proudest ships through a fouled anchor. All men interested in the art of handling anchors are urged to read that portion of Captain Grattidge's book.

As for myself, in approaching a berth I had occupied at least 50 times, I once dropped the anchor a little farther out than was customary. The anchor caught on an obstruction and five shots of chain clanged out before the chief mate could stop it. When the ship was finally docked with the consequential delay in righting things, and with a very red face, I was told that there was a rock out there. The rock was not charted, but it appeared that everyone in creation knew of its existence with the exception of the skipper.

THE BEST TIME TO DROP THE ANCHOR

All men who have had considerable experience in handling ships know that the ideal time to drop an anchor is when all or most of the way of the ship is off, but that is not always possible because of many ungovernable causes. For that reason, it cannot be stressed too strongly how important it is for the mate to set up tight on

the windlass brake as soon as the required amount of chain is out. Not just handtight but brake bar tight, taking up every last fraction of an inch on the screw.

The length of this article would not suffice to record the times anchor chains have gone by the run because the brake was not set up properly. Many such incidents have ended in tragedy, and some, although causing nothing more serious than a loss of time, have branded the shiphandler as no more than a clown trying to do a man's work.

Much pertinent information on the use of anchors will be found in the brief bibliography that follows. Make the knowledge of those master shiphandlers yours by much study and rereading. Initial *fear* is the first problem to be overcome in shiphandling. With a good basic understanding of the principles of shiphandling, fear can be minimized, and if you give yourself a chance to do the job, reasonable proficiency can be realized.

(1) "Naval Shiphandling" published by the U.S. Naval Institute.

(2) "Shiphandling in Narrow Channels," by C. J. Plummer and published by the Cornell Press.

(3) "On a Destroyer's Bridge," by H. Frost and published by the U.S. Naval Institute.

(4) "Tips on Shiphandling," by H. A. V. von Pflugk, ch. 9, Merchant Marine Officer's Handbook. Cornell Press.

This article is not meant as a treatise against the use of tugboats, nor is it meant in any way to detract from the skill of the many fine tugboat skippers in the world's ports who dock ships under the most difficult conditions, and who very rarely touch a wharf hard enough to crack the proverbial eggshell. There will be times in the average skipper's experience when, even with the use of a tug and an anchor, the safe docking of his ship will be a daring exploit, to say the least.

The annals of shiphandling are replete with ironical misfortunes. Perhaps it would be fitting to relate two out of the many:

A former marine superintendent who was a successful shipmaster tells the story of docking his ship one morning in San Francisco and being summoned ashore at noon that day to a banquet given in his honor for being the line's most competent and accident-free skipper. He was presented with a gold watch commemorating the incident, by no less a personage than the owner himself.

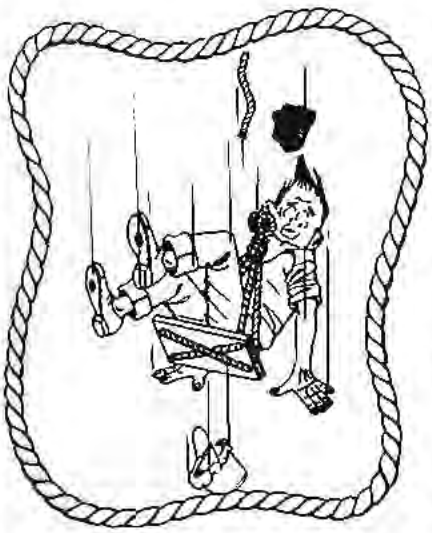
At 2 p.m. the captain left the banquet, boarded his ship, undocked her, and proceeded to Alameda Terminals. At 3 p.m. on the same day he plowed through the dock with the bow of his ship and did $50,000 damage to the dock.

After this article was prepared for publication, I, with a record of a thousand safe dockings and undockings, had the ironical misfortune of smashing two wooden dock stringers into matchwood with my bow, and the stern of my ship swung into the poop deck awnings of a tanker across the slip which was busily engaged in discharging a full cargo of high-test gas, all this while docking my 459-foot-long, light freighter in a crowded berth with a force 7 gale blowing. I wrote my marine superintendent: "There is nothing further to add to the logbook entry and my official statement of facts, except that perhaps by using 'hindsight' I might use more chain or try to back her out and make a fresh approach to the berth."

The only possible consolation one can find for such a grievous experience is in two homely bits of shiphandling philosophy often quoted by experienced shiphandlers: "You can't count eggs every day without dropping one occasionally," and an equally prosaic one, "He who handles glass is bound to break a piece now and then."

MARLINSPIKE SEAMANSHIP

Excerpts from an article
By R. H. Smith and E. Wills, U.S. P&I Agency



It was a beautiful day as the outward bound ship knifed through the calm Pacific. A seaman was aloft in a Bosn's chair, slushing down a topping lift. It was about an hour after dinner and he was a little more than half through his job when suddenly he dropped, still sitting in his chair, falling on the lumber deckload. Fortunately he did not roll overboard although he was badly injured about the head and back.

Investigation showed that the shackle was still around the topping lift wire. No lines had carried away and the Bosn's chair was undamaged. The same gear had been used all morning without mishap and was used throughout the following day. There was nothing wrong with it. The injured man had been going to sea for 20 years and was considered a good seaman.

The fall was due to the fact that the knot which secured the Bosn's chair to the gantline came undone. The knot was a double sheet bend, tied either by the injured man or his predecessor on the job. The injured man denied tying the knot himself but said that it had looked all right to him when he inspected it before going aloft. He said that, "it was a double sheet bend with the pin of the shackle led through the first turn of the gantline as it come through the eye of the chair".

Unfortunately, the tail end of the gantline was short—only a few inches. Now if you want to try an interesting experiment, see if you can reproduce this rig with the shackle pin inserted under that section of the gantline hauling part that jams the two round turns of a double sheet bend. Leave a tail of not more than 8 inches. Then slacken off the gantline to lower the chair and jerk the rig around a little. The chances are that suddenly that short end will pop through the bend, the knot will dissolve, and the chair will drop.

The injured man said, "I never heard of a double sheet bend slipping before." A lot of men will echo that but in our experience there have been a number of serious accidents which occurred in precisely this manner with either a single or double sheet bend when a shackle pin was put through the knot and the tail was short. It is simply bad seamanship to put a shackle pin through a holding knot.

particularly when the tail is short. As a matter of fact, it is not good seamanship to tie any kind of holding knot with a short tail.

A preferred rig is one which the shackle pin is inserted through the supporting lines of the Bosn's chair above the throat seizing and under the double sheet bend knot. The bow of the shackle should always be the rubbing part against the shroud or topping lift wire. If the pin does the rubbing it may become unscrewed by friction. Another good precaution is to take a final half hitch with the bitter end around the standing part of the gantline, provided it is long enough.

MARKING AND IDENTIFICATION OF FLOATING OCEANOGRAPHIC STATIONS

The International Maritime Consultative Organization has approved the following recommendations by the Maritime Safety Committee.

CONCLUSIONS ON THE MARKING OF OCEANOGRAPHIC STATIONS

1. Growing use by oceanographers and meteorologists of various types of oceanographic stations presents the following problems:

(a) Avoidance of collision between vessels and stations;

(b) Easy identification and recovery of the stations by the owner and protection of the stations from being tampered with;

(c) Avoidance of confusion due to similarities between oceanographic stations and navigational buoys or other aids to navigation.

2. As a basis for the solution of these problems the following classification of existing types of oceanographic stations was adopted by the General Assembly of IMCO.

(a) Craft which, owing to their size, material and construction, can cause and/or receive damage through collision. Such craft carry personnel and may have moderately heavy equipment on board. They may be operating at any distance from the coast, either anchored or not;

(b) Permanent structures embedded in the sea-floor and rising above the sea surface (masts and platforms), manned and unmanned, generally within a short distance of the coast;

(c) Equipment which, owing to size, material and construction, is less likely to cause damage through a collision. However, it may receive damage or can foul a propellor or rudder or fishing gear. Such equipment is not expected to carry personnel and it may be anchored at any distance from the coast;

(d) Free floating equipment generally small in size and operating either independently or in the proximity of research vessels or craft of the type 2(a). Such equipment can be carried away for long distances, drifting with the currents.

3. The Maritime Safety Committee concluded that:

(a) Craft of type 2(a), since they appear to satisfy the requirements of the definition of "vessel" should be treated as vessels and comply with the appropriate Rules of the International Regulations for preventing Collisions at Sea in force;

(b) Permanent structures of the type 2(b) should be considered generally as aids to navigation. Their light characteristics and other navigational aids should be adopted in consultation with the country, or countries, most concerned. Their position should be marked on the charts and information should be promulgated as required in paragraph 3(g) below;

(c) Oceanographic stations of the types 2(c) and 2(d) should carry at night identification lights of a flashing type clearly distinct from those used on navigational buoys and other aids to navigation. The following specifications are recomended:

(i) Colour: white-bluish, high intensity, corresponding to the light of xenon discharge tube;

(ii) Repetition rate: short period of quick flashes of a few seconds duration (2–5 seconds) followed by a longer period of darkness (15–18 seconds), whole cycle being no less than 20 seconds.

NOTE: The possibility of using a constant white light on floating buoys of experimental or short duration nature should not be excluded provided that those buoys are small and do not represent any danger to navigation.

(d) For easy identification, oceanographic stations of the types 2(c) and 2(d) should be painted in standard colours presenting the least danger of confusion with the markings being used for the various aids to navigation or other purposes. Fluorescent yellow and red in wide stripes (vertical for anchored stations and horizontal for free-floating ones) should be recommended;

(e) The following equipment should be fitted on the 2(c) and 2(d) type stations as far as practicable:

(i) *Radar Reflectors:* unless buoys are of such size and configuration as to be good radar targets. If fitted, radar reflectors should be as high above the sea surface as possible;

(ii) *Fog Bells or Fog Horns:* when fitted care should be taken to ensure that the sound emitted is not such as to be confused with the sound emitted by similar navigational warning devices;

(f) The requirements specified above should not exclude the possibility of installing on these stations special radio-transmitters for direction-finding purposes;

(g) Information concerning oceanographic stations which represent a danger to or an aid to navigation (position, size, safe distances to be observed and other important characteristics) should be promulgated to mariners through the usual channels (notices to mariners, radio warnings, etc.). The IOC might also use other means to ensure the widest possible promulgation of such information especially to fishing interests of the countries concerned;

(h) The Intergovernmental Oceanographic Commission (IOC) could, at its discretion, use numbers or other inscriptions on the stations to facilitate identification and to discourage unauthorized handling or such stations;

(i) Care should be taken by authorities operating such stations to avoid obstructing fairways used by shipping.

When oceanographic stations of the several types described above are placed within the navigable waters of the United States, including the waters of the outer continental shelf adjacent thereto, they will display those markings, lights or signals compatible with the United States lateral system of buoyage and in accordance with the provisions of Title 33 CFR 60 and Title 33 CFR 66.

MARITIME SIDELIGHTS

AUGUSTO MERCADO, Larder Cook, SS *Monterey*, is shown receiving the letter of Commendation from the Commander, 14th Coast Guard District, for having attempted to rescue a fellow crewmember who had jumped overboard while the vessel was moored. From left to right are Captain Malcolm R. PETERS, Master, SS *Monterey*; Augusto MERCADO; and Captain Charles TIGHE, Chief of Staff of the 14th Coast Guard District.

COMMANDER,
14th CG District,
610 Fort Street,
Honolulu, Hawaii, 96813

m
5950
15 APRIL 1964.

MR. AUGUSTO MERCADO,
Stewards Department, SS "Monterey", % Matson Navigation Co., 215 Market Street, San Francisco, Calif.

DEAR MR. MERCADO:

At about 1843 on 24 January 1964 you were serving as Larder Cook aboard the SS *Monterey* in the Port of Honolulu, Hawaii, when Mr. Bathas Charles Harrison (Z–87810–D1), age 67, intentionally leaped from the vessel into Honolulu Harbor.

Immediately upon learning what Mr. Harrison had done, without regard for your own personal safety, you jumped overboard and tried repeatedly to locate and rescue him.

You are commended for your exemplary action in this matter, which is in keeping with the highest traditions of the U.S. Merchant Marine.

It is with great pleasure that I extend to you a "Well Done."

A copy of this letter will be made a permanent part of your records at Coast Guard Headquarters.

Very truly yours

CHARLES TIGHE,
Captain, U.S. Coast Guard,
Chief of Staff, 14th Coast Guard District.

There were 909 vessels of 1,000 gross tons and over in the active oceangoing U.S. merchant fleet on June 1, 1964, 18 less than the number active on May 1, 1964, according to the U.S. Department of Commerce.

There were 21 Government owned and 888 privately owned ships in active service. These figures did not include privately owned vessels temporarily inactive. They also exclude 25 vessels in the custody of the Departments of Defense, State, and Interior and the Panama Canal Co.

There were 21 fewer active vessels and 20 more inactive vessels in the privately owned fleet. One freighter, the *Gulf Farmer*, was delivered from construction. Two C4 type troopships were received from the Government in exchange for two privately owned freighters. A freighter and a tanker were scrapped. This made a net loss of 1 to a total of 967. Of the 79 privately owned inactive vessels, 23 freighters and 15 tankers were being repaired or overhauled. The others were laid up or temporarily idle.

The Maritime Administration's active fleet increased by 3 while the inactive fleet increased by 8. Eight ships were sold for scrap. Two reserve fleet ships were exchanged with ships of private operators. Two ships were transferred to the Navy, and the Department of Defense returned one to reserve. The total Government fleet decreased by 9 to 1,767. The total U.S. merchant fleet decreased by 10 from May 1, 1964, to 2,734.

No new contracts were placed. One ship was delivered. The number of large oceangoing ships under construction in U.S. shipyards decreased by 1 to 49.

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The SS *John Ericcson*, the last of the whaleback freighters to operate on the waters of the Great Lakes, has been decommissioned by her owners, and will be sold—probably for scrap. The whaleback freighter, so called because of the rounded decks, was considered easier to handle in lake weather.

A radiotelephone system for voice communication between vessels in the New Jersey-New York Harbor area will be tested for a year on vessels bound to or from the port of Newark, according to the Pilotage Commissioners of New York and New Jersey. The results will be used by the commissioners to determine the advisability of making use of the system by pilots on all vessels in the bistate port. The "bridge-to-bridge" system will also permit the vessels to communicate with the Jersey Central drawbridge over Newark Bay. A similar radiotelephone system has been used successfully between vessels on the Delaware River since 1960, and on the Hudson River to Albany during the past year.

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The Golden Gate Bridge, famed for almost three decades as a San Francisco landmark, now has a new fog signal installed at the midpoint of the 4,200-foot center suspension span. . . . A new, highly automated tank vessel, the *ESSO Philippines*, was launched recently in Japan. The vessel features automatic and remote control systems for deck, engineroom, and cargo-handling equipment. . . . A new ammonia tanker, the *William R. Grace*, was launched recently near Rotterdam, The Netherlands. The vessel is specially built for the carriage of anhydrous ammonia at minus 28° Fahrenheit, or refrigerated propane cargo at minus 44° Fahrenheit.

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Twelve Canadian marine radio stations along the east coast have joined the Coast Guard AMVER network for keeping track of vessels in the Atlantic. AMVER is an international mutual assistance program which combines the tradition of the sea that "no call for help shall go unanswered" with a modern electronic computer. Vessels of about 60 nations travel in AMVER's area, and about 60 percent of them participate in the voluntary program.

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The largest and most modern oceanographic research vessel, the *Oceanographer*, was launched recently at the Gibbs Shipyard in Jacksonville, Fla. The 303-foot, 3,800-ton vessel will carry closed circuit television in the automated engineroom; laboratory space in excess of 4,100 square feet will be provided, and special bow viewing ports below the water line will permit underwater observations.

COAST GUARD COMMISSIONS FOR MERCHANT MARINE OFFICERS

(RIGHT) LT. COMDR. FRANK M. SPERRY, USCG, senior resident marine inspector at Sparrows Point Shipyard of Bethlehem Steel Co., shows Capt. Leonard E. Penso, USCG, Officer in Charge of the Coast Guard Marine Inspection Office, Baltimore, a badly corroded lifeboat handax. The ax is to be added to Captain Penso's "chamber of marine horrors" exhibit board used in marine inspector training.

Lieutenant Commander Sperry, 40, a native of Los Angeles reared in Bedford, Ohio, was a merchant marine officer with a master's license for ocean vessels before entering the Coast Guard in 1953.

A professional career as a commissioned officer in the U.S. Coast Guard is available to personnel of the U.S. merchant marine who have served at least 4 years on board vessels of the United States in the capacity of licensed officers.

Applicants who are selected for appointment will have an opportunity to continue working with the maritime industry while devoting a large portion of their time to shore duty in the field of Merchant Marine Safety.

Licensed officers of the U.S. merchant marine may qualify for commissions in the U.S. Coast Guard as lieutenant, junior grade, or lieutenant, according to the age, license, and experience of the applicant.

Officers commissioned through this program will be assigned primarily within the field of merchant marine safety with periodic assignments to other types of duty. Assignments may involve one or more of these areas: Inspection and regulation of vessels and equipment; regulation and protection of the rights of maritime personnel; supervision of safety standards; investigation of personnel and casualties; liaison with the maritime industry.

⚓ ⚓ ⚓

The luxury liner *Shalom*, the world's newest passenger liner and the pride of Israel's merchant fleet, arrived recently in New York on her maiden voyage. The 629-foot, 25,000-ton vessel is scheduled for regular transatlantic sailings to New York.

A tired queen of the sea may soon be towed to the scrap yard, ending a career that began 32 years ago when she was launched by the United States Lines and sailed as one of the most colorful passenger liners in the trans-Atlantic trade. She is the former 668-foot *Manhattan*.

WHAT WOULD YOUR REACTION BE TO A HYDROGRAPHIC SITUATION LIKE THIS?

You are running sounding lines in a channel entrance across a bar.

During your initial run of a south to north sounding line, no unusual soundings were noted from the charted values. Upon running the reverse course the sea became quite turbulent and soundings in excess of 100 feet were recorded where minutes before there had been a scant 12 to 15 feet of water. Continued hydrography revealed that the narrow 17-foot channel was now over 600 yards wide with depths from 30 to 250 feet.

The answer is given on the USN Pilot Chart of the North Atlantic Ocean for November 1963, and we quote:

RIO MAGDALENA BAR DISAPPEARS

On 10 July 1963, the bar at the mouth of Rio Magdalena, for years hampering deep draft shipping into the Port of Barranquilla, suddenly slid off into deeper water and disappeared. As a result of this unique event the river has again been opened to large vessels, restoring the Port of Barranquilla to its former position as an important sea port.

The phenomenon was probably the result of strong scouring action of the river coupled with an underwater mud slide. The incident, however, is not a new story to the local populace, having occurred twice before during the last 50 years. In each previous case, the channel remained clear for approximately ten years before the bar re-formed.

Courtesy of International Hydrographic Bulletin.

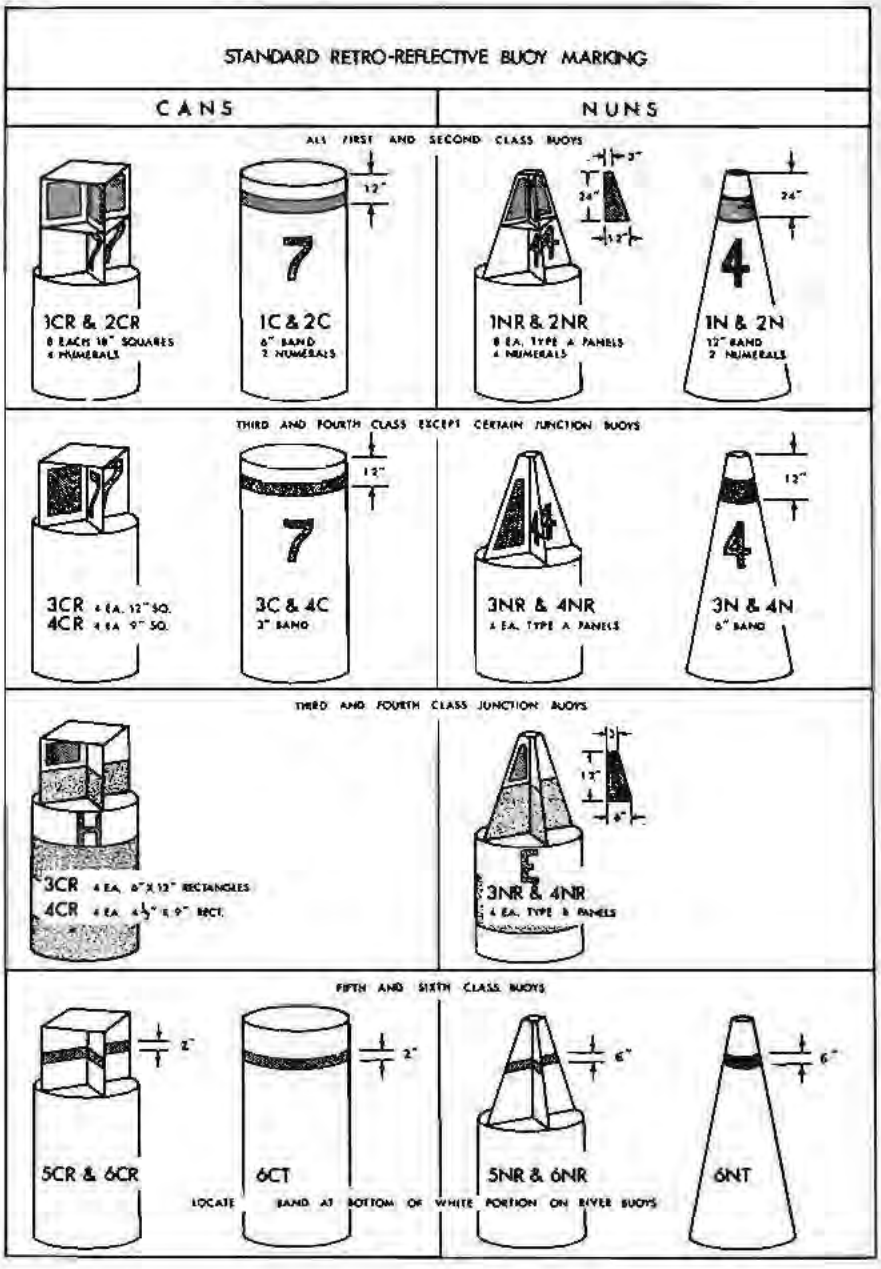
"HEY-CAP- TODAY'S THE 16TH! WE SHOULDA HELD OUR SAFETY MEETING."

RETROREFLECTIVE MARKINGS FOR

The Coast Guard is taking steps to standardize and make more effective its system of unlighted aids to navigation.

Instructions have been issued to the field standardizing the shapes of daymarks for minor lights and daybeacons, and requiring the use of retroreflective, and in some cases fluorescent, materials on such daymarks.

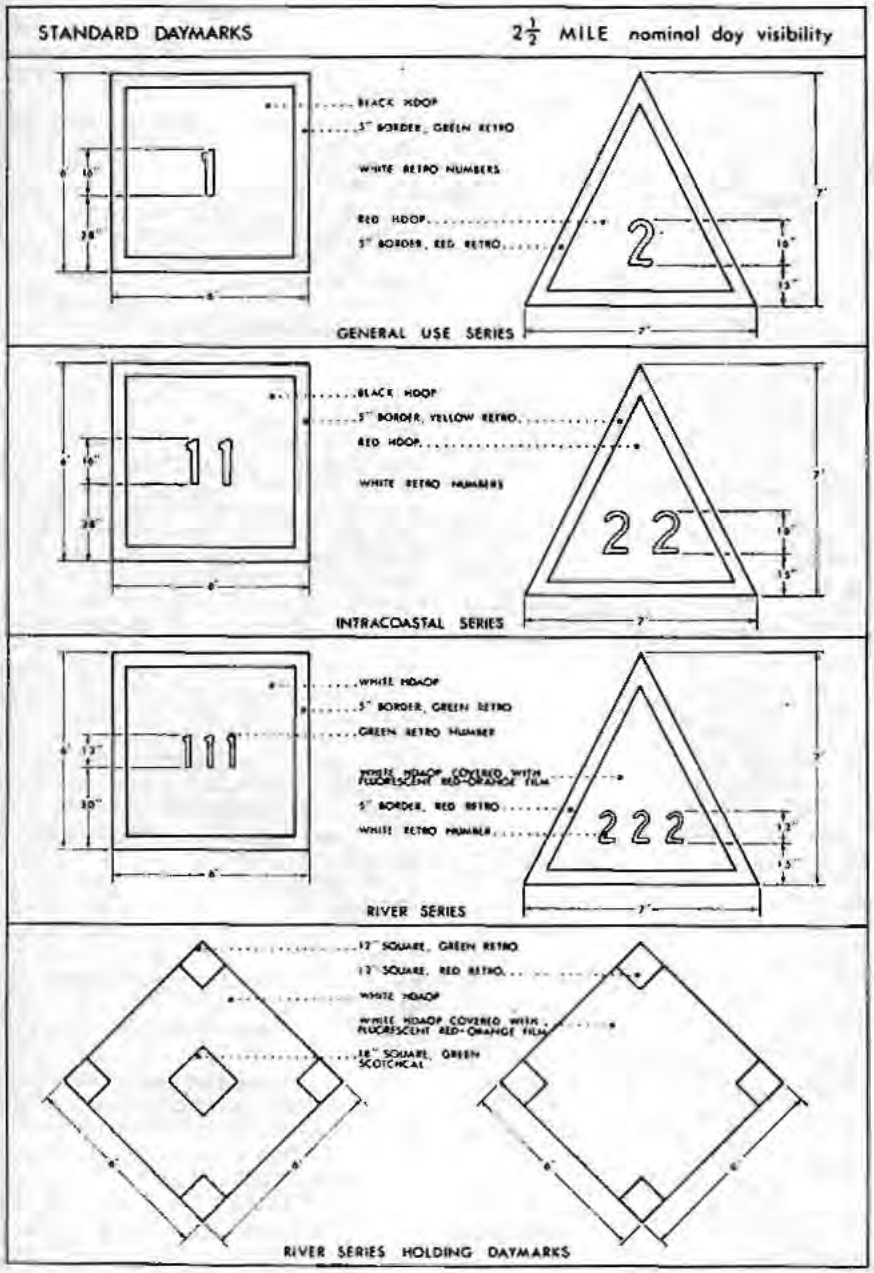
The new standards for such markings are shown in the accompanying drawings. The "general use series" will be used against sea and sky backgrounds, and the "river series" will be used against dark backgrounds such as trees and other foliage. These daymark designs will be used in reconstructing minor lights and daybeacons as such construction becomes neces-



UNLIGHTED BUOYS AND DAYMARKS

sary. Complete changeover to these standards is not expected until 1968.

In addition, all unlighted buoys are to be equipped with retroreflective material as shown. Red and green reflectors will be used where lateral recognition is of primary concern, and white reflectors will be used where long-range detection qualities are more important. Use of these materials will enable the navigator with a searchlight or even a five-cell flashlight to use unlighted aids at night with considerable success. The installation of retroreflective material throughout the buoy system will probably take about 1 year to complete.



BE A DRAFT DODGER

We are advocating draft dodging, not in relation to military service, but, in relation to longshoremen's work in the hold.

A number of serious injuries could have been prevented had the men been attentive to the moving draft and prepared to dodge it, if necessary. Here are some cases in point:

Longshoreman placed himself in a "pinch" position and was jammed between a draft of cargo and bale of sisal.

While positioning a draft of reefer plugs on deck, the load was swung too hard. The landed load pinned a worker between the draft and stowed hatch beams.

Spreader-bar of empty pallet bridle struck hatch coaming, causing bars to swing and strike a longshoreman in the back.

Man was struck by two "sliders" as the end of a draft of 4 feet by 8 feet plywood was lowered into the hold.

There must be coordination between the winchman and the hatch tender, and between either of these individuals and the men in the hold. The deck men are in a good position to see when the men below are in dangerous positions, and to direct them out of the way before moving the draft. At the same time, the hold men should show a healthy respect for the moving draft and not take it for granted that the deck men will always protect them.

It is particularly important to stand fore and aft rather than athwartship of the draft and avoid getting into narrow spaces between the draft and fixed objects against which it might unexpectedly swing.

—*Maritime Safety Digest*

The ancients tried to reach heaven by building the Tower of Babel. Some moderns stack crates and boxes so high you'd think they were trying to do the same.

There's a safe height for stacking which should not be exceeded, the National Safety Council says. That height is determined by floor load limit, type of material being stacked, strength and stability of containers, and requirements of fire protection.

Stay within that safe limit when stacking, lest a falling carton make you a babbling idiot.

nautical queries

DECK

Q. On August 8, 1956 at Latitude 33°-11′ South Longitude 84°-19′ West, an evening observation is taken at 23h-46m-16s GMT of a star whose corrected altitude is 52°-19′.9 and whose azimuth is 105°.2 True.

REQUIRED: Identify the star.

A. Star=KAUS AUSTRALIS

Q. What is meant by the "gross and net tonnage" of a ship?

A. Gross tonnage:

The entire internal capacity of a ship, expressed in units of 100 cubic feet to the ton.

Net tonnage:

The gross tonnage minus all certified spaces such as boiler and engine room space and space taken up by chain lockers, water compartments, fore and after peaks, crew quarters, etc.

Q. During the day, at sea, you observe a vessel firing a gun or other explosive signal at intervals of about a minute. What would this indicate to you and what action would you take?

A. This is one of the recognized distress signals. Give the vessel all assistance possible.

NOTE: This question is based upon one of the eight principles of the annex to the rules proposed by the 1960 International Convention for the Safety of Life at Sea.

Q. As recommended by the proposed annex to the International Rules, what must the mariner be sure of when action is taken to avoid a close quarters situation in restricted visibility at sea?

A. It is essential to make sure that the action is having the desired effect. Alteration of course or speed or both are matters as to which the mariner must be guided by the circumstances of the case.

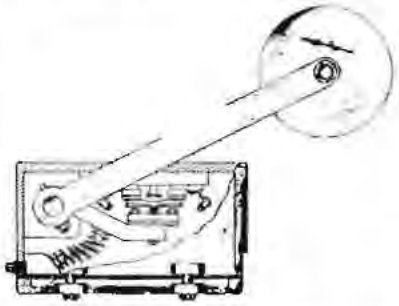
Q. What action shall a power-driven vessel take on hearing, apparently forward of her beam, the fog signal of a vessel whose position is not ascertained?

A. A power-driven vessel hearing, apparently forward of her beam, the fog signal of a vessel, the position of which is not ascertained shall, so far as the circumstances of the case admit, stop her engines, and then navigate with caution until danger of collision is over.

LIFEBOAT LIMIT SWITCH

Q. (a) What points should be carefully checked in examining lifeboat limit switches (see illustration)?

(b) Can current flow to actuate the winch motor when the limit switch is in good condition and in the open contact position?



A. (a) The limit switch should be carefully checked for condition of gasket, tightness of drain plug, tapered pin locking roller arm to shaft, cotter pin and washer in place to hold roller on shaft, and that all internal mechanical and electrical components are dry and in good operating condition.

(b) Because the limit switch is usually in the control circuit rather than in the main power circuit, failure of the contactor in the motor controller would still allow winch to run. This failure could result through accidental circuit through a ground, through the contacts becoming welded together, through frozen hinged joints, etc. Hence, it is important to assure that the emergency disconnect switch is in good operating condition at all times as this is in the main power circuit.

ENGINE

Q. List the causes which would result in a high stack gas temperature when operating under constant load.

A. 1. Too much excess air.

2. The firesides of boiler are fouled.

3. Secondary combustion is taking place in the gas passes.

4. Soot fire in the economizer or air heater.

Q. What operating precautions should be taken in connection with economizers?

A. 1. Extreme care must be taken to maintain the external economizer surfaces free of soot or other unburned carbon deposits.

2. Water must be supplied to the unit continuously to avoid overheating of the extended surfaces. Never fully close the feed check valve or stop the feed pump while the boiler is under fire.

3. Reduce external corrosion by maintaining the feed water temperature high enough (not less than 210° F.) to prevent the tube metal from becoming cooler than the dew point temperature of the flue gases.

4. Reduce corrosion of the internal surfaces by the elimination of oxygen from the feedwater through proper operation of the air ejector and deaeration equipment.

Q. What maintenance is required on the thermal-mechanical feed water regulator?

A. Clean thermostat expansion tube occasionally and do not paint. Keep pins and bearing points clean and oil occasionally with a few drops of light oil. When renewing feed water regulator valve stem packing use only the type of packing recommended by the manufacturer. Tighten valve stem gland just sufficiently to eliminate leakage. If the boiler water is extremely dirty blow down the thermostat about once a week; otherwise only when starting up the boiler.

Q. 1. In the evaporator section of a refrigerating unit, which of the following is a function of the evaporator:

(a) Absorption of latent heat of fusion

(b) Transmission of latent heat of fusion

(c) Absorption of latent heat of vaporization

(d) Transmission of latent heat of vaporization

A. (c) Absorption of latent heat of vaporization

Q. 2. Valves in a freon 12 refrigeration system may be any of the following *except:*

(a) Diaphragm

(b) Duplex

(c) Bellows

(d) Single packed with seal cap

A. (b) Duplex

AMENDMENTS TO REGULATIONS

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

TITLE 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of the Treasury

SUBCHAPTER A—GENERAL

[CGFR 64-31]

PART 3—COAST GUARD DISTRICTS, MARINE INSPECTION ZONES, AND CAPTAIN OF THE PORT AREAS

Miscellaneous Amendments

By Coast Guard General Order No. 17, dated March 18, 1964, the Secretary of the Treasury approved changes in the district boundaries between the 3d and 5th Districts and between the 11th and 12th Districts. In order to provide for an orderly transfer of jurisdiction and the administrative transition in all functions, these boundary changes and the corresponding changes in the Marine Inspection Zones and captain of the port areas shall be effective July 1, 1964.

The first change revises the common boundaries between the 3d and 5th Districts in the State of Delaware so that the reaches of the Nanticoke River and the Chesapeake and Delaware Canal and Fenwick Island except Fenwick Island Light shall be in the 5th District (Portsmouth, Va.) rather than the 3d District (New York). This places all the water areas of the Nanticoke River and the Chesapeake and Delaware Canal in the 5th District. The land masses of the State of Delaware surrounding the Nanticoke River and the Chesapeake and Delaware Canal still remain within the jurisdiction of the 3d District. The jurisdiction of the Marine Inspection Zone of Baltimore, Md., will include the water areas of the Nanticoke River and the Chesapeake and Delaware Canal. The Marine Inspection Zone of Philadelphia, Pa., will retain control over the land masses in the State of Delaware surrounding the Nanticoke River and the Chesapeake and Delaware Canal. The Commander, 5th Coast Guard District, at Portsmouth, Va., will exercise the captain of the port functions and supervise law enforcement for the entire Nanticoke River and Chesapeake and Delaware Canal.

The other change transfers from the 12th District (San Francisco) to the 11th District (Long Beach) jurisdiction over the Counties of Washington, Kane, San Juan, and Garfield, including Lake Powell, in the State of Utah. The Marine Inspection Zones of San Francisco and Los Angeles-Long Beach are also changed accordingly.

All actions, including marine inspections, investigations, law enforcement cases, appeals, etc., commenced prior to July 1, 1964, arising within the areas described herein as being transferred from one district or zone to another shall be continued by the originating office until completed or until mutually satisfactory arrangements are made so the district or zone assuming jurisdiction over such actions may complete actions required without jeopardizing the rights of other parties affected. However, on and after July 1, 1964, all new actions arising within such areas shall be performed by the district or zone assuming jurisdiction.

The purpose of this document is to announce the changes in Coast Guard Districts, Marine Inspection Zones, and Captain of the port areas, and to revise the published descriptions in §§ 3.15–1(b), 3.15–25(b), 3.15–65(b), 3.25–1(b), 3.25–15(b), 3.55–1(b), 3.55–10(b), 3.60–1(b), and 3.60–10(b) to agree with Coast Guard General Order No. 17.

By virtue of the authority vested in me as Commandant, U.S. Coast Guard, by section 632, in Title 14, U.S. Code, and Treasury Department Orders 120 dated July 31, 1950 (15 F.R. 6521) and 167–17 dated June 29, 1955 (29 F.R. 4976), as well as the statutes cited with the regulations cited below, the following amendments are prescribed and shall be in effect on and after July 1, 1964:

(Federal Register of June 9, 1964.)

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

[CGFR 64-30]

SPECIAL PURPOSE WATER SAFETY BUOYANT DEVICES

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 VIIa contained proposals regarding special purpose water safety buoyant devices (CG–249, VIIa, pages 78 through 86, inclusive). In line with actions taken at the public hearing, changes were made in the proposals identified as 46 CFR 2.75–30(c)(2), 25.25–5(h), 25.25–10(b), 160.064–3(c), (d), 160.064–4(a), 160.064–6(a), and 180.05–5.

The principal change in the proposals limits the use of approved special purpose water safety buoyant devices as lifesaving equipment to motorboats of Classes A, 1, and 2 not carrying passengers for hire. Such approved devices may be carried as excess on motorboats carrying passengers for hire and motorboats of Class 3. The proposals in Item VIIa in the agenda, as revised, are adopted and set forth in this document, which is the sixth of a series covering the proposals considered by the Merchant Marine Council.

By virtue of the authority vested in me as Commandant, U.S. Coast Guard, by section 632 of Title 14, U.S. Code, and Treasury Department Order 120, July 31, 1950 (15 F.R. 6521), as well as by the specific laws cited with the requirements below, the following regulations and amendments are prescribed and shall become effective July 1, 1964:

(Federal Register of June 6, 1964.)

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

[CGFR 64-19]

VESSEL INSPECTION REGULATIONS

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 1, 1964 (29 F.R. 1646), 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. The public hearing was attended by over 117 persons representing maritime and allied interests.

In addition, 531 written comments were submitted. Altogether, over a thousand suggestions for changes in the proposals were received.

The Merchant Marine Council recommendations that final consideration be postponed for certain items pending final action and allowing further written comments to be submitted are approved as follows:

Item I—Bulk dangerous cargoes—those portions pertaining to qualifications for personnel, manning of barges, labelling or placarding of barges in Items Ia, Ib, and Id—for 120 days.

Item VIh—Intrinsically safe equipment and circuits—for 90 days.

Item VIId—Pressure gauge or device on dry chemical extinguishers—for 90 days.

Item X—Lights and fog signals on structures of Outer Continental Shelf and adjacent waters—for 120 days.

Item XII—Implementing 1960 Safety of Life at Sea Convention—postponed indefinitely until actions are taken to place the 1960 Safety of Life at Sea Convention into effect.

Final consideration and actions on the following items have been postponed indefinitely to permit further study and consideration or they are withdrawn:

Item II—Qualified members of engine department rating list and pumpman/tankerman requirements—postponed indefinitely.

Item VIg—Sound-powered telephone and voice tube systems—withdrawn.

Item VIIIa—Hatch covers—withdrawn.

Item IXa—Hot work on waterfront facility or vessels—withdrawn.

Item IXb—Power-operated equipment on waterfront facility—postponed indefinitely.

Item XV—Proper lookout—postponed indefinitely.

This document is the third of a series regarding the regulations and actions considered in this public hearing and annual session of the Merchant Marine Council. This document contains final actions taken with respect to the following:

ITEM I—BULK DANGEROUS CARGOES

ITEM IV—INSPECTION AND CERTIFICATION OF VESSELS

ITEM V—MARINE ENGINEERING

ITEM VI—ELECTRICAL ENGINEERING

ITEM VII—REQUIREMENTS AND SPECIFICATIONS FOR LIFESAVING DEVICES, EXTINGUISHERS, AND BACKFIRE FLAME ARRESTERS

ITEM XIII—COMBUSTIBLE GAS DETECTORS ON TANK VESSELS

ITEM XIV—RENEWAL OF OPERATORS' AND OCEAN OPERATORS' LICENSES—EXERCISE ON RULES OF THE ROAD

(Federal Register of June 5, 1964, Part II.)

TITLE 32—NATIONAL DEFENSE

Chapter VI—Department of the Navy

SUBCHAPTER B—NAVIGATION

PART 706—NAVIGATIONAL LIGHT WAIVERS

Certain Aircraft Carriers

Sections 143a and 360 of Title 33, U.S.C., provide that the requirements of the regulations for Preventing Collisions at Sea, 1948, the Inland Rules, the Great Lakes Rules and the Western River Rules as to number, position, range of visibility, or arc of visibility of lights required to be displayed by vessels shall not apply to any vessel of the Navy when the Secretary of the Navy shall find or certify that, by reason of special construction, it is not possible for such vessel or class of vessels to comply with the statutory provisions as to navigation lights.

The Secretary of the Navy has previously found and certified that aircraft carriers of the CVA class are naval vessels of special construction and that it is not possible to comply with the requirements of the statutes enumerated in sections 143a and 360 of Title 33, U.S.C., with respect to the placement of their masthead light and range light over the keel. It was found necessary and feasible to locate the said lights on these vessels at a maximum distance of 89 feet to starboard of the keel line. This waiver appears in note 3a of § 706.2 of Title 32, CFR.

A recent study indicates that military design characteristics of new aircraft carriers of the CVA class preclude installation of the masthead and range lights in conformance with the currently existing waiver in note 3a and with rule 2(a) (iii) of the regulations for Preventing Collisions at Sea (33 U.S.C. 145(a)).

I hereby find that on these vessels of special construction, it is not possible to comply with the requirements relating to the positioning of masthead and range lights. I further find that it is feasible to locate these lights at a maximum distance of 94 feet to starboard of the keel line on these vessels. I certify that such location constitutes compliance as closely as feasible with the applicable statutes.

Therefore I, Paul H. Nitze, Secretary of the Navy, direct that note 3a of § 706.2 of Title 32 of the Code of Federal Regulations be revised to read as follows (leaving the introductory paragraph of said note 3 unchanged):

a. The two 20-point white lights (masthead light and range light) are located at a maximum distance of 94 feet to the left of the keel line when viewed from ahead. (This distance is measured perpendicularly from the keel line to the two white lights.)

I specify that the foregoing amendment shall become effective on the date of publication of this document in the Federal Register.

(Sec. 1, 59 Stat. 590, sec. 2, 65 Stat. 407; 33 U.S.C. 143a, 360)

Dated at Washington, D.C., this 4th day of June 1964.

[SEAL] PAUL H. NITZE,
Secretary of the Navy.

[F.R. Doc. 64-5827; Filed, June 11, 1964; 8:48 a.m.]

ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of ships' stores and supplies certificated from June 1 to June 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

The Dow Chemical Co., Midland, Mich., 48640, Certificate No. 517, dated June 10, 1964, DOWCLENE EC.

Olsen Chemical Co., 62–64 East 26th Street, Paterson, N.J., Certificate No. 596, dated June 18, 1964, OLCO F.O.T.-B.

Certificate No. 597, dated June 18, 1964, OLCO F.O.T.-M.

Certificate No. 598, dated June 18, 1964, OLCO DEGREASER AND EMULSIFYING CLEANSER (or OLCO SPECIAL DEGREASER).

AFFIDAVITS

The following affidavits were accepted during the period from May 15, 1964, to June 15, 1964:

Marotta Valve Corp., Boonton Avenue, Boonton, N.J., 07005, VALVES AND FITTINGS.

Clayton Mark & Co., 1900 Dempster Street, Evanston, Ill., VALVES AND FITTINGS.

Wolverine Tube Division, 17200 Southfield Road, Allen Park, Mich., PIPE AND TUBING.

American Car & Foundry Division, ACF Industries, Inc., 750 Third Avenue, New York 17, N.Y., VALVES.

Industrial Instrument Corp., 8400 Research Road, Austin, Tex., 78764, VALVES AND FITTINGS.

MERCHANT MARINE SAFETY PUBLICATIONS

The following publications that are directly applicable to the Merchant Marine are available and may be obtained upon request from the nearest Marine Inspection Office of the United States Coast Guard. The date of each publication is indicated in 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, 6–5–64.
123	Rules and Regulations for Tank Vessels (4–1–64). F.R. 5–16–64, 6–5–64.
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, 11–22–62, 11–24–62, 12–29–62, 1–4–63, 1–8–63, 2–7–63, 2–27–63, 3–20–63, 4–24–63, 6–11–63, 6–15–63, 6–22–63, 6–28–63, 8–10–63, 10–16–63, 11–23–63, 12–3–63, 2–5–64, 2–11–64, 3–12–64, 3–21–64, 3–27–64, 4–29–64, 5–6–64, 5–19–64, 5–26–64.
191	Rules and Regulations for Licensing and Certificating of Merchant Marine Personnel (7–1–63). F.R. 9–18–63, 12–13–63, 6–5–64.
200	Marine Investigation Regulations and Suspension and Revocation Proceedings (10–1–63).
220	Specimen Examination Questions for Licenses as Master, Mate, and Pilot of Central Western Rivers Vessels (4–1–57).
227	Laws Governing Marine Inspection (6–1–62).
239	Security of Vessels and Waterfront Facilities (8–1–61). F.R. 11–3–61, 12–12–61, 8–8–62, 8–31–62, 11–15–62, 1–30–63, 3–27–63, 5–29–63, 6–4–63, 10–9–63, 1–30–64, 4–17–64, 6–9–64.
249	Merchant Marine Council Public Hearing Agenda (Annually).
256	Rules and Regulations for Passenger Vessels (1–2–62). F.R. 5–2–62, 9–11–62, 12–28–62, 4–4–63, 5–30–63, 8–20–63, 9–6–63, 10–26–63, 6–5–64.
257	Rules and Regulations for Cargo and Miscellaneous Vessels (11–1–62). F.R. 2–1–63, 2–6–63, 3–13–63, 4–4–63, 5–30–63, 8–20–63, 9–6–63, 10–2–63, 10–26–63, 6–5–64.
258	Rules and Regulations for Uninspected Vessels (1–2–64), F.R. 6–5–64, 6–6–64.
259	Electrical Engineering Regulations (12–1–60). F.R. 9–23–61, 9–30–61, 5–2–62, 9–11–62, 8–20–63, 9–6–63, 6–5–64.
266	Rules and Regulations for Bulk Grain Cargoes (5–1–62). F.R. 9–11–62, 12–24–63.
268	Rules and Regulations for Manning of Vessels (2–1–63).
269	Rules and Regulations for Nautical Schools (5–1–63). F.R. 10–2–63, 6–5–64.
270	Rules and Regulations for Marine Engineering Installations Contracted for Prior to July 1, 1935 (11–19–52). F.R. 12–5–53, 12–28–55, 6–20–59, 3–17–60.
293	Miscellaneous Electrical Equipment List (6–1–62).
320	Rules and Regulations for Artificial Islands and Fixed Structures on the Outer Continental Shelf (10–1–59). F.R. 10–25–60, 11–3–61, 4–10–62, 4–24–63.
323	Rules and Regulations for Small Passenger Vessels (Under 100 Gross Tons) (2–3–64) F.R. 6–5–64.
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 JUNE 1964

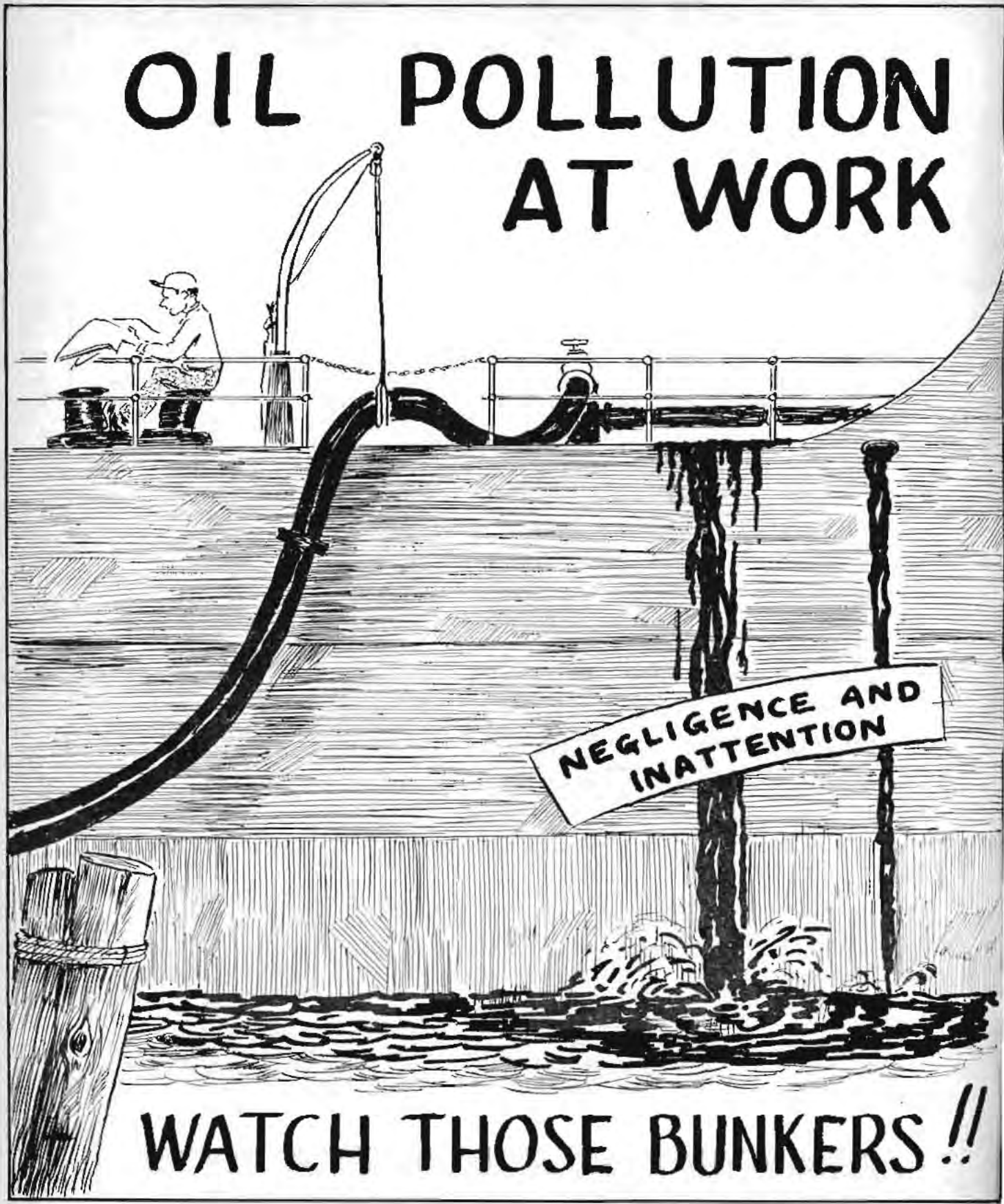
The following have been modified by Federal Registers:

CG–115, CG–123, CG–191, CG–256, CG–257, CG–258, CG–259, CG–269, and CG–323, Federal Register, June 5, 1964, Part II.

CG–258, Federal Register, June 6, 1964.

CG–239, Federal Register, June 9, 1964.

U. S. GOVERNMENT PRINTING OFFICE: 1964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