

PROCEEDINGS

OF THE MERCHANT MARINE COUNCIL



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PROCEEDINGS

OF THE

MERCHANT MARINE COUNCIL

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RESCUERS—Kjell Pettersen, general chairman of the Sons of Norway, presents a "Certificate of Meritorious Service" to Lt. Comdr. Walter E. "Mike" Mason, Jr., USCG, of Coast Guard Air Station, Brooklyn, N.Y., as Congressman James R. Grover, Jr. (left), and Aviation Machinist Mate Second Class Eugene G. Brauer, USCG (second from right), and Nassau County executive, Eugene H. Nickerson (right), look on. LCDR Mason was the aircraft commander, and Brauer, the hoist operator, of the Coast Guard helicopter, which rescued the greatest number of survivors, seven, in the Thanksgiving Day collision between the Israel luxury liner, *SS Shalom*, and the Norwegian tanker *MV Stolt Dagali*, 46 miles southeast of New York in the Atlantic Ocean. The helicopter also recovered one body.

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

IN THIS ISSUE . . .

A brief backward glance at the event-filled life of ex-*SS America* is found on page 27.

OCEAN STORMS come in for some much-needed discussion by a noted meteorological consultant beginning page 28.

An informative preview of the activities of the INTERNATIONAL ICE PATROL for 1965 begins page 30.

Brief accounts of the items of revision to be proposed before the Annual PUBLIC HEARING begin 32.

The series of articles comparing the 1960 with the 1948 RULES OF THE ROAD is continued, beginning page 38.

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FRONT COVER

A pilot boards the *SS America* to see her away on her next-to-last voyage under American flag. A Jeff Blinns photo, courtesy Moran Towing Co.

BACK COVER

A scene that will become so familiar to the Coastguardmen who will man the International Ice Patrol cutters beginning late winter.

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SS America passing lower Manhattan outbound for Europe

SS AMERICA American No More

THE AMERICA IS AMERICAN NO MORE. She has been sold.

After almost a quarter century of active and event-filled service under the American flag, the second largest passenger vessel in the Nation's fleet has been sold by United States Lines to Greek shipping interests.

Built in 1940, at Newport News Shipbuilding & Dry Dock Co., the *America* had enjoyed an outstanding career in both peace and war.

The Greek purchasers are expected to operate the vessel principally from Southampton in a round-the-world service via Greece, Australia, and New Zealand.

The sale of the SS *America* brings to a close one of the most outstanding war and peacetime careers of any commercial ship in the American merchant marine.

WAR SERVICE

The 34,000-gross-ton *America* was designed specifically for North Atlan-

tic service, but she made her debut at a time when World War II was raging in Europe and the Nation's neutrality law forbade operation of an American ship in the war zone.

The *America* began her service cruising to the Caribbean and making a run or two to California. But her cruising operations were soon cut short. On July 15, 1941, she was taken over by the Navy, stripped of all her finery, given a coat of battle gray and renamed the USS *West Point*.

From that time on, the *America* carved a niche in the Nation's wartime history that is unmatched by any other American commercial vessel and unsurpassed by any foreign-flag liner.

The *America* served on every ocean. Off Singapore, after delivering 5,538 Canadian and British troops early in the war, she was caught in the first Japanese air attack on that base, but escaped with no more than a shrapnel shower from a near-miss.

Off Rio de Janeiro, she eluded German torpedoes with her 24-knot speed. In Milne Bay, New Guinea, she fought off Japanese planes with her deck guns.

In the Red Sea and again at Suez she was attacked by German torpedo planes, but her high maneuverability easily took her out of the way.

The *America's* wartime assignments sound like a geography lesson—Noumea, Bombay, Marseilles, Capetown, Guadalcanal, Melbourne, Adelaide, and scores of other farflung ports.

During her wartime enlistment the *America* carried 450,000 troops and other personnel and covered more than a half-million nautical miles. Despite a normal peacetime capacity of 1,050, she was able to carry 8,000 troops in one lift.

Not once did her engines falter, despite the fact that she could not be spared long enough for a complete overhaul in a shipyard all during the war.

PEACETIME SERVICE

The *America* resumed her peacetime career with her maiden commercial voyage to Europe on November 14, 1946. Since then she has made 286 transatlantic voyages, steamed some 2,278,294 nautical miles, and carried 475,787 passengers.

Including her brief prewar and her war service, the *America* has carried some 935,000 passengers and troops and logged more than 2,800,000 nautical miles.

Until July 3, 1952, she was the prestige ship of the American merchant marine and the Nation's largest passenger liner. On that date, the company's 52,000-ton superliner *United States* began her maiden voyage to Europe and proceeded to smash all commercial Atlantic speed records with a round-trip average of 35 knots—from Ambrose Lightship off New York to Bishop Rock, England, and return over the same course.

The *America* then became, and still was at her sale, the second largest passenger ship in the Nation's fleet. ‡



OCEAN STORMS:

Why Where When

by Louis Allen

IN THE COURSE of 1 year in each ocean, there will occur up to about 150 low-pressure systems, of which between 30 to 60 will develop into storm intensity (not including tropical storms). And each storm packs the energy up to one-half million atom bombs every 24 hours it exists. The results are legion . . . vessels and cargo are damaged . . . crews are injured . . . lives are lost . . . schedules are disrupted, resulting in costly delays . . . fuel consumption increases.

TAKING A SIGHT

A storm is a safety valve. It helps keep the atmosphere from becoming overloaded with energy from the sun. If the atmosphere did not erupt into storms, we would ultimately boil, broil, fry, stew, or bake. Storms release enormous quantities of energy back into space. However, the amount of energy emitted by the sun is not constant. This is one reason why storminess differs from year to year. When solar energy significantly exceeds the average, ocean storms are more numerous and follow a lower latitude path. In seasons of lesser solar energy, storms generally follow a more northerly track.

And so the struggle to achieve a balance of energy in the atmosphere goes on. But while we are caught in this struggle, it does not mean we need

to consider it only as an "act of God"—we can do something about it, such as setting courses around or away from storms.

RUNNING UP A LINE OF POSITION

Over the years we have learned that storms have favorite breeding places—Cape Hatteras, Cape Nojimi, others. Why?

Through countless observations, analyses, research, postulating theories, testing theories, more observations, retesting modified theories—there are several characteristics of the atmosphere which occur consistently in the development of ocean storms. We call these characteristics: (1) troughs, (2) vorticity, and (3) solenoids.

1. Troughs are like ravines or gullies in the atmosphere. Because troughs have three dimensions, they cannot always be observed on a surface weather map. However, they often show clearly at altitudes from about 5,000 feet up to 50,000 feet . . . sometimes even higher! These troughs are weaknesses in atmospheric pressure. They are identified by higher pressure existing to the east and west of the troughs.

Unlike valleys or ravines, troughs move. They also change in size and intensity.

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Low-pressure systems often will originate at the earth's surface under these troughs. Then, as troughs move and intensify, so do the accompanying surface low-pressure systems. A weak, innocuous low can become a raging storm in 1 day and move at a fantastic speed of 50 knots! Usually, however, they develop and move more slowly. Troughs are a kind of highway in the atmosphere for storm movement once storms develop.

2. Vorticity is an index of kinetic (not solar) energy—the greater the vorticity, the greater the available energy for storm development. Vorticity, like troughs, can also best be observed from upper air data.

When air moves, it *normally* appears to curve slightly to its right (left in the Southern Hemisphere). But, when the air curves to the left as it moves, hydrodynamic or kinetic energy is required to make it do so. The faster the flow of air and the sharper it curves to its left, the greater is the energy present. This is vorticity. Like a fingerprint, vorticity reveals the presence of a package of kinetic energy looking for a place to start a storm.

3. Solenoids are a measure of available thermodynamic energy in the atmosphere. This, of course, is related to air temperature and moisture.

When cold, dry air moves over a warm, moist surface, the air can absorb the maximum amount of heat (both air temperature and the latent heat contained in the moisture) in the minimum amount of time. Under these conditions the solenoid, or the heat exchange, has its maximum value. Naturally, this occurs where warm ocean currents from the tropics . . . such as the Gulf Stream . . . flow northward close to large land areas before curving farther out to sea.

ESTABLISHING A FIX

When an active trough, a vorticity maximum, and a solenoid maximum



VORTICITY: A BUNDLE OF ENERGY

all occur in the same geographic area at the same time, it's time to get out of the way (or, it may be too late). Because these maximum conditions occur more often at Hatteras and Nojimi than at other geographic locations, we can see why these areas are famous for storms. Comparable counterparts exist in the Southern Hemisphere.

But maximum conditions are not always necessary to begin storm development. Storms will develop wherever active troughs, vorticity, and solenoids occur. This can be anywhere in the world.

CHECKING THE FIX

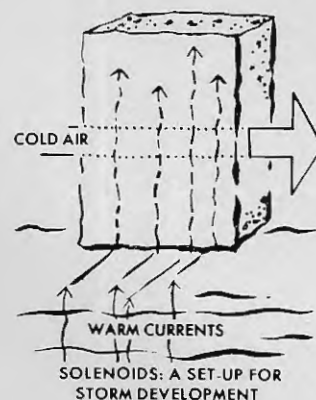
But storms do not develop every day at Hatteras, and there are more days when they do not develop than when they do develop. Why? The chances for an active trough, vorticity, and a solenoid to occur simultaneously at Hatteras are about once every 5-10 days. If the weather features are weak, the resultant surface low pressure system will also be weak. Storm development then is not likely (although it can happen).

Under appropriate conditions, storms can develop anywhere in 24

THE AUTHOR: Prior to establishing his own consulting firm in Washington, D.C., in 1954, Louis Allen was Chief Meteorologist in the Research Division of the Navy Hydrographic Office and Head of the Program Branch in the Division of Oceanography.

hours. At other times, it may require 2-4 days before a weak low reaches storm proportions. Further, while the normal direction and speed of a developing storm is northeastward 20-25 knots, storms can move north, east, south, and sometimes westward. Storms will be weak, moderate, strong, severe. They move slowly, rapidly, almost stop in their tracks, weaken suddenly and even more suddenly accelerate. They are constantly on the prowl and are always worth giving them their full measure of watchfulness. Average storms (whatever they may be) seldom occur, and average precautions seldom pay off.

For almost three seasons of the year, troughs, vorticity, and solenoids are at their maximum activity. The resultant storms are vicious. During the summer these three features are still present, but they are not as well developed. Although summer storms



SOLENOIDS: A SET-UP FOR STORM DEVELOPMENT

(excluding hurricanes and typhoons) will be fewer in number and less apt to be damaging, they yet will cause vessels to lose time in transit. For three seasons storms can cause trans-ocean passages to be up to 10-15 days longer than usual, while in the summer, delays up to 5 days can occur.

SETTING A COURSE

It is one problem to gather all the up-to-date data and information about troughs, vorticities, and solenoids, but it is quite another problem to determine what they are apt to do—whether they will intensify, decrease, speed up or slow down, and when and where they will converge at the same location at the same time.

Prediction is the key to better passages.

The geographic locations of predominate troughs and the range of their intensities often can be predicted up to 30 days in advance.

Predominate troughs sometimes warp, change their shape and intensity, and oscillate to the east or to the west of their primary positions. Also, as one trough begins to weaken, a second trough begins to develop in another location.

Predicting vorticity is difficult. This can be done for only about 3-5 days in advance.

Predicting primary solenoid areas is not too difficult for a period up to 30 days. Solenoids move but little. More often, they change their character from weak to moderate to strong, and back to moderate or weak. Like troughs and vorticity, a number of these solenoids occur simultaneously in various parts of the world.

Storm propagation is an intricate and complex problem—one that now and for the foreseeable future will command the attention and study of meteorologist and sailor alike. ‡



Ice reconnaissance flight lookout

THE U.S. COAST GUARD will commence International Ice Patrol services to shipping for the 1965 ice season in late February or early March, depending upon ice conditions.

The primary objective of International Ice Patrol is to provide timely information and warning to shipping of the extent of the southeastern, southern, and southwestern limits of the regions of icebergs and sea ice in the vicinity of the Grand Banks.

To accomplish this objective, International Ice Patrol maintains facilities during the ice season at Argentina, Newfoundland, for—

a. Collection of ice, weather, and sea temperature reports from shipping and aircraft traversing the Grand Banks area.

b. Operation of aircraft from Argentina for ice reconnaissance.

c. Operation of an oceanographic vessel for the collection of oceanographic and meteorological data.

d. Operation of surface patrol craft when required.

e. Evaluation and analysis of all data collected, including pertinent ice reports from all sources.

f. Forecasting ice conditions based on latest observed conditions and meteorological and oceanographic factors.

g. Dissemination of observed and forecast ice conditions by means of U.S. Coast Guard Radio Argentina (NIK) and by further dissemination via Naval Radio, Washington (NSS) and Radio Halifax (CFH).

SHIPPING REPORTS

Each ice broadcast by NIK will contain a request for all ships to report any ice sighted, and when in the area between latitudes 40° N. and 50° N. and longitudes 42° W. and 60° W. to report every 4 hours ship's position, course, speed, visibility, sea temperature, and weather conditions. *These reports by shipping are of the utmost importance.* During periods of low visibility or low ceilings when aerial ice observation is rendered ineffective, *ice reports* by shipping are invaluable in aiding Ice Patrol to relocate drifting ice and to keep the position of that ice, as reported in the ice broadcasts, up to date. *Visibility reports* are of considerable value in planning ice observation flights. Visibility reports are also useful in determining when special warnings on ice conditions should be broadcast. *Sea temperatures* reported to the Ice Patrol are used to construct isotherm charts employed in estimating ice deterioration and in detecting shifts in the branches of the Labrador Current. *Wind data* are useful in estimating

set and drift of ice, and in forecasting weather for the purpose of planning ice observation flights.

DESIRED ICE INFORMATION

In reporting ice to NIK, it is important that certain information be furnished in order that the report be evaluated correctly, especially from the standpoint of ruling out occasional erroneous reports and obviating unnecessary searches and warnings to shipping. The information desired is: (1) the type of ice sighted, i.e., berg, growler, or sea ice (NOTE: If a radar target is reported which is believed to be ice but is not actually sighted visually, it should be reported as a radar target, NOT as berg, growler or sea ice); (2) the position of the ice (not the position of the reporting ship); (3) description of ice, size, and shape; (4) the sea temperature at point of closest approach to the ice; and (5) weather and visibility conditions.

In view of the heavy reliance placed by Commander, International Ice Patrol, on reports of ice, visibility, sea temperature, and weather from shipping, all shipmasters are strongly urged to make these reports. It is realized that ships with but one radio operator may find it impracticable to report every 4 hours as requested. It is therefore suggested that these ships prepare 4-hourly reports but delay transmitting them until the radio operator comes on watch. A late report is much better than no report.

Cutter *Acushnet* with berg close aboard



ICE PATROL Takes to Sea Again in Late Winter

TWICE-DAILY ICE BROADCASTS

Ice broadcasts will be made twice daily, at 0048 and 1248 GMT, by U.S. Coast Guard Radio Argentina (NIK) on 155, 5320, 8502, and 12880.5 Kc/s. Each broadcast will be preceded by the general call CQ on 500 Kc/s with instructions to shift to receive on 155, 5320, 8502, or 12880.5 Kc/s. After shifting to these frequencies, NIK will transmit test signal and the International Ice Patrol radio call sign NIK for about 2 minutes to facilitate tuning. The ice broadcast will follow immediately at 15 words per minute and then be repeated at 25 words per minute. Prescribed radio silent periods will be observed.

SPECIAL BROADCASTS

When deemed advisable, special ice broadcasts may be made in addition to those regularly scheduled. Such special ice broadcasts will be preceded by the International safety signal TTT.

FACSIMILE BROADCASTS

Ice conditions will be transmitted daily by facsimile at 1330 GMT on 5320, 8502, and 12880.5 Kc/s at a drum speed of 60 RPM. All ships receiving these transmissions are requested to mail the facsimile chart copies, with notations of date received and ship's position, to the Commander, International Ice Patrol, Box 49, FPO, New York, 09597, for evaluation of effectiveness.

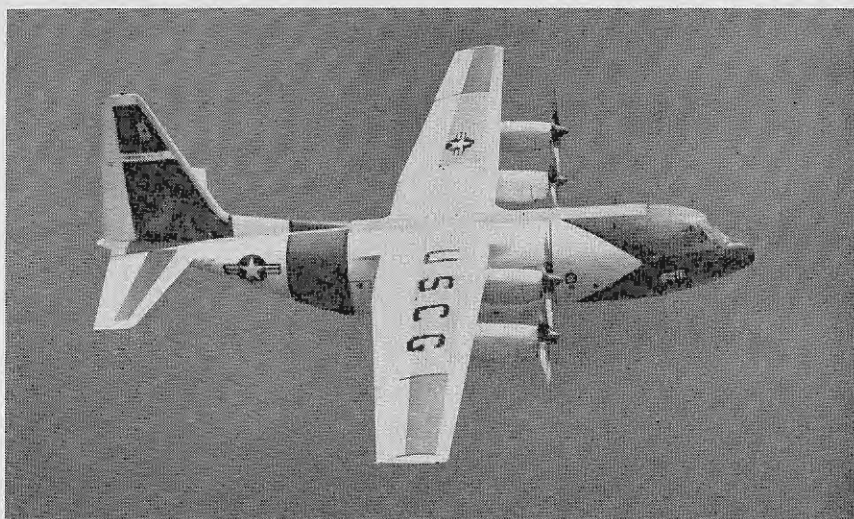
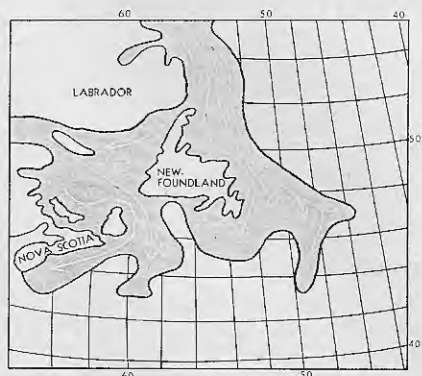
NIK-SHIP COMMUNICATIONS

Duplex operation will be used between NIK and merchant ships for general radio communications such as requests for special information, reports made by merchant ships of ice sighted, sea temperatures, visibility, and weather conditions.

CALLING-WORKING FREQUENCIES

Merchant ships may call NIK on 500 Kc/s and 8 Mc/s maritime calling

The extreme distribution of field ice south of Newfoundland



New C-130's team with cutters

band at any time; also on 12 Mc/s band during daylight hours and 6 Mc/s band during nighttime hours. Ships work 425, 448, 454, 468, or 480 Kc/s, or their assigned HF working frequency. NIK will work 427 Kc/s, 8734 Kc/s, 6477.5 Kc/s, or 12718.5 Kc/s. The surface patrol vessel, radio call sign NIDK, when on station, will relay between NIK and ships when necessary. There is no charge for these services.

BROADCASTS BY OTHER STATIONS

Throughout the ice season, U.S. Navy Radio Washington (NSS) and Halifax (CFH) will broadcast twice-daily ice reports as furnished by Commander, International Ice Patrol, at 0430 and 1630 GMT, and 0130 and 1330 GMT, respectively.

See *Notice to Mariners* for the exact date when the ice broadcasts and operations of the International Ice Patrol will commence.

Until the inauguration of International Ice Patrol services, all reports of ice sightings should be addressed to the U.S. Naval Oceanographic Office, Washington, D.C., and thereafter to Commander, International Ice Patrol (NIK).

Aerial ice reconnaissance and dissemination of ice information is also performed for shipping by the Canadian Department of Transport. Ships may obtain ice information about this area by contacting Ice Information Officer, North Sidney Radio (VCO). This organization, during the period from mid-December 1964 to 30 June 1965, will operate mainly in the Gulf of St. Lawrence and approaches, and the coastal waters of Newfoundland and Labrador to the entrance of Hudson Strait. Details of

these services are available in the publication "Guidance to Merchant Ships Navigating in the Gulf of St. Lawrence in Winter," published annually by the Marine Operations Branch, Department of Transport, Canada.

MERCHANT VESSEL POSITION REPORTS

In accordance with the provisions of the Atlantic Merchant Vessel Reporting Program (AMVER), U.S. Coast Guard Radio Argentina (NIK or NJN) will accept Merchant Vessel Position Reports for relay to U.S. Coast Guard, New York. These reports should be separate from the ice and sea temperature reports addressed to Commander, International Ice Patrol.

SEARCH AND RESCUE

International Ice Patrol has a search-and-rescue responsibility, and assigned aircraft and vessels will render assistance to persons and property within the limits of operation when required.

WARNING

Carefully conducted tests by International Ice Patrol in the past have proven that radar cannot provide positive assurance for iceberg detection. Sea water is a better reflector than ice. This means that unless a berg or growler is observed on radar outside the area of sea "return" or "clutter" on the scope, it will not be detected by the radar. Furthermore, the average maximum range of radar detection of a dangerous size growler is 4 miles. Radar is a valuable aid, but its use cannot replace the traditional caution exercised in a passage across the Grand Banks during the ice season.

Public Hearing Set for March 22

THE MERCHANT MARINE COUNCIL will hold a hearing on Monday, March 22, 1965, commencing at 9:30 a.m. in the Departmental Auditorium, between 12th and 14th Streets on Constitution Avenue NW., Washington, D.C., for the purpose of receiving comments, views, and data on the proposed changes in the navigation and vessel inspection rules and regulations.

These proposals are set forth in Items I to X, inclusive, of the Merchant Marine Council Public Hearing Agenda (CG-249), dated March 22, 1965. The Agenda contains the specific changes being proposed to the navigation and vessel inspection regulations. For certain items the present and proposed regulations are set forth in comparison form, together with reasons for the changes.

These proposals are set forth officially in the Federal Register which contains general descriptions of the proposed changes in the regulations together with appropriate references to statutes authorizing such requirements governing:

- (a) Rules of the Road for the Inland Waters and Western Rivers;
- (b) Navigation and vessel inspection; and

(c) Implementation of the 1960 Safety of Life at Sea Convention.

The complete text of the proposed changes and additions to the regulations is set forth in the Merchant Marine Council Public Hearing Agenda (CG-249). Copies of this Agenda have been mailed to persons and organizations who have expressed a continued interest in the subjects under consideration and have requested that copies be furnished them. Copies of the Agenda will be furnished, upon request to the Commandant (CMC), U.S. Coast Guard, Washington, D.C., 20226, so long as they are available. After the supply of extra copies is exhausted, copies will be available, for reading purposes only, in room 4211, Coast Guard Headquarters, or at the offices of the various Coast Guard district commanders.

Comments on the proposed regulations are invited. Written comments containing constructive criticism, suggestions, or views are welcomed. However, acknowledgment of the comments received or reasons why the suggested changes were or were not adopted cannot be furnished, since personnel are not available to handle the necessary correspondence involved. Each oral or written com-

ment is considered and evaluated. If it is believed the comment, view, or suggestion clarifies or improves a proposed regulation or amendment, such proposal is changed accordingly and, after adoption by the Commandant, the regulation as revised is published in the Federal Register.

Each person or organization who desires to submit comments, data, or views in connection with the proposed regulations set forth in the Merchant Marine Council Agenda should submit them in triplicate so that they will be received by the Commandant (CMC), U.S. Coast Guard Headquarters, Washington, D.C., 20226, prior to March 19, 1965. Comments, data, or views may be presented orally or in writing at the public hearing before the Merchant Marine Council on March 22, 1965. In order to insure consideration of written comments and to facilitate checking and recording, it is essential that each comment regarding a section or paragraph of the proposed regulations be submitted on form CG-3287, showing the section number (if any), the subject, the proposed change, the reason or basis, and the name, business firm or organization (if any), and address of the submitter. A small quantity of form CG-3287 is attached to the Agenda. Additional copies may be reproduced by typewriter or otherwise.

Each item in the Agenda has been given a general title, intended to encompass the specific proposals presented. It is urged that each item be read completely because the application of proposals to specific employment or types of vessels may be found in more than one item.

On the following pages the *Proceedings* presents only the most succinct synopses of the proposed items of revision approved to press time for proposal at the hearing. The Agenda must be consulted for full particulars.

SYNOPSIS OF 1965 PUBLIC HEARING ITEMS

ITEM I—RULES OF THE ROAD

1a—LIGHTS FOR BARGES TOWED AHEAD OR ALONGSIDE

Amending of navigational lighting rules 33 CFR 80.16a (b) and 95.29(a) is proposed to specify lighting requirements for towing situations where barges are being both pushed ahead and towed alongside simultaneously.

1b—LIGHTS FOR COAST AND GEODETIC SURVEY VESSELS

Amending of special signal rule 33 CFR 80.33(d) is proposed to establish a minimum separation of shapes and lights for a Coast and Geodetic Survey vessel at anchor in a fairway on surveying operations.

1c—TEMPORARY LOWERING OF NAVIGATIONAL LIGHTS BY VESSELS WHEN OPERATING UNDER BRIDGES

Regulations designated 33 CFR 80.40 and 95.75 are proposed to be added to Inland Waters and Western Rivers Rules to authorize the temporary lowering of navigational lights as necessary to allow clear passage under bridges.

1d—BOUNDARY LINES OF INLAND WATERS AT ENTRANCE TO GRAYS HARBOR, WASH.

A regulation designated 33 CFR 82.122 is proposed to specifically define the line of demarcation between the "Inland" and "International" waters when applying the "Rules of the Road" in the vicinity of Grays Harbor, Wash.

ITEM II—MERCHANT MARINE OFFICERS AND MOTORBOAT OPERATORS

IIa—PHYSICAL EXAMINATIONS FOR ORIGINAL LICENSES

Amending of special provisions section permitting an applicant who does not meet the prescribed physical standards to make an appeal to the Commandant, 46 CFR 10.02-5(e) (7), 10.20-7(a) (4), and 187.10-15(d), is proposed in order to clarify the scope of disability, the use of the examining physician, and the responsibility of the Officer in Charge, Marine Inspection.

ITEM III—UNINSPECTED VESSELS

IIIa—FIRE EXTINGUISHERS AND DEFINITION OF "OPEN CONSTRUCTION"

Amending of 46 CFR 25.30-20(a) is proposed to clearly define the term "open construction" as it relates to motor boats.

ITEM IV—INSPECTED VESSELS

IVa—VENT SYSTEMS FOR GRADES D AND E LIQUID CARGO TANKS ON TANK VESSELS

Amending of 46 CFR 32.55-20(d) and 32.55-25(e) is proposed to clarify the intent of existing regulations and to establish uniform requirements for venting systems on Grades D and E liquid cargo tanks of all tank ships and tank barges. By this proposal, closed vent header systems will be accepted for Grades D and E cargo tanks.

IVb—DECKING WITHIN SURGICAL OPERATING ROOMS ON PASSENGER VESSELS

Amending of 46 CFR 72.05-10(p) is proposed to reflect an editorial change in title of the National Fire Protection Association's reference standard (NFPA-56) to "Code for Flammable Anesthetics."

IVc—AUTOMATIC SPRINKLER PUMPS; SOURCE OF ELECTRICAL POWER SUPPLY; ON PASSENGER VESSELS (1960 SOLAS)

Amending of 46 CFR 76.25-35(c) is proposed to require at least two sources of power for sprinkler pumps, air compressors, and alarms.

IVd—LIMITATIONS ON THE USE OF FIREHOSES ON CARGO VESSELS

A new regulation designated 46 CFR 95.10-10(j) is proposed to insure that firehoses are not abused by usage for which they were not intended, thus jeopardizing their effectiveness in event of an emergency.

IVe—FEEDERS REQUIRED IN LOADING AND STOWAGE OF GRAIN CARGOES (1960 SOLAS)

An amending of 46 CFR 144.20-20(a) is proposed to change the quantity of grain each feeder shall contain. This brings the regulation in agreement with the 1960 Safety of Life at Sea Convention (SOLAS).

ITEM V—LIFESAVING APPLIANCES AND FIRE PRECAUTIONS

Va—EQUIPMENT FOR INFLATABLE LIFERAFTS

An amending of 46 CFR 33.15-16(a), 75.20-20(b), and 94.20-20(b) is proposed to clarify the requirements for inflatable liferafts equipped for limited service.

Vb—STEAM SMOTHERING IN BOILER CASINGS

A new regulation designated 46 CFR 34.13-1(c), 76.13-1(c), 95.13-1(c), and 167.45-1(a) (9) is proposed to permit the introduction of steam into boiler casings and other confined spaces.

ITEM VI—MARINE ENGINEERING

VIa—DEFINITION OF TERMS IN FORMULA FOR CALCULATING OPENING REINFORCEMENT IN PRESSURE VESSELS

Amending of 46 CFR 52.25-20(c) is proposed to clarify the intent of the present regulations by providing a better definition for the term "F" in the formula for calculating the required area of reinforcement for openings in shells and dished heads.

VIb—PIPE EXPANSION AND FLEXIBILITY

Amending of 46 CFR 55.07-6(b) is proposed to clarify the intent of the present regulation relative to the interpretation of the term "slip joint."

VIc—FUEL OIL RELIEF VALVE DISCHARGE

Amending of 46 CFR 55.10-40(c) is proposed to eliminate the use of small slop tanks with their attendant danger of overflow to the bilge.

VId—PNEUMATIC TESTING OF UNFIRED PRESSURE VESSELS

Amending of 46 CFR 61.25-5 and 61.25-20 is proposed to allow pneumatic testing of certain unfired pressure vessels under specified conditions. A new regulation designated "46 CFR 61.25-16" is proposed to further amplify these testing procedures.

ITEM VII—ELECTRICAL ENGINEERING

VIIa—REFERENCE SPECIFICATIONS AND PUBLICATIONS

Amending of 46 CFR 110.10-1 is proposed to add references to the specifications and publications referred to in other proposed changes set forth in this item.

VIIb—INSULATION MATERIALS

A new section designated "46 CFR 111.05-15(h)" is proposed to limit porcelain use. Amendments to 46 CFR 111.05-30, 111.25-10 (a1) and (a2) are also proposed to bring electrical engineering regulations up to date with the current industry standards.

VIIc—STORAGE BATTERIES

Amending of 46 CFR 111.15-1 is proposed to: (1) make provisions for accepting types of batteries other than lead acid or alkaline, (2) to specify inclination angle at which a battery must not spill any electrolyte, (3) to establish categories depending on power output of the battery charge, and (4) to establish minimum information required to be applied on the battery nameplate.

Amending of 46 CFR 111.15-5 is proposed to redefine what is considered to be reasonably safe installations.

Adding of a new regulation designated "46 CFR 111.15-6" is proposed regarding arrangement of battery trays.

Amending of 46 CFR 111.15-10 is proposed to set forth requirements which are more specific regarding battery ventilation.

Amending of 46 CFR 111.15-15 is proposed to delete the requirement for corrosion-resistant paint.

VIII—MOTOR CONTROLLERS

Amending of 46 CFR 111.45-1(e) is proposed to bring Coast Guard regulations regarding motor circuits and controllers into agreement with similar requirements in the National Electrical Code.

VIIe—OVERCURRENT PROTECTION

Amending of 46 CFR 111.55-1(g) is proposed to include specific requirements for both AC and DC generators as to short-time and instantaneous trips.

VIIIf—ELECTRIC CABLE

A new regulation designated "46 CFR 111.60-1(h) and (i)" is proposed which will permit the use of certain cable as substitute for the AIEE type and will permit the use of special-purpose cable not available in the AIEE type.

VIIg—ATTACHMENT PLUGS AND PORTABLE CABLE

Amending of 46 CFR 111.60-30 (a) and (h) is proposed to provide a practical and safe arrangement for the distribution of power to the barge of a tow and will simplify the requirements pertaining to the control of a motor when the controller is not adjacent to the motor it controls.

VIIh—LIGHTING FIXTURES

Amending of 46 CFR 111.60-35 is proposed to remove from regulations those construction details which are now included in the Underwriters' Laboratories, Inc., Standard for Marine Type Electric Lighting Fixtures (Subject 595), so that this section will contain only those requirements considered necessary to describe conditions governing use of lighting fixtures.

VIIi—EMERGENCY LIGHTING AND POWER SYSTEMS

Amending of table 112.05-5(a) of 46 CFR 112.05-5 and 112.05-10(a) is proposed to remove any reference to the use of relay-controlled battery-operated lanterns.

VIIj—SOUND-POWERED TELEPHONES

Amending of 46 CFR 113.30-5(a) (4) is proposed to add a requirement that a means of communication between the bow lookout station and the wheelhouse shall be provided.

Amending of 46 CFR 113.30-20 is proposed to indicate the type of telephone station which may be included on a circuit which has stations required by other regulations as well as to insure that required telephone stations are not subject to unnecessary risk nor to any condition which may tend to decrease the reliability of the installation.

ITEM VIII—DANGEROUS CARGO IN BULK

VIIIa—PROPYLENE OXIDE AND ETHYLENE OXIDE

(This item withdrawn December 16, 1964, for further study)

VIIIb—PHOSPHORIC OR HYDROCHLORIC ACID IN BULK

(This item withdrawn December 16, 1964, for further study)

ITEM IX—DANGEROUS CARGOES

Various amendments to the Dangerous Cargo Regulations in 46 CFR Part 146 are necessitated by corresponding changes made in the regulations of the Interstate Commerce Commission governing land transportation of the same commodities. A provision in section 170 of Title 46,

United States Code (R.S. 4472, as amended), requires that the Coast Guard accept and adopt those definitions, descriptions, descriptive names, classifications, specifications of containers, packing, marking, labeling and certification of explosives or other dangerous articles or substances, insofar as they apply to shippers by all carriers engaged in interstate and foreign commerce by water, to the extent such requirements are or may be established from time to time by the Interstate Commerce Commission.

IXa—GENERAL DESCRIPTION OF CHANGES

The proposed changes to the Dangerous Cargo Regulations in 46 CFR Part 146 are miscellaneous amendments to bring the regulations up to date, and include provisions for water shipment of new articles of commerce, editorial changes to existing regulations, changes in shipping requirements for certain dangerous cargoes to clarify requirements, and additional requirements for shippers of certain commodities.

IXb—DEFINITIONS

Amending of 46 CFR 146.03-19 is proposed to clarify the meaning of the phrase "With Inside Liners," to include coatings applied to the interior walls of containers.

IXc—LIST OF EXPLOSIVES AND OTHER DANGEROUS ARTICLES AND COMBUSTIBLE LIQUIDS

A new regulation, designated "46 CFR 146.04-5," is proposed to add new items to the list of explosives and other dangerous articles and combustible liquids, based on ICC Change Orders Nos. 60 and 62 and the recommendation of the Department of Labor regarding "hexachloroethane."

IXd—SHIPPER'S REQUIREMENTS

An addition to 46 CFR 146.05-5 is proposed restricting the use of metal drums to those having the opening size specified by the ICC regulations for the dangerous article concerned. At the present time there is no certification required for Class C explosives. In the interest of safety it is proposed to amend 46 CFR 146.05-11(a), regarding shipper's certification, to require certification for Class C explosives.

IXe—RAILROAD VEHICLES, HIGHWAY VEHICLES, VANS, OR PORTABLE CONTAINERS ON BOARD OCEAN VESSELS

Amending of 46 CFR 146.07-5(d) is proposed to clarify the regulations regarding the carriage of fuels in fuel tanks for refrigerating or heating equipment mounted on railroad vehicles, highway vehicles, vans, and portable containers; include provision to preclude accumulation of carbon monoxide in excess of 100 parts per million by requiring that internal combustion engines operating below deck exhaust their gases to the open air.

IXf—EXPLOSIVES

Amending of 46 CFR 146.20-23(g) is proposed to permit the stowage of ammonium nitrate or nitro carbo nitrate in proximity to permitted Class A explosives if the aggregate is considered as Class A explosives.

IXg—INFLAMMABLE LIQUIDS

Amending of 46 CFR 146.21-100, Table D—Classification: Inflammable liquids, is proposed to revise the container requirements for "flammable liquids, N.O.S.," to more clearly reflect the Interstate Commerce Commission shipping requirements, which are adopted and form a part of these regulations.

IXh—INFLAMMABLE SOLIDS AND OXIDIZING MATERIALS

Amending of 46 CFR 146.22-15(b)(1) and 146.22-100 is proposed to permit the stowage of ammonium nitrate or nitro carbo nitrate in proximity to permitted Class A explosives if the aggregate is considered as Class A explosives.

IXi—CORROSIVE LIQUIDS

Amending of 46 CFR 146.23-100, Table F—Classification: Corrosive liquids, is proposed to provide for new items and to clarify certain provisions relative to the use of tank motor vehicles for carriage of certain corrosive liquids. These changes include such commodities as caustic potash, liquid, etc.; etching acid, liquid, N.O.S.; sodium chlorite solution, etc.; and "tris(1-aziridinyl) phosphine oxide."

IXj—HAZARDOUS ARTICLES

Amending of 46 CFR 146.27-100, Table K—Classification: Hazardous articles, is proposed to add the material "hexachloroethane" and to require its packaging in ICC containers; by revising requirements for "automobiles, motorcycles, etc.," "fishmeal or fish scrap, etc.," and "naphthalene," and other editorial changes. It is proposed to permit the shipment of mechanized equipment containing 1 gallon of electrolyte without restricting it to vehicles. For fishmeal it is proposed to provide for polyethylene-lined burlap or paper bags as an authorized package. Regarding naphthalene, it is proposed to provide for metal drums as an authorized package.

IXk—MILITARY EXPLOSIVES AND HAZARDOUS MUNITIONS

Amending of 46 CFR 146.29-41(k) is proposed to add provisions which will clarify the regulations by providing that a van is not limited to a certain volume of explosives unless it is being used as a portable magazine. Where the regulations require magazines, vans may not be used for stowage purposes unless they comply with the magazine requirements. Amending of 46 CFR 146.29-100 is proposed to exclude white-phosphorous-filled grenades or projectiles from Class II-C.

ITEM X—SPECIFICATIONS AND APPROVALS OF EQUIPMENT

Xa—CORK AND BALSA WOOD LIFE PRESERVERS AND WITHDRAWAL OF APPROVALS THEREFOR

Cancellation of 46 CFR 160.003-1 to 7, inclusive, and 160.004-1 to 7, inclusive, is proposed because certain deficiencies inherent in cork life preservers, Models 32 and 36, and balsa wood life preservers, Models 42 and 46, render them no longer acceptable. This regulation will be effective on the date the 1960 SOLAS becomes effective: May 26, 1965.

Xb—BUOYANT VESTS AND CUSHIONS, AND MATERIALS THEREFOR

Extensive amending of 46 CFR 160.047, 160.048, 160.049, 160.052, 160.060, and addition of 160.015 is proposed to either: (1) set forth more detailed specifications, (2) raise requirements, (3) provide for brand approval, (4) spell out hardware changes, or (5) set requirements for new manufacturing techniques.

Xc—RING LIFE BUOYS

Amending of 46 CFR 160.009-1 is proposed to update specifications and plans for cork or balsa wood ring life buoys, to show the current standards. The proposed changes to 46 CFR 160.009-3, regarding materials, will

THE PUBLIC HEARING

In a representative democracy the public hearing is a vital and necessary mechanism. It serves to guarantee laws and regulations free of star-chamber secretiveness; it gives the public voice an official ear.

Prior to final adoption of proposed regulations, rules, or standards, it is the policy of the Coast Guard to obtain the opinions and views of those persons and organizations that may be affected. This is usually accomplished by means of a public hearing conducted by the Merchant Marine Council.

Before a public hearing may be held by the Council to consider changes in, or additions to, regulations affecting the public, an appropriate notice, together with a summarization of the Agenda, is published in the Federal Register (unless exempted under the Administrative Procedure Act).

Any person or organization may appear to be represented and, without argument or dispute, may present written or oral opinions with respect to any or all proposals contained in the Federal Register and the Merchant Marine Council Public Hearing Agenda (CG-249).

Coast Guard public hearings, like those of other regulatory agencies, are, just as the name implies: PUBLIC—open to anyone having legitimate business and wishing to be heard. They are informal and administrative in nature.

Written and oral comments containing constructive criticism, suggestions, or alternative proposals are welcomed, considered, and evaluated. If such comments are found to clarify or improve a proposed regulation, rule, or standard, the revision is included in the Council's recommendation to the Commandant. Written comments received before or during a public hearing are not usually read at the hearing, but are made a part of the record. All comments are considered by the Council while in executive session following the public hearing. After regulations, rules, or standards, as revised, are approved by the Commandant, they are published in the Federal Register as required by law.

The Merchant Marine Council Public Hearing Agenda, CG-249, presents the proposed revisions together with existing regulations in comparison form. In addition, the reasons why changes or new regulations are desired and the purpose for such regulations is given. The arrangement of material in the Agenda is presented in such a manner as to facilitate study, and submission of comments by industry, labor, Coast Guard district commanders, officers in charge, marine inspection, marine inspectors, members of the Council, and the interested public.

Copies of the Agenda were mailed in January to persons and organizations having expressed a continued interest in the subjects under consideration and having requested that copies be furnished them. Those not on the regular mailing list may make a special request to Commandant (CMC), U.S. Coast Guard, Washington, D.C., 20226. These requests will be honored until the supply is exhausted. After that, copies of the Agenda will be available for reading purposes only at the offices of the several district commanders and in room 4211, U.S. Coast Guard Headquarters, Washington, D.C.

contain new requirements based on the 1960 Safety of Life at Sea Convention, Chapter III, Regulation 21(a) (iv); will provide for additional materials, and coordinate present requirements with current industry practices. The proposed changes to 46 CFR 160.009-4 (d) and (e) revise requirements for beackets, grabline, and stitching.

Amending of 46 CFR 160.050-1 is proposed to provide for use of plastic foam covered by a Coast Guard proposed specification designated 46 CFR Specification Subpart 164.015. The proposed changes in 46 CFR 160.050-3, regarding materials, are to provide for use of the new plastic foam, to require the color to be either International orange or white; to provide for synthetic material which will resist weather degradation. The proposed changes in 46 CFR 160.050-4 revise requirements for the grabline and straps. The proposed changes in 46 CFR 160.050-5, regarding sampling, tests, and inspection; 160.050-6, regarding marking; and 160.050-7, regarding approval procedures, are changes to comply with present practices or to clarify inspection procedures.

Xd—LIFEBOATS AND THEIR EQUIPMENT, AND RESCUE BOATS

Amending of 46 CFR 160.035-1 to 160.035-11, inclusive, is proposed to: (1) permit only diesel engines, (2) prohibit manufacture of wooden lifeboats, (3) change airtank requirements to allow only buoyancy units, and (4) limit size of hand-propelled lifeboats to 100 persons.

Amending of 160.015 is proposed to require the capability of quick recovery of a lifeboat from the water by lifeboat winches.

Amending of 46 CFR 160.017 is proposed to require a 19-inch-minimum width for the steps of flexible ladders.

Amending of 46 CFR 160.033 is proposed to require the same test at the factory as is presently used in the ship-board installation test of lifeboat lowering gear. A new regulation designated 46 CFR 160.056 is proposed regarding procedure for approval of rescue boats.

Xe—INFLATABLE LIFERAFTS

Amending of 46 CFR 160.051 is proposed to: (1) provide for additional equipment specified in 1960 SOLAS, (2) limit the weight of inflatable liferafts to 400 pounds, and (3) specify minimum capacity as not less than six persons.

Amending of 46 CFR 160.051-1 to 160.051-8, inclusive, is proposed to: (1) bring the specifications up to date and

in agreement with present practices, (2) revise the provisions regarding "inflation tests," and (3) provide for davit-launched liferafts.

Xf—EQUIPMENT FOR LIFEBOATS AND LIFERAFTS

Amending of 46 CFR 160.026-1 to 160.026-6, inclusive, is proposed to include the "drinking water standards" of the U.S. Public Health Service.

Amending of 46 CFR 160.057 is proposed to require an efficient self-activating smoke signal capable of producing smoke of highly visible color for at least 15 minutes. A new requirement designated 46 CFR 160.058 is proposed setting forth the specification governing the manufacture of sea water desalting kits. A new regulation designated 46 CFR 160.061 is proposed setting forth the specifications governing the manufacture of fishing tackle kits.

Xg—FIRE PROTECTION AND PRECAUTIONS

Amending of 46 CFR 162.027 is proposed to eliminate from the specifications those portions pertaining to the self-cleaning strainer. A new regulation designated "46 CFR 162.034" is proposed containing the requirement governing the manufacture of international ship-shore connections. A new regulation designated "46 CFR 162.039" is proposed containing regulations governing the manufacture of semiportable fire extinguishers for use on merchant vessels.

Xh—VESSEL CONSTRUCTION MATERIALS

A new regulation designated 46 CFR 164.007 is proposed containing the regulation governing the manufacture of structural insulation.

Amending of 46 CFR 164.008 is proposed containing requirements governing the manufacture of bulkhead panels. The new regulation increases the space area of the test panel and brings the specifications up to date to reflect present practices.

Amending of 46 CFR 164.009 is proposed to add to the present material requirements, woven or knitted glass fabric containing no more than 2.5 percent lubricant.

*Written comments must be submitted in triplicate prior to
March 19, 1964*

Winter Weather Makes Extra Safety Precautions Necessary

The possibility of being injured accidentally is always present, but during the winter months that possibility seems to increase greatly because of ice and snow. This is true aboard ship as well as ashore, as one recent lost-time injury shows.

In this instance, there was snow on the deck of the ship and an AB was dragging a spring line from the gypsy-head toward the cargo manifold line when he ran into a raised padeye on the deck that was hidden by the snow. He struck his shin on the padeye, severely bruising the shin and rupturing a blood vessel.

While most people would not consider this a serious injury, it was painful, nevertheless, making it serious to the man involved. The fact that should impress all of us is that during the winter months, conditions are right for a great many similar painful accidents.

One thing that doesn't require 40 years of sea duty to learn is that it is not unusual for decks, catwalks, lad-

ders, railings, etc., to be wet, which, in cold weather, puts a coat of ice over much of the ship.

The other winter hazard, of course, is snow which not only is slippery, but also hides padeyes and other small obstacles on deck.

Usually, ice and snow are removed as quickly and as thoroughly as possible. There are, however, times when ice will re-form as fast as it is removed. And, if a ship is at dock during a snowstorm, it is extremely difficult to keep all areas clean.

The final result, in such instances, is that it is up to the individual to take the extra precaution necessary to avoid injury, to watch where he is walking, to use handrails, etc., for additional support and balance.

From the Marine News—Atlantic Refining





nautical queries

DECK

Q. a. What is the loaded displacement?

b. What is light displacement?

A. a. The loaded displacement is the weight of the vessel and all its contents when loaded to the marks; therefore, it is also the weight of the volume of water displaced by the underwater volume of the vessel in loaded condition.

b. Light displacement is the weight of the empty vessel, that is, the weight of the volume of water displaced by the underwater volume of the vessel in light condition.

Q. What is the purpose of annual loadline inspection?

A. A vessel having been marked as provided by the regulations, will be inspected at intervals of approximately 12 months in order to insure the maintenance in an effective condition of the fittings and appliances for the—

- a. Protection of openings,
- b. Guardrails,
- c. Freeing ports,

d. Means of access to crews' quarters, and that there have not been alterations made to the hull or superstructures which would affect the regulations determining the position of the loadlines.

Q. a. What is the color required by the Regulations for lifeboat sails?

b. What care should be given sails and other canvas aboard ship?

A. a. Indian Orange (Cable No. 70072, Standard Color Card of America).

b. Sails and other canvas should be aired in fine weather to prevent mildew and rot.

Q. a. What type of sail is required on lifeboats?

b. What type and minimum size rigging must be used for mast stays on lifeboats?

A. a. Standing lug.

b. Galvanized wire not less than $\frac{3}{16}$ inch in diameter.

Q. What precautions are prescribed by the regulations when connecting cargo hose between a ship and shore terminal, or other vessel?

A. Sufficient hose shall be used to provide for the movement of the vessel. Gaskets shall be used in every

hose joint and in couplings to pipelines; and where bolted flanged joints are used a sufficient number of bolts shall be used to secure a tight connection. Under no circumstances shall less than three bolts be used in a bolted flanged coupling. When cargo hose is supported by ship's tackle, the senior deck officer on duty shall see that sufficient tackles are used. Pans or buckets shall be placed under cargo hose connections on the vessel.

ENGINE

Q. The present top lead of the slide valve is $\frac{1}{8}$ inch, and the bottom lead $\frac{1}{4}$ inch. The lead required is $\frac{1}{4}$ inch on top and $\frac{1}{2}$ inch on the bottom. What alteration should be made to obtain the desired result? Explain your procedure and show your figures.

A. The sum of the lead increase equals $\frac{1}{8}'' + \frac{1}{4}'' = \frac{3}{8}''$

Advance eccentric sheave $\frac{3}{8}''$
 $\div 2 = \frac{3}{16}''$

Put in liner ($\frac{1}{4}'' - \frac{1}{8}''$) $\div 2 = \frac{1}{16}''$ thick.

Advance the eccentric sheave $\frac{3}{16}$ inch increases lead at both ends by $\frac{3}{16}$ inch, but by lining up for the odd $\frac{1}{16}$ inch, giving finally $\frac{1}{4}$ inch at top and $\frac{1}{2}$ inch at bottom as required.

Q. (a) A pump lifts 200 long tons of water per hour to a height of 20 feet. Find the horsepower exerted.

(b) If the pump is 70 percent efficient, determine the horsepower input to the pump.

$$A. (a) \text{ Work per minute} = \frac{200 \times 2,240 \times 20}{60} \text{ ft.-lbs.}$$

$$\text{Horsepower} = \frac{\text{Work per minute}}{33,000} = \frac{4,000 \times 2,240}{60 \times 33,000} = 4.52 \text{ H.P.} = \text{Answer}$$

$$(b) \text{ H.P. to pump} = \frac{100 \times 4.52}{70} = 6.457 = \text{Answer}$$

Q. Find the horsepower of a triple expansion engine with cylinder diameters of 24''-46''-66''; stroke 3'6''; R.P.M. 90; M.E.P. 86-24-6 lbs. per square inch disregard rod.

$$A. \frac{86 \times 3.5 \times 24 \times 24 \times 0.7854 \times 180}{33,000} = 742.74 \text{ H.P. horsepower}$$

$$\frac{24 \times 3.5 \times 46 \times 46 \times 0.7854 \times 180}{33,000} = 761.46 \text{ I.P. horsepower}$$

$$\frac{6 \times 3.5 \times 66 \times 66 \times 0.7854 \times 180}{33,000} = 391.88 \text{ L.P. horsepower}$$

$$\text{Total} = 1896.08 \text{ horsepower}$$

$$\text{Constant} = 0.014994.$$

$$\text{Answer} = 1896.08 \text{ horsepower.}$$

Q. List the auxiliary machinery, necessary for the safe operation of the vessel, which you would expect to find in the engine room of a motorship with a direct-drive, 2,500 horsepower, two-cycle engine using mechanical injection and a closed-cooling water system.

- A. 1 Scavenging air blower,
- 2 lubricating oil pumps,
- 2 lubricating oil coolers,
- 2 lubricating oil cooling water pumps,
- 2 treated cooling water pumps,
- 2 treated water coolers,
- 2 raw water pumps,
- 2 fuel oil transfer pumps,
- 2 centrifugal separators,
- 2 fuel oil service pumps (plus F.O. injection system for each cylinder),
- 2 or more air compressors with service and reserve air tanks,
- 3 interchangeable bilge ballast and fire pumps,
- 2 or more motor driven generators with attached cooling water and lubricating oil systems,
- 1 cylinder lubricator for each cylinder of the main engine,
- 1 turning engine.

1960 AND 1948 INTERNATIONAL RULES COMPARED: REVISIONS OF RULES 7 AND 8 EXPLAINED

This fourth article of a series continues the comparison of the 1948 International Rules of the Road presently in use with the revised 1960 International Rules which will become effective on 1 September 1965.

PART B—LIGHTS AND SHAPES

RULE 7

1960 INTERNATIONAL RULES

Power-driven vessels of less than 65 feet in length, vessels under oars or sails of less than 40 feet in length, and rowing boats, when underway shall not be required to carry the lights prescribed in Rules 2, 3, and 5, but if they do not carry them they shall be provided with the following lights:—

(a) Power-driven vessels of less than 65 feet in length, except as provided in sections (b) and (c), shall carry:—

(i) In the forepart of the vessel, where it can best be seen, and at a height above the gunwale of not less than 9 feet, a white light constructed and fixed as prescribed in Rule 2(a) (i) and of such a character as to be visible at a distance of at least 3 miles.

(ii) Green and red sidelights constructed and fixed as prescribed in Rule 2(a) (iv) and (v), and of such a character as to be visible at a distance of at least 1 mile, or a combined lantern showing a green light and a red light from right ahead to 22½ degrees (2 points) abaft the beam on their respective sides. Such lantern shall be carried not less than 3 feet below the white light.

Changed. 1948 Rule reads:

Power-driven vessels of less than 40 tons, vessels under oars or sails of less than 20 tons, and rowing boats, when underway shall not be required to carry the lights mentioned in Rule 2, but if they do not carry them they shall be provided with the following lights:—

(a) Power-driven vessels of less than 40 tons, except as provided in section (b), shall carry:—

(i) In the forepart of the vessel, where it can best be seen, and at a height above the gunwale of not less than 9 feet, a bright white light constructed and fixed as prescribed in Rule 2(a) (i) and of such a character as to be visible at a distance of at least 3 miles.

In the following presentation, the 1960 rule appears in standard roman type immediately followed by the superseded 1948 rule. A résumé of primary changes follows the rule presentation.

(ii) Green and red sidelights constructed and fixed as prescribed in Rule 2(a) (iv) and (v), and of such a character as to be visible at a distance of at least 1 mile, or a combined lantern showing a green light and a red light from right ahead to 2 points (22½ degrees) abaft the beam on their respective sides. Such lantern shall be carried not less than 3 feet below the white light.

(b) Power-driven vessels of less than 65 feet in length when towing or pushing another vessel shall carry:—

(i) In addition to the sidelights or the combined lantern prescribed in section (a) (ii), two white lights in a vertical line, one over the other not less than 4 feet apart. Each of these lights shall be of the same construction and character as the white light prescribed in section (a) (i) and one of them shall be carried in the same position. In a vessel with a single mast, such lights may be carried on the mast.

(ii) Either a stern light as prescribed in Rule 10, or in lieu of that light a small white light abaft the funnel or aftermast for the tow to steer by, but such light shall not be visible forward of the beam.

(New, no 1948 Counterpart)

(c) Power-driven vessels of less than 40 feet in length may carry the white light at a less height than 9 feet above the gunwale but it shall be carried not less than 3 feet above the sidelights or the combined lantern prescribed in section (a) (ii).

Changed, the counterpart 1948 Rule read:

(b) Small power-driven boats, such as are carried by seagoing vessels, may carry the white light at a less height than 9 feet above the gunwale, but it shall be carried above the sidelights or the combined lantern mentioned in subsection (a) (ii).

(d) Vessels of less than 40 feet in length, under oars or sails, except as provided in section (f), shall, if they

do not carry the sidelights, carry, where it can best be seen, a lantern showing a green light on one side and a red light on the other, of such a character as to be visible at a distance of at least 1 mile, and so fixed that the green light shall not be seen on the port side, nor the red light on the starboard side. Where it is not possible to fix this light, it shall be kept ready for immediate use and shall be exhibited in sufficient time to prevent collision and so that the green light shall not be seen on the port side nor the red light on the starboard side.

(Same as (c) 1948 Rule, except that a 40-foot-size criteria has been substituted for the former 20-ton criteria for this section)

(e) The vessels referred to in this rule when being towed shall carry the sidelights or the combined lantern prescribed in sections (a) or (d) of this rule, as appropriate, and a stern light as prescribed in Rule 10, or, except the last vessel of the tow, a small white light as prescribed in section (b) (ii). When being pushed ahead they shall carry at the forward end the sidelights or combined lantern prescribed in sections (a) or (d) of this rule, as appropriate, provided that any number of vessels referred to in this rule when pushed ahead in a group shall be lighted as one vessel under this rule unless the overall length of the group exceeds 65 feet when the provisions of Rule 5(c) shall apply.

(New, no 1948 Counterpart)

(f) Small rowing boats, whether under oars or sail, shall only be required to have ready at hand an electric torch or a lighted lantern, showing a white light, which shall be exhibited in sufficient time to prevent collision.

(Same as (d) of the 1948 Rules)

(g) The vessels and boats referred to in this rule shall not be required to carry the lights or shapes prescribed in Rules 4(a) and 11(e), and the size of their day signals may be less than is prescribed in Rules 4(c) and 11(c).

Changed, the counterpart 1948 Rule read:

(e) The vessels and boats referred to in this rule shall not be required to carry the lights or shapes prescribed in Rules 4(a) and 11(e).

PRIMARY CHANGES

1. Length, defined in Rule 1 as length overall, has replaced tonnage as the criteria under which vessels

may enjoy the relaxed provisions of this rule. As before, if vessels whose size allows them to be lighted under Rule 7 desire to carry a central range of white lights, such vessels must be in full compliance with the provisions of Rule 2 (e.g., range lights to be at least 20 feet above the hull with a minimum horizontal separation of 45 feet, etc.).

2. The rule has been revised to allow all power-driven vessels of less than 40 feet in length to carry the white light at a reduced height instead of just "small power-driven boats, such as are carried by seagoing vessels." However, the rule now establishes an absolute minimum height above the sidelights of 3 feet.

3. A section has been added which applies to power-driven vessels of less than 65 feet in length towing or pushing another vessel.

4. Additionally, a new section relates to vessels under 65 feet in length being towed or pushed ahead and is a relaxation of the requirements of Rule 5. The rule now allows anchor balls and special shapes for vessels of less than 65 feet in length unable to maneuver due to their occupations to be less than the 2-foot diameter specified for larger vessels.

RULE 8

1960 INTERNATIONAL RULES

Due to a complete change in format, section-by-section comparison is impracticable. Therefore the 1960 Rule 8 has been printed in its entirety, followed by the complete 1948 Rule 8.

(a) A power-driven pilot-vessel when engaged on pilotage duty and underway—

(i) Shall carry a white light at the masthead at a height of not less than 20 feet above the hull, visible all round the horizon at a distance of at least 3 miles and at a distance of 8 feet below it a red light similar in construction and character. If such a vessel is of less than 65 feet in length, she may carry the white light at a height of not less than 9 feet above the gunwale and the red light at a distance of 4 feet below the white light.

(ii) Shall carry the sidelights or lanterns prescribed in Rule 2(a) (iv) and (v) or Rule 7 (a) (ii) or (d), as appropriate, and the stern light prescribed in Rule 10.

(iii) Shall show one or more flareup lights at intervals not exceeding 10 minutes. An intermittent white light visible all round the horizon may be used in lieu of flareup lights.

President proclaims Regulations for Preventing Collisions at Sea ("Rules of the Road") to be effective 1 September 1965. See page 41.

(b) A sailing pilot-vessel when engaged on pilotage duty and underway—

(i) Shall carry a white light at the masthead visible all round the horizon at a distance of at least 3 miles.

(ii) Shall be provided with the side lights or lantern prescribed in Rules 5(a) or 7(d), as appropriate, and shall, on the near approach of or to other vessels, have such lights ready for use, and shall show them at short intervals to indicate the direction in which she is heading, but the green light shall not be shown on the portside nor the red light on the starboard side. She shall also carry the stern light prescribed in Rule 10.

(iii) Shall show one or more flareup lights at intervals not exceeding 10 minutes.

(c) A pilot-vessel when engaged on pilotage duty and not underway shall carry the lights and show the flares prescribed in sections (a) (i) and (iii) or (b) (i) and (iii), as appropriate, and if at anchor shall also carry the anchor lights prescribed in Rule 11.

(d) A pilot-vessel when not engaged on pilotage duty shall show the lights or shapes for a similar vessel of her length.

Changed. 1948 Rule reads:

(a) (i) Sailing pilot-vessels, when engaged on their station on pilotage duty and not at anchor, shall not show the lights prescribed for other vessels, but shall carry a white light at the masthead visible all round the horizon at a distance of at least 3 miles, and shall also exhibit a flareup light or flareup lights at short intervals, which shall never exceed 10 minutes.

(ii) On the near approach of or to other vessels they shall have their side lights lighted ready for use and shall flash or show them at short intervals, to

indicate the direction in which they are heading, but the green light shall not be shown on the portside, nor the red light on the starboard side.

(iii) A sailing pilot-vessel of such a class as to be obliged to go alongside of a vessel to put a pilot on board may show the white light instead of carrying it at the masthead and may, instead of the side lights above mentioned, have at hand ready for use a lantern with a green glass on the one side and a red glass on the other to be used as prescribed above.

(b) A power-driven pilot-vessel when engaged on her station on pilotage duty and not at anchor shall, in addition to the lights and flares required for sailing pilot-vessels, carry at a distance of 8 feet below her white masthead light a red light visible all round the horizon at a distance of at least 3 miles, and also the side lights required to be carried by vessels when underway. A bright intermittent all-round white light may be used in place of a flare.

(c) All pilot-vessels, when engaged on their stations on pilotage duty and at anchor, shall carry the lights and show the flares prescribed in sections (a) and (b), except that the side lights shall not be shown. They shall also carry the anchor light or lights prescribed in Rule 11.

(d) All pilot-vessels, whether at anchor or not at anchor, shall, when not engaged on their stations on pilotage duty, carry the same lights as other vessels of their class and tonnage.

PRIMARY CHANGES

1. Rule 8 has been completely re-organized in format with required lights for both power-driven and sailing pilot-vessels separately and more explicitly enumerated.

2. Power-driven pilot vessels underway must now carry the white masthead light at a specified minimum height above the gunwale. Additionally, this minimum height and the minimum separation between the "white over red" 32 pt lights have been reduced for such vessels of less than 65 feet in length.

3. Reference to tonnage or classification as "... a class as to be obliged to go alongside of a vessel to put a pilot on board ..." have been removed in favor of the use of length in defining vessels.

4. The 1960 rule clearly states that a pilot-vessel engaged in pilot duty which is not underway (i.e., at anchor, made fast to the shore, or aground) shows neither the sidelights nor stern light.



JUDGING FROM THE NUMBER of deaths in a recent 2-month period, there seems to have been a sizable group of individuals who disregard the need for oxygen to sustain life. As a result of various careless actions, all of the following casualties from selected cases were caused by a lack of oxygen. In each instance, the individuals who died and those others who were only overcome had been either warned of the possible dangers or should have been aware of such dangers through common practice or good judgment.

On *Vessel One*, a forepeak compartment which houses the anchor windlass resistor room was found filled with water when it was opened after arriving in port. The space was dewatered, and shortly thereafter the chief engineer ordered the electrician to wash the electrical gear in the resistor room with fresh water and an "electro" cleaner. An engine utility man was assigned to assist the electrician in this task. After fresh water was used to clean the gear and pumped from the compartment deck, the electrician proceeded to pour 5 gallons of electro cleaner over the varied surfaces of the electrical equipment. The two men then left the compartment and went to the electrical shop.

After waiting for a short period, the utility man was sent back to dry the deck, but was told to wait topside until the fumes had disappeared before entering the compartment. No one was assigned to assist him or to stand watch outside the compartment when he entered. The electrician remained in his shop for a while to complete work on a heating lamp which was to be used to dry the electrical equipment. Later, when the electrician returned he entered the resistor room and found his assistant lying on the deck. At this time, the fumes emanating from the room were still considered very strong. The sole source of ventilation was natural air through the spaces via the hatch of the foc'l deck.

The engine utility man was pronounced dead as a result of an acute spasm of the heart due to the inhalation of toxic vapors. It was later determined that the cleaner can was well marked; however, it was apparent that part of the label was misunderstood and another part was disregarded. The label stated that the cleaner's "toxicity was slight"; this was interpreted as meaning "non-toxic" by the electrician and the utility man. The section which appears to have been overlooked read "----- may be used safely in a well-ventilated room and with simple and ordinary precautions."

Who Needs Oxygen

Vessel Two was a barge which, while being towed between two Pacific coast ports, developed a port list through hull leakage. After the barge was moored, the master of the towing vessel decided to dewater and make the necessary temporary repairs. The port tanks were opened under the direction of the chief mate, and pumping operations were carried out. A day and a half after opening the hatches, men entered the spaces and proceeded with the necessary repairs. No ill effects were felt by anyone working in these spaces.

While the repairs were in progress, Mr. A asked the chief mate if he could open the starboard tanks for inspection. Since that was the high side of the barge, the chief mate answered in the negative. The mate stayed aboard for several more hours, and upon his departure, placed Mr. A in charge. Mr. A then, contrary to his previous order, instructed other seamen to open the starboard tanks.

About 5 minutes after the hatch was opened, a seaman entered the tank. When he reached the bottom of the ladder, he appeared to have a convulsion and fell backward. Mr. A then entered the tank while a shoreworker ran to summon assistance. When Mr. A was in the tank, he called for help which was answered by a shoreworker. He also hastily entered the tank to aid the two men already in trouble. While trying to be of some assistance to these two seamen, he collapsed.

The local fire department which had been summoned arrived with equipment for artificial respiration, but no breathing apparatus. One fireman stayed on the scene while the others departed to obtain the proper equipment for entering an enclosed space with an oxygen deficiency. This fireman, aware that by now three people were in difficulty, entered the tank, but after a very few seconds, he became so weak that he was forced to emerge.

Approximately 15 minutes after the original call, the firemen returned with the breathing apparatus. They

entered the tank and found the two seamen unconscious and apparently not breathing, and the shoreworker who was unconscious, but gasping for air. After removal from the tank, artificial respiration was commenced. When the doctor arrived he pronounced the two seamen dead and ordered the shoreworker to a hospital for treatment. The cause of the deaths was determined to be insufficient oxygen.

Vessel Three was a former tanker which had been purchased to make one trip between the United States and the Orient under tow as a barge with a cargo of scrap metal. Shortly after she was purchased, her No. 2 center tank was cut open to permit the loading of small bundles of compressed scrap consisting of light-gauge metal. When the loading was completed, a deck insert was welded back in place. To ascertain its watertightness, a shoreworker descended into the tank with a flashlight to detect leakage from the "hose testing."

After he had been in the tank for a short period of time and had not been heard from, a crewmember looked into the tank and saw him staggering around. The seaman went to his assistance but he too was soon in distress. A second seaman noticing this and after notifying the yardmaster, also entered the tank. With the assistance of local authorities the two seamen who had followed to assist were revived, but all efforts to save the shoreworker were fruitless.

During the same voyage a second and similar accident occurred aboard the same vessel. *Vessel Three* had departed the United States, and while under tow in the Pacific, she developed a starboard list. Upon arrival in port, she was anchored offshore, and a shore-based crew were placed on board to correct the list by pumping sea water from various starboard tanks. A seagoing tug was alongside waiting to continue the tow to the ship's final destination, and a harbor tug was also alongside supplying air for the pumps.

After installing an air pump in a tank, two shoreworkers who were working together were ordered to open some other hatches. They were instructed to check the tanks for water with a flashlight but not to enter any of them. One of the workmen opening a tank inhaled some fumes which nearly overcame him.

He was forced to sit down and recover away from the hatch in fresher air. He then realized that his partner was missing and sent someone to look for him. When this worker failed to return, he went to look for them himself. He found both

of the men lying on top of scrap metal stacked about 8 feet below the hatch opening.

After notifying the operator of the harbor tug to call for assistance, he immediately returned to the hatch. He then used the airhoses to blast air near the men's faces in an attempt to give them some oxygen. A work party from the seagoing tug attempted to assist by using respirators and an airhose, but due to malfunction of the equipment they were prevented from rendering further assistance. When a fireboat arrived, two firemen using oxygen breathing apparatus removed the two men to the deck. Mouth-to-mouth respiration and a resuscitator were used, whereupon one shoreworker was revived and recovered while the other was pronounced dead.

On the day preceding the casualty, No. 5 center hatch was secured, since there was no need for entering it. The smell of "rotten iron" which came from the tank was common knowledge, and all personnel had been warned not to enter any spaces unless they had been properly ventilated. Once again we have a case of one person following another into a danger area knowing of the possible consequences. We did, however have a good example of emergency action when airhoses were utilized to provide air to the men without further endangering any additional lives.

GOOD AIR AND OXYGEN ARE ESSENTIAL TO SUPPORT LIFE



SHIPS FIRE CAUSED BY POOR ELECTRICAL HOUSEKEEPING

Fire, caused by a previously damaged electrical cable, broke out in cotton bales stowed in the hold of a freighter on a Far East voyage. The fire was contained with CO₂ and, on the vessel's arrival in port, extinguished with high velocity water. Damage exceeded \$5,000.

Where practicable, unused electrical systems in cargo holds should be temporarily defused.

LOOSE CLOTHING CATCHES IN CARGO WINCH; KILLS ONE

A pier superintendent was killed when he was pulled into the drum of a cargo winch. The superintendent, wearing a loose top coat, was observed to carelessly back close to the runner of a working cargo winch. A gust of wind apparently blew his coattail onto the runner, which was led to the bottom of the drum. He was pulled into the drum and to his death.

Carelessness in dress and carelessness in actions contributed to this death.

PROCLAMATION 3632

REGULATIONS FOR PREVENTING COLLISIONS AT SEA

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

WHEREAS certain regulations designated as Regulations for Preventing Collisions at Sea, 1960, were approved by the International Conference on Safety of Life at Sea, 1960, held at London from May 17 to June 17, 1960; and

WHEREAS the Act of September 24, 1963 (Public Law 88-131, 77 Stat. 194), hereinafter referred to as the Act, authorizes the President of the United States of America to proclaim those regulations, which are set forth in Section 4 of the Act, and to specify the effective date thereof, the regulations to have effect (after the effective date thus specified), as if enacted by statute; and

WHEREAS on March 12, 1964, the Government of the United States of America communicated to the Inter-Governmental Maritime Consultative Organization, as depositary agency, its acceptance of the regulations; and

WHEREAS the Government of the United States of America has been notified by the Inter-Governmental Maritime Consultative Organization, as depositary agency, that substantial unanimity has been reached as to the acceptance by interested countries, and that it has fixed September 1, 1965, as the date on and after which the regulations shall be applied by the governments which have accepted them; and

WHEREAS the Act provides that the Regulations for Preventing Collisions at Sea, 1948 (65 Stat. 406), as proclaimed and made effective as of January 1, 1954, by Proclamation No. 3030 of August 15, 1953, shall be of no further force or effect after the effective date proclaimed for the Regulations for Preventing Collisions at Sea, 1960.

NOW, THEREFORE, I, LYNDON B. JOHNSON, President of the United States of America, under and by virtue of the authority vested in me by the Act, do hereby proclaim the Regulations for Preventing Collisions at Sea, 1960, as set forth in Section 4 of the Act, which regulations are attached hereto and made a part hereof, and do hereby specify that the effective date thereof shall be September 1, 1965.

Proclamation No. 3030 is superseded effective as of September 1, 1965.

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 twenty-ninth day of December in the year of our Lord nineteen hundred and sixty-four, and of the Independence of the United States of America the one hundred and eighty-ninth.

LYNDON B. JOHNSON

By the President:

DEAN RUSK,
Secretary of State.

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 CHANGES

CERTAIN WATERS OF NINE STATES DECLARED NAVIGABLE

By Commandant's action of December 16, 1964, determinations made by the Commandant with respect to certain navigable waters were announced. These announcements affect Title 33, Code of Federal Regulations, Subparts 2.23, 2.27, 2.37, 2.43, 2.49, 2.51, 2.54, 2.63, 2.67, and 2.68.

Determinations of navigability were made for Lake Powell in Arizona and Utah; Connecticut River in Connecticut, Massachusetts, New Hampshire, and Vermont; Desoto Bend (Lake) in Iowa and Nebraska; Cooper River, Lake Moultrie, Diversionary Canal and Tail Race Canal in South Carolina.

Additionally, two determinations of nonnavigability were made: Keuka Lake, N.Y., and Saluda River, S.C.

(For complete text of amendments, see Federal Register, December 22, 1964.)

LIGHTS AND SHAPES FOR NON-SELF-PROPELLED DREDGES BEING PUSHED AHEAD BY TOWBOAT ANNOUNCED IN NEW REGULATION

By Commandant's action of December 14, 1964, 33 CFR 80.21 has been amended to provide for a new type of operation, i.e., for non-self-propelled suction dredges underway and engaged in dredging operations while being pushed ahead by a towboat. The text of 33 CFR 80.21 is revised so the wording includes all dredges underway and engaged in dredging operations, whether self-propelled or non-self-propelled. This change in 33 CFR 80.21 became necessary when it was found that a non-self-propelled dredge (250-foot barge) was engaged in dredging operations while being pushed ahead by a towboat, and the

vessels displayed only the lights of a towboat and tow being pushed ahead. Because of its encumbered navigation when performing dredging activities, it was deemed imperative that the mariners in the area should be made aware of this "unit's" limited maneuvering capability.

Other changes are: (1) the introductory sentence in § 80.16a(f) has been amended, (2) the note preceding § 80.18 has been amended.

Effective December 14, 1964, Title 33, Code of Federal Regulations § 80.21, is amended to read as follows:

* * * * *

§ 80.21 Dredges underway and engaged in dredging operations.

(a) Dredges underway and engaged in dredging operations shall display by day two black balls not less than 2 feet in diameter and carried in a vertical line not less than 3 feet nor more than 6 feet apart, where they can best be seen from all directions. The term "dredging operations" shall include maneuvering into or out of position at the dredging site, but shall not include proceeding to or from the site.

(b) By night, self-propelled dredges underway and engaged in dredging operations shall carry, in addition to the regular running lights, two red lights of the same character as the white masthead light, in a vertical line beneath that light. These red lights shall be not less than 3 feet nor more than 6 feet apart, and the upper red light shall be not less than 3 feet nor more than 6 feet below the masthead light. They shall also carry on or near the stern two red lights in a vertical line not less than 3 feet nor more than 6 feet apart, to show through 12 points of the compass; that is, from right astern to 6 points on each quarter.

(c) By night, a non-self-propelled dredge which is underway and engaged in dredging operations while being pushed ahead by a towboat shall be considered, with such towboat, for the purpose of compliance with Rules of the Road requirements for lights and shapes, as a single vessel. This vessel shall carry the lights described in paragraph (b) of this section, except that both the dredge and towboat shall carry the side lights normally required for a barge towed by being pushed ahead and a vessel towing, respectively. When not engaged in dredging operations, this unit shall carry the regular lights for vessels towing and being towed.

* * * * *

(Federal Register, December 18, 1964.)

TITLE 46 CHANGES

AMENDMENTS TO DANGEROUS CARGO REGULATIONS MADE

By Commandant's action of December 16, 1964, extensive changes were made to regulations involving explosives, combustible liquids, flammable liquids, flammable solids and oxidizing materials, corrosive liquids, compressed gases, and poisonous articles. These changes affect Title 46, Code of Federal Regulations, subparts 146.04, 146.20 through 146.25, and 147.05.

(See Federal Register, December 22, 1964, for the complete text of these changes.)

LATEST CIRCULAR

NEW LIFESAVING SIGNALS AND BREECHES BUOY INSTRUCTIONS POSTER

Form CG-811, BREECHES BUOY INSTRUCTIONS poster, is to be replaced. A new poster, incorporating an international table of lifesaving signals, will soon be issued.

The issuance of the new form has been announced in Navigation and Vessel Inspection Circular No. 9-64.

ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of ships' stores and supplies certificated from December 1 to December 31, 1964:

CERTIFIED

Burmar Chemical Co., 571 Seventh Street, San Francisco, Calif., 94103, Certificate No. 607, dated December 1, 1964, LEKTROSOL-170.

B & B Chemical Co., Inc., Post Office Box 796, Miami 66, Fla., Certificate No. 608, dated December 8, 1964, B&B 2020-N and Certificate No. 609, dated December 8, 1964, B&B 2021.

AFFIDAVITS

The following affidavits were accepted during the period from November 15, 1964, to December 15, 1964:

Babcock & Wilcox Co., Tubular Products Division, 640 Keystone St., Alliance, Ohio, PIPE AND TUBING.*

Ernst Water Column & Gage Co., 250 South Livingston Ave., Livingston, N.J., 07039, VALVES & FITTINGS.*

*ASTM specification A214 and A250 are not acceptable for use aboard Coast Guard-inspected vessels.

MERCHANT MARINE SAFETY PUBLICATIONS

The following publications of marine safety rules and regulations may be obtained from the nearest marine inspection office of the U.S. Coast Guard. Because changes to the rules and regulations are made from time to time, these publications, between revisions, must be kept current by the individual consulting the latest applicable Federal Register. (Official changes to all Federal rules and regulations are published in the Federal Register, printed daily except Sunday, Monday, and days following holidays.) The date of each Coast Guard publication in the table below is indicated in parentheses following its title. The dates of the Federal Registers affecting each publication are noted after the date of each edition.

The Federal Register may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402. Subscription rate is \$1.50 per month or \$15 per year, payable in advance. Individual copies may be purchased so long as they are available. The charge for individual copies of the Federal Register varies in proportion to the size of the issue but 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 and Supplement dated July 1, 1964 are now available from the Superintendent of Documents, price basic book: \$2.50; supplement: 75 cents.

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, 11-5-64, 12-18-64.
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, 11-5-64.
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, 10-27-64.
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, 11-5-64.
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, 7-2-64, 7-18-64, 7-28-64, 10-21-64, 10-27-64.
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). F.R. 11-5-64.
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 (7-1-64).
249	Merchant Marine Council Public Hearing Agenda (Annually).
256	Rules and Regulations for Passenger Vessels (4-1-64). F.R. 6-5-64.
257	Rules and Regulations for Cargo and Miscellaneous Vessels (9-1-64).
258	Rules and Regulations for Uninspected Vessels (1-2-64), F.R. 6-5-64, 6-6-64, 9-1-64.
259	Electrical Engineering Regulations (7-1-64).
266	Rules and Regulations for Bulk Grain Cargoes (7-1-64).
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 (6-1-64).
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, 10-27-64.
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).

CHANGES PUBLISHED DURING DECEMBER 1964

The following has been modified by Federal Register:
CG-169, Federal Register, December 18, 1964.

