

PROCEEDINGS

W279

Ice Patrol 1969 . . . Public Hearing Proposals . . .

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COVERS

- FRONT COVER: The Coast Guard Icebreaker Eastwind participating in the 1968 International Ice Patrol's Greenland Glacier survey. A Coast Guard Oceanographic Unit field party aboard the vessel surveyed eight glacier fronts in conjunction with oceanographic observations made in the area of the Greenland icecap.
- BACK COVER: An S-T-D (Salinity-Temperature-Depth) instrument about to be lowered over the side of the International Ice Patrol's research vessel Evergreen. Oceanographic studies support the research into the problems of iceberg drift and deterioration.

DIST. (SDL NO. 88)

A: abcdew(2); fghijklmnopqrstuv(1) B: n(40); c(16); e(5); f(4); gh(3); bdikmpq(1)C: abcdefgimnou(1) D: i(5); abdefklmruvw(1) E: d(1)F: p(1) Lists 141M, 111, 203

PROCEEDINGS

OF THE

MERCHANT MARINE COUNCIL

Published monthly at Coast Guard Headquarters, Washington, D.C. 20591, under the auspices of the Merchant Marine Council, in the interest of safety at sea. Special permission for republication, either in whole or in part, with the exception of copyrighted articles or pictures, is not required provided credit is given to the Proceedings of the Merchant Marine Council. Use of funds for printing this publication has been approved by the Director of the Bureau of the Budget, February 26, 1968.

The Merchant Marine Council of The United States Coast Guard

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A West Greenland glacier feeds its ice into the Labrador Sea.

INTERNATIONAL ICE PATROL SERVICES—1969

GENERAL INFORMATION

THE U.S. COAST GUARD will, depending upon ice conditions, commence the International Ice Patrol services to shipping in February or early March 1969. The primary objective of the International Ice Patrol is to provide timely information and advance warning to shipping of the extent and limits of icebergs and sca ice in the North Atlantic Tracks in the vicinity of the Grand Banks.

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Commander, Eastern Area, U.S. Coast Guard, is also Commander, International Ice Patrol, and all related forces are under his operational control. The International Ice Patrol Office is located at the U.S. Coast Guard Base, Covernors Island, New York, N.Y. During the Ice Patrol Season, ice reconnaissance aircraft and personnel will be deployed to Argentia, Newfoundland to conduct ice observations. The U.S. Coast Guard Radio Station, Argentia (NIK) will be placed in operation during the ice season.

To accomplish the objects of the International Ice Patrol, the U.S. Coast Guard will maintain an International Ice Patrol Office in New York to:

1. Evaluate and analyze all data collected.

2. Forecast ice conditions based on the latest observed data, as



Calving and erosion of icebergs can create strange shapes. This "drydocked" berg shows wave-washed terraces of earlier waterline.

affected by meteorological and oceanographic factors.

3. Disseminate observed and forecast ice conditions via Coast

Guard Radio Station Argentia (NIK), Naval Radio Station Washington (NSS), and Canadian Forces Station Mill Cove (CFH). The Coast Guard will also deploy ice observation forces to Argentia, Newfoundland for the:

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

2. Operation of ice reconnaissance aircraft.

An oceanographic vessel will be deployed to the Grand Banks to collect oceanographic and meteorological data, and a surface patrol vessel will be provided for ice observation and special broadcasts when required.

ICE INFORMATION

a. Scheduled Broadcasts:

Ice broadcasts will be made twice daily by participating radio stations. Prescribed radio silent periods will be observed. Special notices will be published in the event any changes occur in transmission of the Ice Broadcasts. Schedules will be as follows:

Coast Guard Radio Argentia (NIK) will broadcast at 0018 and 1218 GMT daily. Each broadcast will be preceded by the general call CQ on 500 kHz with instructions to shift frequency and receive on 427, 5320, 8502, or 12880.5 kHz. NIK will then transmit a test signal and the International Ice Patrol call sign (NIK) for about two minutes to facilitate tuning, followed immediately by the Ice Broadcast at 25 words per minute, after which the broadcast is repeated at 15 words per minute.

U.S. Naval Radio Station Washington (NSS) will broadcast at 0430 GMT and 1700 GMT, Canadian Forces Station Mill Cove (CFH) at 0130 GMT and 1330 GMT.

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. Ice conditions by facsimile will be transmitted daily from NIK at 1330 GMT on 5320, 8502, and 12880.5 kHz at a drum speed of 60 RPM. All ships receiving these transmissions are requested to mail the facsimile chart copies, with notations of the date received and ship's position, to Commander, International Ice Patrol, Governors Island, New York, N.Y. 10004 for evaluation of effectiveness.

GENERAL COMMUNICATIONS

Duplex operations will be used between NIK and ships for general radio communications, such as requests for special information, reports by ships of ice sighted, sea temperature, visibility, and weather conditions. Ships may call NIK on 500 kHz or the 8 MHz and 12 MHz maritime calling bands at any time, and then shift to their assigned HF working frequency. NIK will work 427, 8650, or 12889.5 kHz. 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.

Prior to the inauguration of the International Ice Patrol services, all reports of ice sightings should be addressed to the U.S. Naval Oceanographic Office, Washington, D.C. 20390 by mail or via U.S. Naval Radio Station Washington (NSS) and to Commander, International Ice Patrol, Governors Island, New York, N.Y. 10004 by mail or via Coast Guard Radio Station Argentia (NJN).

IMPORTANCE OF REPORTS FROM SHIPPING

The Ice Broadcasts by NIK will contain a request for shipping to report any ice sighted. Ship reports of ice and weather in the Grand Banks area are an indispensible source of ice, oceanographic, and meteorological data. They materially assist the International Ice Patrol in determining ice conditions and in disseminating ice information to shipping. When reporting icebergs, ships are requested to describe the shape, and provide an estimate of the size. The berg description is required to identify and track the individual bergs, while the sizc assists in determining their eventual deterioration. Common nomenclature used by the Ice Patrol is: Growlerunder 4 feet high, less than 20 feet long; Bergy Bit-4-20 feet high, 20-50 feet long; Small Berg-20-50 feet high, 50-200 feet long; Medium Berg-50-150 feet high, 200-400 feet long; Large Berg-over 150 feet high, over 400 feet long. Whenever any dimension falls into a larger size, that size is used.

In addition to ice sighting reports during the ice season, all ships are urged to make regular reports every 4 hours to Radio Station Argentia (NIK) during the ice season when within latitudes 40°N. and 50°N. and longitudes 42°W. and 60°W., including ship's position, course, speed, visibility, sea temperature, and wind. The importance of these reports cannot be overemphasized. The visibility reports are especially valuable in planning ice observation flights. Sea temperatures are used to construct isotherm charts employed in estimating ice deterioration and detecting shifts in the branches of the Labrador Current. Wind data is useful in estimating set and drift of ice and in forecasting weather for the purpose of planning ice observation flights. An up-to-date plot is maintained on all reporting ships. These ships can be warned directly when approaching dangerous ice. It is realized that ships with but one radio operator may find it impractical to report every 4 hours. It is therefore suggested that the reports be prepared every 4 hours as requested and held in abeyance until the single radio operator is on watch.

GULF OF ST. LAWRENCE INFORMATION

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 Sydney Radio (VCO). This organization, during the period from mid-December 1968 to 30 June 1969 will operate mainly in the Gulf of St. Lawrence and the approaches and 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.

SEARCH AND RESCUE

International Ice Patrol assigned aircraft and vessels will render assistance to persons and property within the limits of their capability.

WARNING

Carefully conducted tests by the International Ice Patrol have proven that radar cannot provide positive assurance of iceberg detection. As sea water is a better reflector of radar signals than ice, a berg or growler inside the area of "sea return" or "clutter" of the radar scope may not be detected. Furthermore, it was determined that the average range of radar detection of a dangerous growler is only 4 miles. While radar remains a valuable aid for ice detection, its use cannot replace the traditional caution exercised in a passage across the Grand Banks during the ice season.

ICE PATROL OFFICE LOCATION

The International Ice Patrol Office is located at the U.S. Coast Guard Base, Governors Island, New York, N.Y., in Building 110 adjacent to the AMVER Center. Telephone number (Area Code 212) 264–4798 or 264– 4799. ‡

Public Hearing 1969 Proposals

THE MERCHANT MARINE COUNCIL will hold a hearing on Monday, March 24, 1969, 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 the Merchant Marine Council Public Hearing Agenda, CG-249, dated March 24, 1969. The agenda contains the specific changes being proposed to the navigation and vessel inspection regulations, and for certain items the present and proposed regulations are set forth in comparison forms, 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.

Copies of the 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. 20591, so long as they are available. After the supply of extra copies is exhausted, copies will be available for reading purposes 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. The public hearing held by the Merchant Marine Council is informal and intended to obtain views and information from those who will be directly affected by the proposals under consideration. Each oral or written comment is considered and evaluated. If it is helieved 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 regulations as revised are published in the Federal Register. If a proposal under consideration is not accepted by the Commandant, the proposal is rejected or withdrawn.

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 Public Hearing Agenda should submit them in triplicate so that they will be received by the Commandant (CMC), U.S. Coast Guard Headquarters, Washington, D.C. 20591, prior to March 21, 1969. Comments, data, or views may be presented orally or in writing at the Public Hearing before the Merchant Marine Council on March 24, 1969. 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 the 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 thereunder. 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 for consideration at the hearing. The Agenda must be consulted for full particulars.

ITEM PH 1-69-BULK DANGEROUS CARGOES

With respect to requirements for transporting bulk dangerous cargoes, it is proposed to establish a Subchapter O entitled "Certain Bulk Dangerous Cargoes" Chapter 1 of Title 46 Code of Federal Regulations, which will eventually contain all the specific requirements governing the transportation of dangerous cargoes in bulk. For the present, however, this subchapter will be limited to unmanned barges. The proposals establish a new Part 151 for unmanned barges, and proposed amendments to reflect this change are to be made in 46 CFR Parts 2 (procedures applicable to the public), 24 (uninspected vessels), 30, 31, 32, 35, 38, 39, and 40 (tank vessels), 70 (passenger vessels), 90 and 98 (cargo and miscellaneous vessels), 110 (electrical engineering), 146 (dangerous cargoes), 175 (small passenger vessels), and 188 (oceanographic vessels).

These proposed regulations are the first phase of a program to develop regulations for water transportation of all bulk dangerous cargoes having hazards other than, or in addition to, the conventional flammability and combustibility of petroleum products. They include basic regulations and changes to 46 CFR Parts 30 through 40 in Subchapter D (Tank Vessels), 46 CFR Parts 90 and 98 in Subchapter I (Cargo and Miscellaneous Vessels), and 46 CFR Part 146 in Subchapter N (Dangerous Cargoes) as necessary to eliminate duplications and make them consistent with the proposed new Subchapter O. The scope of the complete program includes all physical forms of such cargoes (solid, liquid, liquefied gas) transported in ships, barges, and portable tanks. However, the present proposed regulations are confined to liquids and liquefied gases carried in unmanned barges (inland and seagoing), with space being reserved within the subchapter for the yet-to-be-developed parts. Existing regulations in Subchapter O (Waivers of Navigation and Vessel Inspection Laws and Regulations) are to be transferred to Part 6 of Subchapter A (Procedures Applicable to the Public).

The proposed new Subchapter O regulations were developed by a joint Industry-Coast Guard Task Group under the Chemical Transportation Advisory Panel to the Coast Guard's Merchant Marine Council, with the assistance of the Western Rivers Panel. This procedure provided extensive industry participation in draft development through constituent trade associations, such as the Manufacturing Chemists' Association (MCA), the American Petroleum Institute (API), the Compressed Gas Association (CGA), the Chlorine Institute, and the American Waterways Operators (AWO).

The underlying principles of the proposed new regulations are as follows:

(a) Liquids and liquefied gases to be transported in bulk are evaluated to determine if they have hazards other than, or in addition to, the conventional flammability of petroleum products. Those that do will be governed by the regulations in Subchapter O (Certain Bulk Dangerous Cargoes), without regard to their classification. Those bulk liquids and liquefied gases having primarily the hazards of conventional flammability of petroleum products will continue to be governed by Subchapter D (Tank Vessels).

(b) Cargoes in the proposals are to be identified by name rather than by classification, as in the past. Two lists of cargoes are included in the proposed regulations in Subchapter O, as well as in amendments to Subchapter D, showing which subchapter governs the shipment of each. Dangerous cargoes not appearing on either list are not authorized for transportation in bulk without specific authorization by the Commandant and/or by normal regulatory procedures. While the proposals apply initially only to unmanned barges, this classification of cargoes by name will be applicable to self-propelled vessels when requirements are developed.

(c) Only cargo carrying requirements are included in the proposed regulations. Certification as tank barges or cargo barges continues to be in accordance with the applicable requirements and procedures of Subchapter D (Tank Vessels) or Subchapter I (Cargo and Miscellaneous Vessels) in 46 CFR Chapter I. (d) For all cargoes regulated by the proposed Subchapter O regulations, knowledge of the specific cargo properties and hazards is required for personnel in charge of cargo transfer and movement and is to be available to emergency personnel. This is accomplished by requirements for warning signs, water information cards, and special qualifications for cargo transfer personnel.

(e) As an interim measure, pending development of additional parts of the proposed Subchapter O, manned barges carrying cargoes regulated by that subchapter will be considered individually by the Commandant and may be required to meet the cargo containment and handling requirements for unmanned barges.

ITEM PH 2-69-DANGEROUS CARGOES, MISCELLANEOUS CHANGES

Various amendments to the Dangerous Cargo Regulations in 46 CFR Part 146 have been necessitated by corresponding changes made in the regulations of the Department of Transportation governing land transportation of the same commodities. R.S. 4472, as amended, (46 U.S.C. 170) requires that the Coast Guard accept and adopt such definitions, descriptions, descriptive names, classifications, specifications of containers, packing, marking, labeling, and certification of explosives or other dangerous articles or substances to the extent as are or may be established from time to time by the Department of Transportation insofar as they apply to shippers by carriers engaged in interstate commerce by water. Therefore, amendments applying only to shippers' requirements which the Department of Transportation has promulgated in compliance with the Administrative Procedure Act are not included in the Agenda for the 1969 Merchant Marine Council Public Hearing but will be published as a separate document in the Federal Register. Other changes are proposed in the Agenda to clarify some portions of the regulations by rewording and rearranging the text. It is recognized that in these proposals and in other portions of 46 CFR Parts 146 and 147 there is much more that could be done to achieve the desired degree of clarity and precision; nevertheless, it seems more desirable to propose these interim changes rather than delay all action until an optimal change can be developed. The more significant proposals are mentioned below.

The regulations applicable to the water transport of vchicles, containerized cargo, and portable tanks have been revised in this proposal to clarify their application and to reflect current terminology. The changes proposed are the minimum needed to overcome operational problems recently experienced; however, more extensive changes will be developed in the future and will be based on research recently begun. The scope of 46 CFR Subpart 146.08 has been made explicit by the adding of a new § 146.08–1 and redesignating the existing section as § 146.08–3, whereas it is now only implied.

The regulations for radioactive materials have been removed from 46 CFR Subpart 146.25 (Poisonous Articles) and transferred to 46 CFR Subpart 146.19. A proposal is made to amend Table 146.19–35 to reduce some of the required separation distances between radioactive materials and accommodation spaces on board the vessel. The revised figures are based on the Intergovernmental Maritime Consultative Organization (IMCO) International Maritime Dangerous Goods Code, Class 7. Because of the conservative nature of the calculations and assumptions on which the present table is based, it is not expected that any individual would approach, let alone exceed, the exposure dose limitations for the general public as established by the Federal Radiation Council.

In this proposal, 46 CFR 146.21–100, Table D—Flammable Liquids, has been amended to remove from the list of authorized containers ICC Specification 52 portable tanks, which are made of aluminum or magnesium. These tanks are no longer considered adequate for the water transportation of flammable liquids. Carboys made of glass will also be deleted from the list of authorized containers for one commodity in this classification since carboys will not survive even a 4-foot drop test, and other containers are available and authorized.

A new entry is added to the classification "Flammable Solids," in 46 CFR 146.22–100, to provide for the safe packaging of coconut meal pellets with excessive moisture or oil content. Pellets with either characteristic would be expected to heat spontaneously if carried in bulk in a ship's hold. This entry can be included in 46 CFR 146.22 only if it is also incorporated in 49 CFR 170 to 190.

Carboys are removed from the lists of authorized containers for corrosive liquids in 46 CFR 146.29-100, since carboys will not survive even a 4-foot drop test and since other, more satisfactory containers are available.

Several changes are proposed in 46 CFR Subpart 146.27, concerning hazardous articles. A new 46 CFR 146.27-27 is proposed to specify conditions under which fishmeal pellets may be carried in bulk by vessels. Such shipments have been made over the past 2 years under special permits, and the experience has been satisfactory. 46 CFR 147.27-30 is extensively revised and rewritten as three sections to clarify the scope and application of these requirements for the carriage of motor vehicles on vessels. Some minor changes in content have been made, and the allowable carbon monoxide concentration in 46 CFR 146.09-15(e) (3) has been lowered as proposed in Item PH 8b in the Agenda, for spaces in which power-operated industrial trucks are operated. In 46 CFR 146.27-100 an entry for "coconut meal pellets" is proposed to specify the proper conditions for acceptance and carriage of this commodity since it has been demonstrated that, if improperly stored, handled, or stowed, it may heat by oxidation of oil or by biological decay processes.

In 46 CFR Subpart 146.29, the prohibition in 46 CFR 146.29–25(p) against operating any equipment which radiates electromagnetic energy is deleted, and a new 46 CFR 146.29–28 is added to provide for limited, safe operation of vessel radio and radar equipment.

Finally, a change is proposed for 46 CFR 147.03-9 to lengthen the life of ships' stores certifications from 1 year to 3 years to decrease the administrative burden imposed by the annual renewal of the certifications.

ITEM PH 3-69-TANK VESSELS

3a-FIREFIGHTING EOUIPMENT, DECK FOAM SYSTEMS

Various amendments to the tank vessel regulations in 46 CFR Part 34 are proposed. These changes are to insure that deck foam systems installed for the protection of tank vessels keep pace with the latest design trends. In the past, regulations have been based on an assumption that design and manning of tank vessels would remain constant. This of course has not been the case, and the proposals are considered necessary to insure an adequate fire extinguishing system.

The proposed amendments to 46 CFR 34.20-1 and 34.20-90 provide the requirements governing installations of deck foam systems contracted for on or after January 1, 1970. The installations contracted for prior to January 1, 1970, will be in accordance with the requirements in 46 CFR 34.20-90. The proposed changes in 46 CFR 34.20-5 will provide reasonable fire extinguishing equipment for all tank ships, regardless of their design. The application rate will be based on the area of the largest single cargo tank as well as the total cargo tank area, which would provide effective fire protection for a reasonable area of fuel spill and/or spread. For usual petroleum products the water rate shall be at least 0.016 gallon per minute for each square foot of the cargo area or 0.24 gallon per minute for each square foot of the horizontal sectional area of the single tank having the largest such area, whichever is greater. It is also proposed to provide for polar solvent products, and the water rate will depend upon the vessel's design, products to be carried, and the foam system to be used.

The proposed change to 46 CFR 34.20-15 requires at least 50 percent of the required rate of application shall be from mounted appliances. Hand held appliances require considerable time to place in operation because of the time necessary to uncoil hose, attach nozzles, etc. On the other hand, mounted appliances have greater capacity, greater range and can be put into operation in a much shorter time than hand held appliances.

36-SEGREGATION OF CARGO

It is proposed to amend 46 CFR 32.60-10, regarding segregation of cargo, by allowing access openings from cargo tanks to innerbottoms under specified conditions. The present regulations prohibit openings from cargo tanks to other enclosed spaces. This has resulted in the use of a trunk for access openings to the innerbottoms. These trunks are often unsatisfactory for access to such spaces. It is felt that, while a manhole in a cargo tank may be troublesome, it will be less of a safety problem than the current limitations on access to enclosed spaces under cargo tanks.

3c-LOWERING OF LIFEBOATS

It is proposed to amend 46 CFR 35.10-5 to require the lowering of each lifeboat at least once in each 3 months with no exceptions, and to require the crew to be exercised in the use of oars and other means of propulsion. Over the past few years, during routine weight tests of lifeboats, instances have been observed on tank vessels where lifeboats could not be lowered. In some of these cases the gravity davits would not roll down the tracks due to rust and scale. In other cases the lifeboats could be lowered to the water but could not be released due to the releasing gear being frozen. On most of these vessels it was found upon reviewing the log books that the lifeboats were hardly ever lowered except at the biennial weight test. In each case, the master indicated that it was not practicable or reasonable to lower the boats.

Prior to 1961 only the regulations for passenger, cargo and miscellaneous vessels required the lowering of each lifeboat to the water at least once in each 3 months and the exercising of the crew in the use of oars and other means of propulsion. However, the new regulations of the 1960 SOLAS Convention included a requirement for lowering lifeboats on all vessels; therefore, the tank vessel regulations (46 CFR 35.10-5(e)) were amended in 1961, providing for the lowering of lifeboats at least once every 3 months. In addition, unlike the passenger and cargo regulations, the term "if practicable and reasonable" was included in the tank vessel regulations. Since it is deemed necessary and considered reasonable to lower each lifeboat to the water at least once in each 3-month period, the phrase "if practicable and reasonable" in the Tank Vessel Regulations is no longer considered appropriate.

3d-INSTALLATIONS OF SACRIFICIAL ANODES

The proposed changes to 46 CFR 35.01-25 pertain to the use of sacrificial anodes in vessel cargo tanks and will not impose additional requirements on the marine industry. The existing regulations were enacted to prevent explosions or fires in cargo tanks due to incendive frictional sparking caused by falling aluminum and/or magnesium anodes. Test data received since the enactment of the present regulations have demonstrated that aluminum anodes installed under the conditions recommended in the proposed changes will not produce incendive friction sparks. The conditions under which aluminum anodes will be accepted and the acceptability of other materials are specified in the Navigation and Vessel Inspection Circular No. 6-64.

3e-ELECTRICAL SYSTEMS

It is proposed to amend 46 CFR 111.70–10(c) in the Electrical Engineering Regulations to require that explosionproof lighting fixtures in any one space shall be divided between at least two circuits and so arranged that adequate illumination exists for relamping any one deenergized lighting circuit. This proposal is intended to reduce the possible hazard of opening and relamping an energized light fixture. This proposal also advises the public of the special requirements which must be met in order to obtain the required specific approval of the Commandant for the installation of explosionproof lights in tank vessels.

ITEM PH 4-69-SPECIFICATIONS

4a-ELECTRICAL FLOATING WATERLIGHTS

The waterlight covered by this item is the illuminated rescue marker used with the liferaft, life floats, buoyant apparatus and ring life buoys. The waterlight covered by the specification in 46 CFR 161.001 does not comply with the intensity requirement of the proposed international standard adopted by the Intergovernmental Maritime Consultative Organization's (IMCO) Maritime Safety Committee. This proposed change to Regulation 21(f) of Chapter III of the International Convention for the Safety of Life at Sea (SOLAS) requires a luminous intensity of not less than 2.0 candelas in all directions of the upper hemisphere.

In order to meet the IMCO requirement, a new specification, 46 CFR 161.010, was proposed in the March 25, 1968, Merchant Marine Council Public Hearing Agenda (CG-249) for a high intensity, stroboscopic flashing waterlight. This specification was opposed because it excluded a steady burning waterlight and because the intensity was specified in terms of candelas, a quantity not readily equated to stroboscopic flashing lights.

The proposed specification in 46 CFR 161.010, consisting of §§ 161.010–1 through 161.010–7, as set forth in this item, has been rewritten to permit the use of steady burning and flashing incandescent lights in addition to the stroboscopic flashing light. The problem of equivalency between flashing and steady lights has been resolved by specifying the intensity requirement for each type of light in quantities which may be easily measured and specified by manufacturers. The Blondel-Rey formula was used to calculate the equivalent intensities using a constant of 0.2 for incandescent flashing lights.

In addition to the improved light intensity characteristic, the following improvements are also contained in the proposed waterlight specification designated 46 CFR Subpart 161.010:

(a) The construction requirements are relaxed in

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favor of a performance specification in order to permit greater design flexibility.

(b) The battery requirement is relaxed to permit a better and more efficient power source.

(c) The flashing circuit is to be encapsulated to provide shock, tamper and moisture resistance.

(d) The void space within the light is to be filled with a unicellular plastic foam in order to reduce moisture damage and provide positive buoyancy in case of damage.

(c) The test procedures are modified to provide a better check on the performance required of the waterlight.

The proposed changes to Titles 33 CFR 144.01-10 and 144.01-25 (artificial islands and fixed structures on the outer continental shelf), and 46 CFR 33.15-20 and 33.40-1 (tank vessels), 75.20–25 and 75.43–5 (passenger vessels), 94.20-25 and 94.43-5 (cargo and miscellaneous vessels), 167.35-80 (nautical schoolships), 180.15-5 and 180.30-1 (small passenger vessels), and 192.20-25, 192.20-35 and 192.43-5 (oceanographic vessels) will require that all vessels, both new and existing, as well as artificial islands and fixed structures on the outer continental shelf shall be required to have waterlights in compliance with the proposed specification in 46 CFR 161.010 after December 31, 1971 as set forth in this item. Existing vessels may retain waterlights meeting current specifications in 46 CFR 160.012 or 161.001 as long as they are maintained in good condition, but all new or replacement waterlights installed after December 31, 1971 shall be of a type described by specification 46 CFR 161.010. It is proposed that the existing waterlight specifications designated 46 CFR 160.012 and 161.001 shall be cancelled on December 31, 1970, including the Certificates of Approval issued to manufacturers under these specifications.

46-STRUCTURAL INSULATIONS AND BULKHEAD PANELS

It is proposed to revise in their entirety the specification for Structural Insulations in 46 CFR Subpart 164.007, consisting of §§ 164.007–1 through 164.007–9, and the specification for Bulkhead Panels in 46 CFR Subpart 164.008, consisting of §§ 164.008–1 through 164.008–6.

In May 1968 the Intergovernmental Maritime Consultative Organization (IMCO) adopted recommended fire test procedures for "A" and "B" class divisions. The test procedures recommended by IMCO are very similar to those employed by the Coast Guard in its specifications in 46 CFR Subparts 164.007 and 164.008, with 2 exceptions:

First, the IMCO method of measuring furnace temperature and unexposed surface temperature result in a less severe test than by Coast Guard standards; and,

Second, the IMCO procedure contains many details of testing not presently in the Coast Guard specifications.

The IMCO procedures were adopted with the concurrence by the United States Delegation after lengthy discussions, during which the United States advanced numerous arguments for employing certain Coast Guard methods; i.e., temperature measurement. Less severe testing procedures will be counterbalanced by the adoption of other fire safety requirements; e.g., the fire detecting systems on passenger ships. Thus, the overall safety of passenger vessels with adoption of all IMCO standards will be equal to or slightly higher than at present. Certain other changes are also included as follows:

(a) Retest. The proposed specifications in 46 CFR Subparts 164.007 and 164.008 require periodic retests of the material to insure continued compliance with the various requirements of the specification. Wording of the retest section will allow testing and acceptance of foreign materials. The testing frequency for foreign materials is more frequent than for U.S. products. The reasons for the more frequent testing of products are: (1) limited knowledge of the materials, and (2) limited personal contact with producers. Selection of samples in U.S. plants will probably be by a marine inspector. A Coast Guard designated representative will select samples from foreign manufacturers, which may include a member of an independent organization, or possibly an inspector from the National Administration.

(b) Field identification. The materials will be required by the proposals in 46 CFR Subparts 164.007 and 164.008 to be marked in such a manner as to be readily identifiable to a marine inspector in the field. Markings will include the use of the Coast Guard approval numbers. This marking is intended to aid the marine inspector in identifying materials covered under the proposed specifications in 46 CFR Subparts 164.007 and 164.008, and to ensure that Coast Guard approved materials are being utilized.

4c-FLOATING ORANGE SMOKE DISTRESS SIGNALS

With respect to the specification for floating orange smoke distress signals, it is proposed to amend 46 CFR 160.057-3, regarding materials and construction, 160.-057-4, regarding qualification and operational tests, and 160.057-6, regarding preapproval samples. These proposals are intended to:

 (a) Clarify the text of the specification with regard to consideration of alternate designs;

(b) Remove specific requirements which do not directly contribute to achieving the desired performance requirements and which may hamper development of other suitable signals; and

(c) Require representative testing to simulate actual use conditions and to determine capability to withstand expected use conditions.

ITEM PH 5-69—HANDLING OF EXPLOSIVES OR OTHER DANGEROUS CARGOES WITHIN OR CONTIGUOUS TO WATERFRONT FACILITIES

Various proposals amending 33 CFR Part 126 are intended to enhance the safety of ports, the safety of the navigable waters of the United States and vessels with their cargo navigating thereon, and to require that accidental spills and discharges of dangerous liquid commodities into the waters of the United States shall be reported to the Captain of the Port (COTP) immediately. The accidental spills or discharges of dangerous liquid commodities frequently create a potential fire hazard or toxic conditions. These reports will assist the COTP in securing the area or in taking timely action in the protection of property while cleanup operations are underway. The proposed change to 33 CFR 126.11 will limit the waiver authority to conditions on waterfront facilities. The proposed changes to 33 CFR 126.15 will prohibit hot work on vessels moored to designated waterfront facilities without permission of the COTP; will prohibit burning rubbish in an open fire on docks and piers of waterfront facilities; and will prohibit open fires or fires in drums on waterfront facilities. The proposed changes to 33 CFR 126.27 regarding general permit for handling dangerous articles and substances will extend the general permit requirements to bulk shipments of dangerous cargoes; will change the requirement for a written notice to a "prior" notice to the COTP; will require the reporting of operations handling flammable liquids in excess of 10 net tons whether in containers or hulk shipments; and will require a general permit for bulk shipments of cargo which involve a particular hazard. The proposed change to 33 CFR 126.29 regarding supervision and control of dangerous cargo will add requirements about reporting of discharge of dangerous liquid commodities into waters of the United States, which may create a potential hazard or toxic condition in the port area. The proposed change to 33 CFR 126.31 regarding termination or suspension of a general permit will permit the District Commander instead of the Commandant to revive a terminated general permit. It allows for closer liaison and reduces correspondence between waterfront facilities and the Coast Guard.

ITEM PH 6-69-LOAD LINES

6a-RAILS AND GUARDS

On July 21, 1968, the International Convention for Load Lines, 1966, became effective. The implementing regulations were published on July 12, 1968, as 46 CFR Part 42 and as miscellaneous amendments to 46 CFR Parts 43 to 46. With this Convention in effect various amendments now are necessary to 46 CFR Part 31 (Tank Vessels), Part 72 (Passenger Vessels), Part 92 (Cargo and Miscellaneous Vessels), and Part 175 (Small Passenger Vessels) to bring those regulations up to date, to show cross references to the applicable load line regulations, or to describe vessels on international voyages subject to this Convention.

One of the provisions covered in the 1966 International Load Line Convention concerns rails and guards. Prior to this Convention no specific standard rail or bulwark height was specified for vessels on international voyages. The Coast Guard in its regulations required a basic 36inch minimum height (18-inch maximum course spacing). The rails accessible to passengers on passenger vessels have been required to be 42 inches high. To obtain reduced freeboards under the 1966 International Load Line Convention, it is necessary, in most cases, to meet the minimum Convention rail and bulwark height of one meter (391/2 inches) and a 15-inch maximum course spacing on all exposed peripheries of the freeboard and superstructure decks. This applies to existing or new vessels on international or coastwise voyages, but no changes in rail or bulwark heights are required for existing vessels retaining a previous load line assignment.

The rail height requirements have been "standardized" in nearly all instances at 39½ inches to comply with the Convention and to provide a standard minimum height. The 42-inch height requirement for spaces accessible to passengers on passenger vessels has been lowered to the standard 39½ inches. Although the 1966 International Load Line Convention specifically excludes Great Lakes vessels from its jurisdiction, it is proposed to have the regulations governing Great Lakes vessels to be the same as for vessels covered by the Convention with respect to determinations of rail heights. Also, provisions have been included for the relaxation of these requirements when it can be satisfactorily shown that the voyage conditions are sufficiently sheltered.

To acomplish these changes for rails and guards, it is proposed to amend 46 CFR 32.01-10 (Tank Vessels), 72.40-1, 72.40-5, and 72.40-90 (Passenger Vessels), 92.25-1, 92.25-5, and 92.25-90 (Cargo and Miscellaneous Vessels), 177.35-1 (Small Passenger Vessels), and 190.25-1, 190.25-5, and 190.25-90, (Oceanographic Vessels).

66-EXTENDED FREEBOARD TABLE FOR GREAT LAKES VESSELS

At present the load line regulations for Great Lakes vessels do not have a freehoard table for vessels over 750 feet. Vessels over 750 feet in length are now under construction and intended for use on the Great Lakes. As an interim measure the United States/Canadian Joint Technical Committee for Great Lakes Load Lines (sponsored jointly by the U.S. Coast Guard and Canada's Department of Transportation and composed of industry, ship operators, classification societies, and government agencies from Canada and the United States) has recommended the adoption of a freeboard table for vessels from 750 to 1,000 feet in length. This proposal duplicates the Type B Table of the 1966 International Load Line Convention from 800 to 1,000 feet. A straight line interpolation is employed between the end of the existing Great Lakes Table at 750 feet and the 1966 Convention figure at 800 feet. To accomplish this, it is proposed to amend 46 CFR 45.10-1(b), and 45.15-97, and to add 46 CFR 45.10-105.

ITEM PH 7-69-PERSONNEL

7a-OFFICERS AND SEAMEN FOR OCEANOGRAPHIC VESSELS

The proposed 46 CFR Part 20, regarding officers and seamen for oceanographic vessels is to implement the objectives of Public Law 89–99 (46 U.S.C. 441–445), with respect to the licensed officers and unlicensed crew members employed on board oceanographic vessels. This proposal is the personnel counterpart to the inspection and certification regulations which were written to implement the objectives of Public Law 89–99, and published in the Federal Register dated January 27, 1968.

Public Law 89–99 recognized that many of the provisions provided in Titles 52 and 53 of the Revised Statutes might be inconsistent with the mission of an oceanographic vessel, and therefore the statute provided means to accommodate these inconsistencies through exemption by regulation. The proposed regulations require that present procedures prescribed under 46 CFR Parts 10, 12, and 14 through 16 shall apply to all personnel serving on board oceanographic vessels except as outlined in the proposal. The specific changes to these procedures are proposed to meet the objectives of Public Law 89–99.

In the development of minimum standards for licensed officers, special provisions are provided to assist in providing an adequate manpool of licensed officers for the smaller oceanographic vessels and at the same time provide means for such licensed officers to have their licenses upgraded in other areas of marine activity.

76-MANNING OF SCHOOLSHIPS

It is proposed to amend 46 CFR 167-60-15, regarding manning and persons allowed to be carried on nautical schoolships, to have the Officer in Charge, Marine Inspection, specify the minimum manning in the Certificate of Inspection and to permit use of qualified students to perform appropriate duties. The Coast Guard is charged with the responsibility of specifying minimum manning requirements for all certificated vessels; and, it is felt that, irrespective of whether or not the vessel is documented, the minimum number of officers and crew necessary for the safe navigation should be stated in the vessel's Certificate of Inspection. The reason for this change is to assure continuity and adequate manning for certificated nautical schoolships. It is desirable to permit senior cadets to perform the required watchstanding duties when they become qualified. When qualified cadets are

ITEM PH 8-69-OPERATIONS

8a-FIREMAN'S OUTFITS

Annex III and portions of Annex IV of the amendments to the International Convention for the Safety of Life at Sea, 1960 (SOLAS), as adopted by the Thirteenth Session of the Maritime Safety Committee of the Intergovernmental Maritime Consultative Organization (IMCO), apply to both new and existing tank vessels and cargo vessels on international voyages. Included in these changes is a proposal to require a minimum of two complete fireman's outfits for each cargo and tank vessel subject to the 1960 SOLAS Convention. Since the United States agrees with these amendments and accepted them as adopted by the Maritime Safety Committee, it is proposed to:

(a) Revise the Tank Vessel Regulations by amending 46 CFR 35.30-20 to require on all manned tank vessels having tanks which exceed 15 feet in depth, and all tankships of 1,000 gross tons and over to be provided with at least two emergency outfits.

(b) Revise the Cargo and Miscellancous Vessel Regulations by amending 46 CFR 96.35–5 and 96.35–10 to require on all cargo and miscellaneous vessels on an international voyage to be provided with at least two emergency outfits.

(c) Revise the Oceanographic Vessel Regulations by amending 46 CFR 195.35-5 and 195.35-10 to require on all oceanographic vessels other than unmanned barges to be provided with at least two emergency outfits.

(d) Revise the items included in the fireman's emergency outfit by adding requirements that boots and gloves shall be of rubber or other electrically nonconducting material; the helmet shall provide effective protection against impact; and protective clothing shall be of material that will protect the skin from the heat of fire and burns from scalding steam, while the outer surface shall be water resistant.

86-MAXIMUM CARBON MONOXIDE CONCENTRATION

The use of power-operated industrial trucks on board inspected vessels has been allowed under certain specific conditions as set forth in the regulations applicable to designated categories of vessels. This proposal revises the maximum acceptable carbon monoxide concentration for holds and intermediate decks where persons work. This proposal will reduce the acceptable maximum of carbon monoxide concentration from "below 100 parts per million" to "not more than 50 parts per million (.005%) as a time-weighted average, and persons shall be removed from the area if the concentration exceeds 75 parts per million (.0075%)." This proposal also requires the senior deck officer to see that tests of the carbon monoxide content are made in the areas in which persons are working as frequently as conditions require to insure that dangerous concentrations do not develop. To accomplish this it is proposed to have the same changes made to 46 CFR 35.70-20(d) (Tank Vessels), 78.80-15(c) (Passenger Vessels), 97.70-15(c) (Cargo and Miscellaneous Vessels), and 146.09-15(c) (3) (Dangerous Cargo Regulations).

ITEM PH 9-69-NAVIGATIONAL LIGHTS

90-LIGHTS FOR BARGES TRAVERSING BOTH INTERNATIONAL AND INLAND WATERS

The provisions of 33 CFR 80.16b require barges which begin and terminate a trip in Inland Waters to exhibit the appropriate Inland Lights. If during the course of the voyage such barges pass into International Waters, then such barges must alter the lights in mid-voyage to conform with the International Rules while on International Waters. It is proposed to publish an "interpretation" as 33 CFR 86.05-10 so that barges subject to 33 CFR 80.16b which have occasion during their voyages to operate upon waters to which the International Regulations for Prevention of Collisions at Sea (33 U.S.C. 1051-1094) apply may, for the duration of such voyage, display the navigational lights and shapes required by the International Rule 5 (33 U.S.C. 1065) rather than the lights required by 33 CFR 80.16b.

96-NAVIGATION LIGHTS FOR MOTORBOATS, UNINSPECTED VESSELS, AND SMALL PASSENGER VESSELS

The performance standards for navigation lights are specified in the applicable Rules of the Road and in section 3 of the Motorboat Act of 1940, as amended. The navigation lights carried on vessels, including motorboats, shall meet these requirements. In the administration of these requirements, it was determined that light intensity standards could provide a measurable parameter for defining visibility. These "Light Intensity Standards" were published in the Federal Register of December 27, 1967, as additions to 46 CFR Part 25 (Uninspected Vessels), Part 113 (Electrical Engineering), and Part 184 (Small Passenger Vessels under 100 Gross Tons). This change caused a review of many existing installations on motorboats, and unfortunately in many cases it was difficult to ascertain compliance without dismantling the lights or using special equipment. Regarding applicability of performance requirements and "light intensity standards" previously published, it is proposed to add to 46 CFR 25.05-15 and 184.15-5 statements of applicability for motorboats, uninspected vessels, and small passenger vessels to the effect that the light intensity standards published December 27, 1967, shall apply on and after January 1, 1971, and that new navigation lights installed and replacements of existing lights made on and after January 1, 1971, shall be of an approved type. These proposals are intended to establish a reasonable time frame for compliance by vessels, including motorboats, carrying navigation lights. £

THE NEW MARINE ENGINEERING REGULATIONS

The "New Look" in Regulations Is Here!

Subchapter F, the Marine Engincering Regulations, was published as Part II of the Federal Register of 18 December 1968. The use of the regulations is currently optional but will become mandatory on 1 July 1969.

The term "new" is applied, yet there is no fundamental or farreaching change in requirements. The Coast Guard has neither abdicated responsibility nor relinquished authority for providing safety in design, fabrication, and repair of boilers, pressure vessels, pressure piping, and machinery for marine application. So what is new?

The avowed aim of the new document is to reduce the volume of regulatory material and, at the same time,

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expand the details for design and fabrication by adopting certain industry standards.

There are thousands of pages of appropriate national industry standards from which the Marine Engineering Regulations of the past have drawn heavily. These industry standards are kept current and are published in detail. They represent the efforts of leading members of the engineering community. The "new" regulations adopt, without reproducing, entire volumes of these industry standards and then cover in some detail the specific areas not included in the adoption.

Several questions immediately arise: If we are adopting by reference, why is the remaining volume of regulations so large? The adoption is being made while attempting to keep existing regulations and policy pretty much intact. In doing this the "new" regulations not only cover items listed as not accepted in the general adoption of industry standards, they also include items not covered or inadequately covered in those standards. They attempt to develop these areas in the detail characteristic of the adopted industry standards.

This is the beginning, then, and not the end. The next objective is to examine exceptions and differences in the light of familiarity with industry standards which will now

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lessons from casualties

THE CURRENT THAT KILLS

Electricity is one of man's most useful servants, yet it is also one of the most dangerous. We take for granted the countless conveniences that are provided to us through electric power, but we seldom stop to consider the jolting suddenness with which death can strike when electricity is misused.

Aboard ship, electricity is a vital element in the operation of just about every system and appliance. But the marine environment is a particularly dangerous one for the use of electricity. Wet conditions, a preponderance of metal, and the presence of complex circuitry in confined areas demand that extra caution be exercised when working with electricity. Unfortunately, carelessness and ignorance continue to take their toll, as a number of casualties in recent years suggest.

A man used to his job may tend to forget the simplest precautions, as was the case in a recent incident aboard a drilling barge. A maintenance man went aboard to disconnect a piece of equipment. Three electrical cables were attached to the equipment, one of which ran to a 115-volt a.c. source. The maintenance man had 2 years' experience with this type of equipment, and the job was a routine one. Despite his experience, he chose to cut the wires instead of unplugging them. What's more-the plugs were only about a foot from the point where the wires were cut!

The maintenance man neglected to disconnect the power source and, standing on the wet, wooden floor of the drilling rig, he proceeded to cut the wires with a pair of insulated pliers. Two of the wires were nonenergized and were severed uneventfully, but the third one was the killer.

The maintenance man was knocked down by the shock. He "froze on" to the pliers. A nearby driller took quick action, knocking the hot wire away with a wooden mop handle. But efforts to revive the maintenance man failed.

Knowledge of electrical systems doesn't guarantee safety, but ignorance is an even deadlier enemy. A young master of a small-crew/production boat was informed by a shore mechanic that the engineroom lights had gone out. The vessel was in drydock at the time, and the mechanic suggested that an electrician be obtained to repair the lights.

The master chose to take the matter in his own hands, and he went below, equipped with an insulated fuse puller, a flashlight, and some spare fuses. He was accompanied by a deckhand. The master went behind a dead front switchboard, which was equipped with all the standard marine safety features, including a gate to prevent entry behind the board. Moments later the master yelled, "shore power!" The deckhand rushed from the vessel and disconnected the shore power. He returned to the engineroom and found the master's body slumped behind the switchboard.

The master clearly had scanty knowledge of the electrical system, for there were no fuses in the area that could have remedied the faulty engineroom lights. Yet he had gone behind the switchboard equipped with fuses and a fuse puller. His misguided efforts in the darkened room killed him.

While carelessness is a lethal partner when working with electricity, danger may also lurk in improper installation of electrical systems and defective wiring. These faults can waylay any man, no matter how careful and knowledgeable he may bc.

A mate aboard an uninspected towing vessel went into the galley to get a can to put lube oil in. He knelt down with one knee on the metal deck and one hand on the metal sink and reached into a cabinet under the sink. He received a severe shock when his hand touched a bare electrical terminal on a heating unit installed in the cabinet to heat water for sterilizing dishes. The jolt proved fatal.

The type of heating unit in question has since been enclosed to prevent accidental contact with energized parts. But the improper installation claimed one life. This type of installation would not have been approved if Coast Guard inspection and certification of the vessel had been required.

PORTABLE ELECTRIC EQUIPMENT... Check for ...

National Safety Council

Errors in wiring account for a considerable number of electrocutions. On board a tanker last year a crewman was rigging temporary lights with an extension cord in the forecastle area. He was working alone.

When the crewman failed to appear for an assigned wheel watch a group of his shipmates set out to locate him. They found his body in the forepeak area, his left hand near an extension cord with an attached lighting fixture. Crossed wires had caused the lighting fixture to be charged when the extension cord was plugged in. The crewman had apparently touched the live fixture while standing on a steel deck still wet with salt water from an earlier tank cleaning process. It was not determined who was responsible for the crossed wires.

In another case, a yacht was being outfitted for interisland trade in the Bahamas. Two men were in the engineroom mounting a generator bracket on the port main engine. One of the men was working with an electric drill which was plugged in by means of a two-prong plug. This plug had been substituted for one of the three-prong variety. The ground wire, though not attached at the plug end, was still attached to the drillcase.

Without warning, the drill bit broke off, causing the drill to twist in the operator's hands. The drill struck a nearby oil plug, rupturing the drill wiring and insulation. The ground wire contacted the energized wire. Result: 110 volts on the drill casing.

The operator's companion unplugged the drill and snatched it from the victim's hands, but it was too late. If the ground wire had been properly connected, the casualty would not have occurred.

In all of the above cases, a simple task resulted in death. Most—if not all—of the accidents could have been prevented. In those cases where neglect of the simplest precautions or ignorance of electrical systems was the cause, sound judgment should have prevailed. It's an easy matter to take precautions or to leave a job for a qualified electrician if you're not sure of yourself.

In cases where improperly installed or wired equipment is at fault, the answer lies in regular inspection and maintenance by a qualified electrician. Equipment should be installed in such a way as to minimize the risk of electrocution, and wiring or repairs should be undertaken only by an electrician.

Electricity is more a servant than a killer, but the man who forgets its dangers is the one most likely to receive a jolting reminder. It also may well be his last reminder—of anything.

CARGO GEAR-THE BULL ROPE

Recently a large tankship suffered a marine casualty while the crew was preparing to do maintenance work on the cargo gear. As a cargo boom was being positioned on the forecastle, the bull rope parted. The boom fell about 30 feet downward, striking and instantly killing a seaman tending the starboard outboard guy.

An investigation of the casualty showed that there was nothing in the operation of positioning the boom that could have caused a strain on the wire bull rope sufficient to part it at its rated breaking strength. The bull rope, a 100 foot 3/4" 6 x 19 right regular lay fiber core wire rope, was believed to be approximately five years old. It was used only about five times a year. The cargo gear and bull rope were slushed down after each use. The slushing material used was a lube oil and asphalt or graphite mixture, which had been recommended as a preserver by the technical branch of a leading wire rope manufacturer.

A close examination of the parted bull rope revealed that there were no fish hooks throughout the length of the wire, except fresh ones in the immediate area of failure. In addition, there was no visible evidence of wear, deformation, kinking, necking, cuts or other readily recognizable evidence of pending failure. The slushing was dry and there was no unusual amount of surface discoloration caused by rust.

Unlaying of the wire revealed a dry rotten core which crumbled at the touch. Heavy internal corrosion, not evident from the surface, was shown. There was no internal lubrication. The regular external preservation failed to adequately penetrate and lubricate the wire internally, allowing the internal wires and core to dry and corrode.

This deterioration may have been accelerated by the preserver trapping air and moisture inside the wire, with the core aiding the process by absorbing and holding the moisture. A dry core wears and crushes faster than a lubricated one and will absorb moisture to the detriment of rope service life.

The wire bull rope in this casualty was routinely stored by securing it around a set of cleats on the kingpost on the forecastle. This stowage practice not only exposed the wire to salt spray and weather but also may have introduced a kink or increased the probability of bending fatigue in the wire.

The three principal causes of excessive corrosion of wire rope are lack of proper lubrication, exposure to salt water, and idle periods. All of these causes were prevalent in this casualty. They could have been avoided. Deterioration is sometimes difficult to find when visual signs are present, but it is even more difficult to discover when hidden causes are responsible.

Proper care of wire rope in general, and running gear in particular, demands careful attention to lubrication, weather protection and frequent flexing in use.

MARINE ENGINEERING REGULATIONS

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develop among the Coast Guard's inspection and technical personnel. The understanding that will come from this familiarity will allow acceptance of more of the industry standards. It will also enable the Coast Guard to help with the improvement and expanding coverage of these standards. The objective regulations as an end product, then, would contain only reference to the appropriate standard and coverage of those features so peculiar to the marine service that they cannot be provided for in basic industry standards. One result of the change being made is that industry standards groups will be more prone to consider marine problems when they are developing standards.

Another question might be: When will CG-115 be published?

The magnitude of this rewrite and the complexity of trying to cover all points and yet avoid contradictions will make many changes and corrections necessary. The new procedure for keeping current and providing for changes will involve innovations. Therefore, publication of these regulations in pamphlet form (CG-115) is not planned for the immediate future.

The "New" Marine Engineering Regulations are here!

Regulations through adoption by reference is underway. You can be of great help in the steady development of these new regulations. Anything you can suggest which will clarify, simplify, or shorten them will contribute. Comments should be submitted to Commandant (MMT-2), U.S. Coast Guard, Washington, D.C. 20591.

AMENDMENTS TO REGULATIONS

Title 33 Change

Chapter I --- Coast Guard, Department of Transportation

SUBCHAPTER N-ARTIFICIAL ISLANDS AND FIXED STRUCTURES ON THE OUTER CON-TINENTAL SHELF

PART 140-GENERAL PROVISIONS

PART 144—LIFESAVING APPLIANCES

Miscellaneous Amendments

The Coast Guard has the administrative responsibility with respect to safety equipment and other matters relating to the protection of life and property on the artificial islands and fixed structures located on the outer continental shelf. The regulations in 33 CFR Parts 140 through 146 set forth the applicable requirements.

The purpose of this document is to bring these regulations up to date. The amendment to 33 CFR 140.01-5 describes the assignment of the functions under 43 U.S.C. 1333 to the Coast Guard under the Department of Transportation Act. The amendment to 33 CFR 140.05-5 corrects the reference to the Regulations for Preventing Collisions at Sea. The amendment to 33 CFR 144.01-35 sets forth an interpretation regarding use of required equipment by recognizing and permitting the use of safety litters capable of being safely hoisted with an injured person in addition to the Stokes litter.

As the amendments in this document are descriptions of organization, editorial corrections, and interpretations, it is hereby found that compliance with the Administrative Proce-

dure Act (respecting notice of proposed rule making, public rule making procedure thereon, and effective date requirements) is unnecessary and exempted under the provisions of section 553 of Title 5, United States Code.

The complete text of these changes has been published in the Federal Register of December 17, 1968.

Title 46 Change

VESSEL INSPECTION AND CERTIFICATION

Miscellaneous Amendments

The purpose of this document is to effect various changes to the navigation and vessel inspection regulations contained in 46 CFR Chapter I with respect to discharging bulk hydrochloric acid, isolation of tank spaces containing liquefied flammable gases in tank vessels, and miscellaneous requirements regarding lifesaving cquipment, fire protection, and electrical engineering.

Pursuant to the notice of proposed rule making published in the Federal Register of February 29, 1968 (33 F.R. 3564-3570), and the Merchant Marine Council Public Hearing Agenda dated March 25, 1968 (CG-249), the Merchant Marine Council held a public hearing on March 25, 1968, for the purpose of receiving comments, views, and data. The proposed changes covered by this document were identified as Items PH 2-68 (Dangerous Cargoes), PH 3-68 (Lifesaving Equipment), PH 4-68 (Fire Protection), and PH 6-68 (Electrical Engineering) in the Agenda (CG-249).

Interested persons have been afforded an opportunity to participate in the consideration of these proposals and certain changes were made in the proposals as a result thereof. Briefly, the actions taken are as follows:

2a-Hydrochloric acid; discharging in bulk: This proposal was accepted without change. The comment received was not accepted.

2b—Liquefied flammable gases; isolation of tank spaces: Three comments were received regarding 46 CFR 38.05-1(d) about cargo tank spaces, and on the basis of two comments the text of the addition to § 38.05-1(d) was revised. The third comment was not accepted. The other proposals were accepted without change.

3a—Primary lifesaving equipment for small vessels: One written comment of an editorial nature to 46 CFR 94.10-55(a)(2) was submitted and accepted. The other proposals were accepted without change.

3b—Paddles for liferafts: This proposal was accepted without change.

3c—Manning of lifeboats and liferafts: Two comments were received with respect to this proposal, one favorable and one of an editorial nature to 46 CFR Tables 78.14–10(a) and 97.14–10(a) which was accepted. The proposal as revised was accepted.

3d—Small tank and cargo vessels; ring lifebuoys and water lights for: One comment was received which would have limited the number of ring lifebuoys to eighteen (18) for vessels of 400 feet in length and over. The comment was not accepted. The proposal was accepted without change.

3e—Buoyant work vests; permissive use on uninspected vessels: This proposal was accepted without change.

3f—Rescue boats: The comment received with respect to this proposal recommended clarification of construction requirements for rescue boats in exposed waters. The comment was accepted. As revised, this proposal was accepted.

PH 4-68—Fire protection: This item was accepted as proposed. No comments were received.

6a—Electrical equipment in hazardous locations: The comment received with respect to this proposal proposed the prohibition against belt drives be broadened to prohibit the use of belt drives with any machinery in hazardous locations. The comment was accepted. The proposal, as revised, is accepted.

6b—Arrangement of generator cable runs: The comment was accepted with respect to 46 CFR 111.55-5(a)(1) which clarifies the intent of the regulation with respect to the location of the overcurrent protective device. The proposal, as revised, is accepted.

6c—Electrical cable: Twelve comments were received and the five changes recommended were accepted. The proposal, as revised, is accepted.

6d—Steering gear installations, electric: Five comments were received with respect to this proposal. Two comments recommended changes to § 111.65-55(e)(2) so this regulation would conform with IEEE Standard No. 45 and one recommended retention of § 111.45-10(b)(4). These comments were not accepted. The two other comments recommended an editorial change in 46 GFR 111.65-55(f)(4) and were accepted. The proposal, as revised, was accepted.

6e-Electrical installations on tank vessels: Twelve comments were received. Two comments supported the proposal to permit squirrel cage explosion proof motors in cargo compressor rooms by amendments to 46 CFR 32.45-1(f)(1) and 111.70-10 (c)(1) while two comments were against the proposal. The latter comments were accepted and the proposal was not accepted. Two comments supporting the proposals with respect to lighting for cargo handling rooms were accepted. However, the proposed units were renumbered because of other changes which were accepted. Two comments of an editorial nature were accepted. The comment suggesting the permissive word "may" in lieu of "shall" in the proposed new 46 CFR 111.70(c)(1) (ii) was not accepted. The comment suggesting a prohibition against electrical through runs in cofferdams adjacent to cargo tanks was not accepted. The proposal, as revised, was accepted.

6f—Switchboards and propulsion controls: One comment was received pertaining to the explanatory note accompanying the proposal, and no action was necessary thereon. The proposal is applicable to inspected vessels generally rather than being limited to smaller vessels as interpreted by the comment. The proposal was accepted without change.

6g—Gas turbine for emergency generators: Four comments were received and two were accepted while portions of two others were accepted. Two of the comments were identical, and one part thereof was, in turn, closely similar to the third comment which was accepted. The proposal, as revised, was accepted.

6h—General alarm systems: This proposal was accepted without change. No comments were received.

6i—Communications and alarm systems and equipment: The comment was accepted which discussed the need for further consideration of the subject during the general study of automated ships and recommended final actions be postponed until after the results of that study are made available. Therefore, the proposal was not accepted.

The actions and recommendations of the Merchant Marine Council with respect to the comments and views received and changes in the proposals in Items PH 2-68, 3-68, 4-68, and 6-68 (CG-249, Mar. 25, 1968, pages 121 to 123, 183 to 208, and 210 to 244, inclusive), are hereby adopted.

The complete text of these changes has been published in the Federal Register of December 28, 1968, Part II.

These regulations may be obtained from the local marine inspection office or by writing Commandant (CAS-2) U.S. Coast Guard, Washington, D.C. 20591.

PROPOSED RULEMAKING AND PUBLIC HEARING FEBRUARY 12, 1969, AT SEATTLE, WASH.

COMMERCIAL FISHING VESSELS DISPENSING PETROLEUM PRODUCTS

Manning, Inspection, and Certification

The Commandant, U.S. Coast Guard, is considering proposals to implement the provisions of Public Law 90-397 entitled "An Act to exempt certain vessels engaged in the fishing industry from the requirements of certain laws" (Act of July 11, 1968, 82 Stat. 341). This law exempted for a 5-year period cannery tender or fishing tender vessels of not more than 500 gross tons used in the salmon or crab fisheries of the States of Oregon, Washington, and Alaska from the statutory requirements in Sections 88, 367, and 404 of Title 46, United States Code, and added to Section 391a(1) of Title 46, United States Code (Tanker Act, R.S. 4417a, as amended), the following sentence: "Notwithstanding the first sentence hereof, cannery tenders, fishing tenders, or fishing vessels of not more than 500 gross tons used in the salmon or crab fisheries of the States of Oregon, Washington, and Alaska when engaged exclusively in the fishing industry shall be allowed to have on board inflammable or combustible cargo in bulk to the extent and upon conditions as may be required by regulations promulgated by the Secretary of the department in which the Coast Guard is operating." Briefly, the proposals under consideration are as follows:

(a) To add minimum requirements as 46 CFR Part 105 for those cannery tenders, fishing tenders, and fishing vessels of not more than 500 gross tons, which include, as an incidental part of their occupation, the transporting and dispensing of its petroleum products to other vessels. These regulations are limited to that portion of the vessel involved in the storage, carriage and handling of petroleum products, as well as to state the minimum manning requirements when required for these vessels by other specific provisions of laws. After determining a vessel has met the prescribed requirements in 46 CFR Part 105, the Coast Guard will issue a permit in the form of a "letter of compliance" which will be effective for a period not exceeding 2 years.

(b) To add requirements governing the issuance of Merchant Mariner's Documents endorsed as "tankerman for commercial fishing vessels only." This document will be "validated for emergency service". The procedures for applicants to obtain this document will be the same as for obtaining other documents, and they are published in 46 CFR Part 12, "Certification of Seamen" (Subchapter B). The applicants will be required to pass a modified examination, either orally or written, for "tankerman" as set forth in 46 CFR 105.60-10.

The document published in the Federal Register of December 27, 1968 contains these proposals together with appropriate references to statutory authorities which authorize or establish requirements for fishing vessels, which are applicable to vessels exempted by the Public Law 90–397 from certain inspection laws. Interested persons may participate in this proposed rule making by submitting written or oral data, views, arguments, or comments as they may desire on or before February 12, 1969. All submissions may be made in writing to the Commander, 13th Coast Guard District, 618 Second Avenue, Seattle, Wash. 98104, or they may be made orally or in writing at a public hearing to be held on February 12, 1969, starting at 10 a.m., P.s.t., in Customs Court Room 1057, Federal Office Building, 909 First Avenue, Seattle, Wash., under the direction of the Commander, 13th Coast Guard District,

In addition to publication in the Federal Register, of December 27, 1968, copies of the printed document have been mailed to persons and organizations who have expressed to the Commandant (CMC) a continued interest in this subject and have requested that copies of proposed changes in rules and regulations be furnished them. Attached to the printed copies of this document is a small quantity of Form CG-3287 which may be used for submittal of comments. Additional copies of Form CG-3287 may be reproduced by typewriter or otherwise. Copies of the printed document will also be furnished, upon request to the Commander, 13th Coast Guard District, 618 Second Avenue, Seattle, Wash. 98104, or the Commandant (CMC), U.S. Coast Guard, Washington, D.C. 20591, so long as they are available. After the supply of extra copies is exhausted, copies will be available for reading purposes in the Office of the Commander, 13th Coast Guard District, the Office of the Commandant (CMC), and at offices of the other Coast Guard District Commanders.

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 GFR 146 and 147 (Subchapter N), dated January 1, 1968 and Supplement dated July 1, 1968, are now available from the Superintendent of Documents, price: basic book \$2.50, Supplement: 20 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 (5-1-68).
- Marine Engineering Regulations and Material Specifications (3-1-66). F.R. 12-6-66, 12-20-67, 6-1-68, 12-18-68.
 Rules and Regulations for Tank Vessels (5-2-66). F.R. 12-6-66, 12-9-67, 12-27-67, 1-26-68, 1-27-68, 2-10-68, 4-12-68, 6-1-68, 10-2-68, 12-18-68, 12-28-68.
- 129 Proceedings of the Merchant Marine Council (Monthly).
- 169 Rules of the Road—International—Inland (9–1–65). F.R. 12–8–65, 12–22–65, 2–5–66, 3–15–66, 7–30–66, 8–2–66, 9–7–66, 10–22–66, 12–23–67, 6–4–68.
- 172 Rules of the Road-Great Lakes (9-1-66).
- 174 A Manual for the Safe Handling of Inflammable and Combustible Liquids (3-2-64).
- 175 Manual for Lifebaatmen, Able Seamen, and Qualified Members of Engine Department (3-1-65).
- 176 Load Line Regulations (1-3-66). F.R. 12-6-66, 1-6-67, 9-27-67, 7-12-68.
- 182 Specimen Examinations for Merchant Marine Engineer Licenses (7-1-63).
- 184 Rules of the Road—Western Rivers (9–1–66). F.R. 9–7–66, 12–23–67.
- 190 Equipment Lists (8-1-68). F.R. 11-7-68, 11-8-68, 11-16-68, 11-19-68, 11-20-68, 12-11-68, 12-18-68.
- 191 Rules and Regulations for Licensing and Certificating of Merchant Marine Personnel (5-1-68). F.R. 11-28-68.
- 200 Marine Investigation Regulations and Suspension and Revocation Proceedings (5-1-67), F.R. 3-30-68.
- 220 Specimen Examination Questions for Licenses as Master, Mate, and Pilot of Central Western Rivers Vessels (4–1–57). 227 Laws Governing Marine Inspection (3–1–65).
- 239 Security of Vessels and Waterfront Facilities (5-1-68).
- 249 Merchant Marine Council Public Hearing Agenda (Annually).
- 256 Rules and Regulations for Passenger Vessels (5-2-66). F.R. 12-6-66, 1-13-67, 4-25-67, 8-29-67, 12-20-67, 1-27-68, 4-12-68, 10-2-68, 12-18-68, 12-28-68.
- 257 Rules and Regulations for Cargo and Miscellaneous Vessels (1-3-66). F.R. 4-16-66, 12-6-66, 1-13-67, 12-9-67, 1-26-68, 1-27-68, 2-10-68, 4-12-68, 6-1-68, 10-2-68, 12-18-68, 12-28-68.
- 258 Rules and Regulations for Uninspected Vessels (3-1-67). F.R. 12-27-67, 1-27-68, 4-12-68, 12-28-68.
- 259 Electrical Engineering Regulations (3-1-67). F.R. 12-20-67, 12-27-67, 1-27-68, 4-12-68, 12-18-68, 12-28-68.
- 266 Rules and Regulations for Bulk Grain Cargoes (5-1-68).
- 268 Rules and Regulations for Manning of Vessels (5-1-67). F.R. 4-12-68.
- 293 Miscellaneous Electrical Equipment List (9-3-68).
- 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, 12-28-61, 4-10-62, 10-13-62, 8-31-62, 4-24-63, 10-27-64, 7-29-65, 8-9-66, 10-15-68, 12-17-68.
- 323 Rules and Regulations for Small Passenger Vessels (Under 100 Gross Tons) (1-3-66). F.R. 12-6-66, 1-13-67, 12-27-67, 1-27-68, 4-12-68, 11-28-68, 12-18-68, 12-28-68.
- 329 Fire Fighting Manual for Tank Vessels (4-1-58).

CHANGES PUBLISHED DURING DECEMBER 1968

The following have been modified by Federal Registers:

CG-320, Federal Register, December 17, 1968.

CG-190, Federal Registers, December 11 and 18, 1968.

CG-115, CG-123, CG-256, CG-257, CG-259, CG-323, Federal Register, December 18, 1968, Part II. CG-258, CG-123, CG-256, CG-257, CG-259, CG-323, Federal Register, December 28, 1968.

