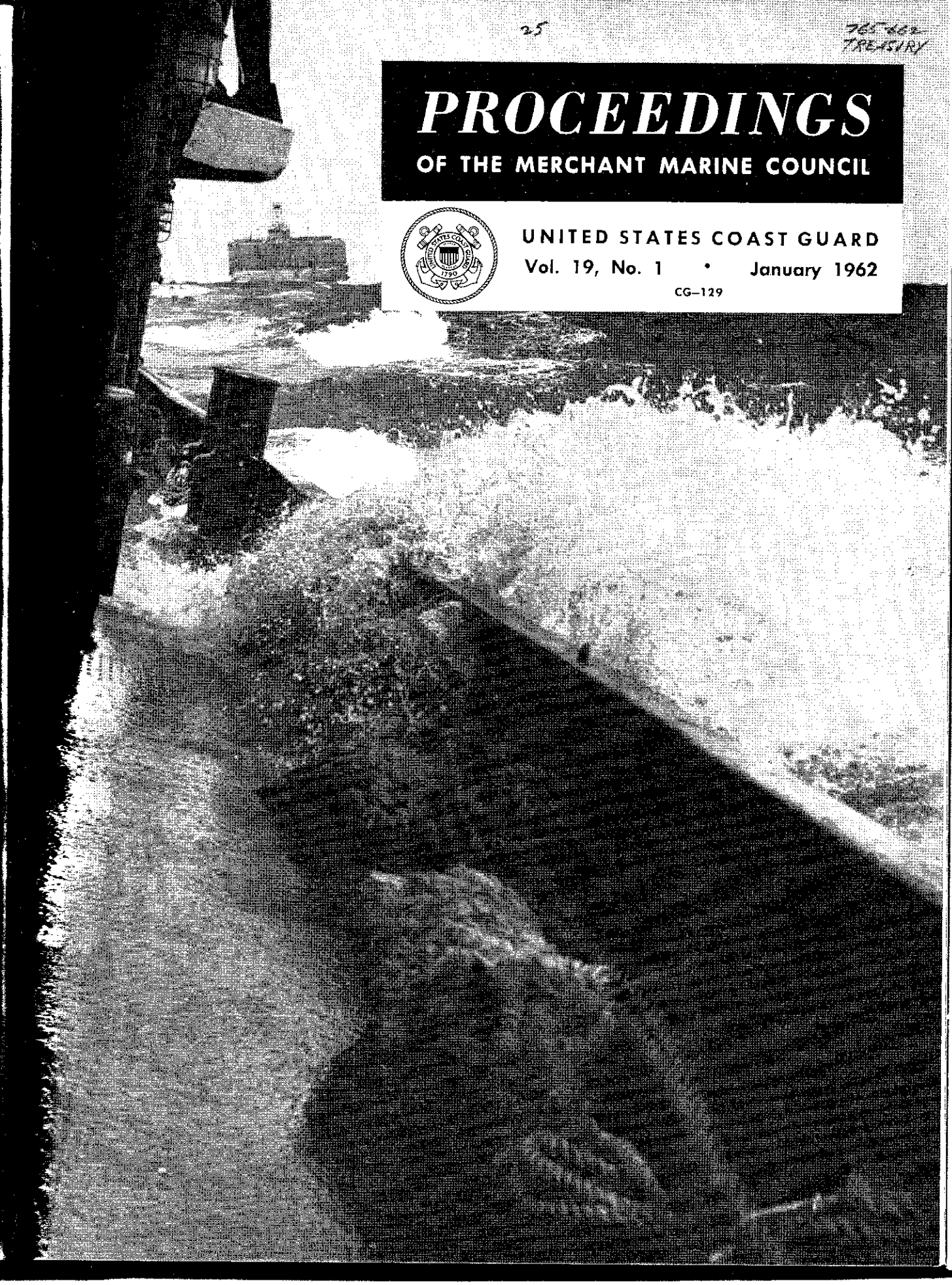
PROCEEDINGS
OF THE MERCHANT MARINE COUNCIL

UNITED STATES COAST GUARD
Vol. 19, No. 1 • January 1962
CG–129



PROCEEDINGS

OF THE

MERCHANT MARINE COUNCIL

Published monthly at Coast Guard Headquarters, Washington 25, D.C., 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 Bureau of the Budget October 3, 1957.

CONTENTS

PUBLIC LIBRARY OF THE HIGH SEAS

The "Public Library of the High Seas" was founded to provide the men who go to sea in American-flag ships with a library service not available to them through land libraries. Since 1921 port representatives of the American Merchant Marine Library Association have distributed 228,365 sea-going library units containing 13,104,412 books to American seamen. The AMMLA is the only national organization providing this type of service exclusively to the men who go to sea in American-flag ships.

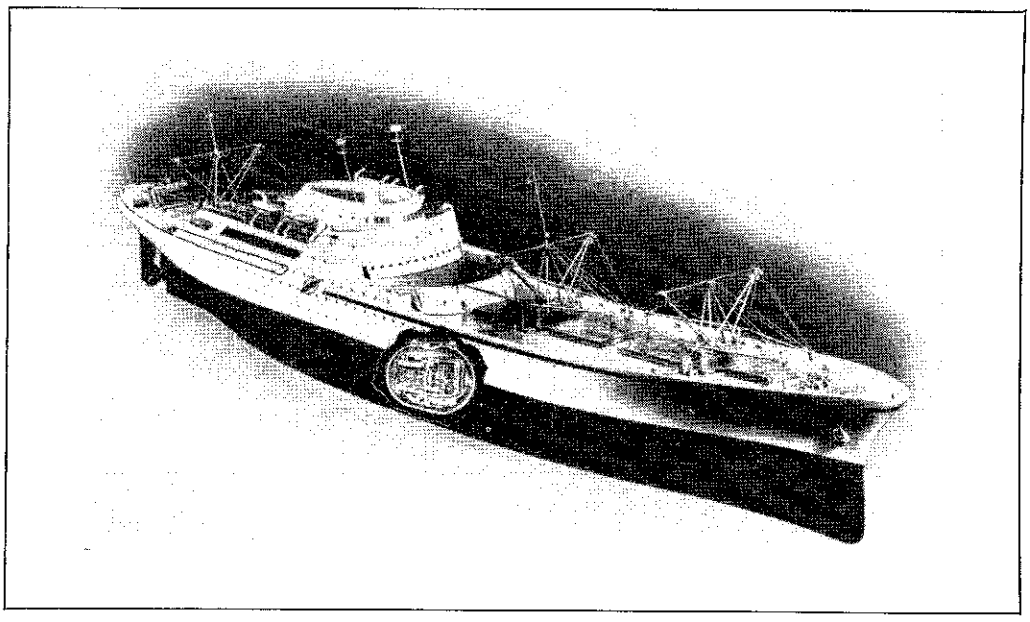
The need for this service was first recognized when the American Library Association approached the U.S. Shipping Board during World War I to assist with a program of supplying books to the men of the American Merchant Marine. The ALA provided the books which were voluntarily distributed by the social service division of the U.S. Shipping Board. When the activity became too detailed a program to be administered voluntarily, AMMLA was founded.

On May 27, 1921, the Board of Regents of the State of New York provided the Association with a charter. From a modest beginning of only four United States port offices, the activity has grown to its present status whereby nine port offices are required to administer the library service to the men who go to sea.

AMMLA provides every type of service rendered by land libraries. Each port office contains a shore library specializing in technical books which can be borrowed to assist those studying for license preparation and advancement in grades. The development of a Comprehensive Nautical Collection for research and reference at the New York Headquarters will ultimately result in the most extensive nautical collection in existence.

DIST. (SDL NO. 74)

A: a aa b c d (2); remainder (1)
Bn: n (35); c (16); e (5); f (4); h (3); g (2); remainder (1)
C: a b (less Quonset Pt.) c d e f g i k (p only) m o u (1)
D: i (5); a b c d e f g h j k l q (1)
E: o (New London only) (1)
List 141M
List 111



NS SAVANNAH

SS *Savannah*, first steamship to cross Atlantic; started voyage May 22, 1819, commemorated each year since 1933 as *Martime Day* by Presidential Proclamation.

AUTHORIZED

Authorized by P.L. 848, July 30, 1956, to be built jointly by the Maritime Administration and Atomic Energy Commission. Current cost estimates total $46,900,000—$28,300,000 by AEC for developing and building nuclear power plant; $18,600,000 by Maritime Administration for ship, including gyro stabilizers, shore facilities, training of the crew, and other costs associated with the ship. In addition to these funds, AEC is undertaking the development and fabrication of improved fuel cores.

REACTOR

A system of advanced design using pressurized water as coolant and moderator and fuel elements of about 4 percent U235 enrichment.

Power: 74 megawatts (million watts) maximum.

Active core: 66 in. high by 62 in. mean diameter, containing the fissionable material—7,050 kg. of uranium oxide (UO_2) in 32 fuel elements (164 rods each), clad in stainless steel. Life: 52,000 megawatt-days.

Pressure vessel: Enclosing the core and measuring 25′10½″ in height, 72″ inside diameter.

Primary shield: Steel and lead tank of water around pressure vessel.

Containment vessel: Steel plate, 60.5′ long and 35′ diameter.

Secondary shield: Of polyethylene plastic, lead, concrete, steel. Wood and steel, in alternating layers, act as a collision pad.

Gross weight: 2,500 tons: Reactor system, containment and shielding.

Operating pressure: 1,750 lbs. per sq. in.—Primary coolant.

Temperatures: 495° F., inlet; 521° F., outlet (Primary coolant).

Safeguards: Meets the safety requirements of the MA, the U.S. Coast Guard, U.S. Public Health Service, and American Bureau of Shipping; has met recommendations of the Advisory Committee on Reactor Safeguards of the Atomic Energy Commission.

In March 1961 the AEC held a Public Hearing on the safety aspects of the *Savannah* and on July 24, 1961, issued an authorization to fuel, start up, and test the reactor and conduct sea trials. Actual fueling of the reactor was commenced during the latter part of November 1961.

REACTOR CONTROL

Power level of the reactor is changed by movement of 21 boron-steel control rods. Two diesel generators of 750 k.w. capacity each will supply port and emergency electric power when the reactor is shut down.

CONSTRUCTION

Contract for construction signed with New York Ship Building Corp., Camden, N.J., at a price of $20,908,774.

ENGINE

DeLaval steam turbine, 20,000 normal shaft h.p., double-reduction geared to the single shaft (22,000 maximum h.p.).

PROPELLER

Five-bladed, nickel-manganese-bronze.

HULL

Contract for design signed with George G. Sharp, Inc., N.Y. Walter Kidde Nuclear Laboratories, Inc., N.Y., assisted with secondary shielding.

CARGO GEAR

Modified burtoning rig, based on the system originated by Francis Ebel of the Division of Ship Design, MA, and first used aboard S.S. *Schuyler Otis Bland*. Unique in appearance, it is composed of pipe sections rather than the more familiar masts and kingposts.

BUILDING SCHEDULE

Keel laid May 22, 1958 (Maritime Day). Launched, July 21, 1959. Reactor fuel loading, November 1961. Extensive dock and sea trials are the final step.

OPERATOR

States Marine Corp. (Del.) named operator.

TRAINING

Training in reactor theory, engineering and operation started September 29, 1958, for 16 licensed engineer officers supplied by the operator, together with 20 additional students from outside SML's ranks as follows: Kings Point (USMMA) (1), Maine Maritime Academy (1),

(*Continued on page 12*)

ELECTRICAL SAFETY IN SHIPS

By Captain O. T. Estes, USCG

Chief, Electrical Engineering Branch

Merchant Marine Technical Division, Headquarters

ELECTRICAL SAFETY in ships includes the prevention of shock, fire and even panic; I propose to take these one at a time and tie them into everyday experiences.

SHOCK

Much has been said and done to protect the unsuspecting person from electrical shock. Suppose you wish to install a washer or electric dryer in your basement. Or possibly you are remodeling your bathroom. Whether you do this job yourself or have a contractor do it, the work should be examined by the local city or county electrical inspector. Following the National Electrical Code (210–22 and 410–95) this inspector will require grounding type receptacle outlets in kitchens, workshops, garages, etc., where the outlet may supply equipment used by persons standing on the ground or on grounded conductive materials. Metal enclosures for lighting fixtures, faceplates, etc., in these areas must be grounded. The purpose of all this is to eliminate the possibility of a person bridging across a source of voltage. For example a person in a bathtub shouldn't be reaching over to touch the faceplate on an electrical outlet or a mirror light. However if he does he will not be shocked if the bathtub, radiator, faucets, faceplate, and lighting fixture enclosure are all properly connected together to ground. The same is true of your electric dryer or washer and set tub or pipes in the basement. The same is true aboard ship and this principle is applied to large vessels inspected by the U.S. Coast Guard under the "Electrical Engineering Regulations" CG–259 (46 CFR 111.05 and 46 CFR 111.60). In a steel hulled vessel everyone is walking on or touching ground wherever they go. You might say that aboard a steel vessel one foot is always in the bathtub. And the hands and other parts of the body are nearly always within reach of power cables or electrical equipment containing lethal voltages. A board ship the cable armor, the enclosures of lighting fixtures and other electrical equipment should all be grounded to the hull of the vessel thereby bringing all exposed metal to a common potential and eliminating shock hazard from this source. The portable tools used aboard ship are good examples. The metal enclosure of the tool, that part carried in the hands of the operator, is connected directly to ground (vessel's hull) through a third conductor in the supply cable. This requires grounding type plugs and receptacles. With this grounded enclosure arrangement the operator is safeguarded against holding a "hot" (faulted) tool in his hands while touching ground with other parts of his body.

THIS CARELESSLY placed portable cargo light fell from the main deck into the upper 'tween deck onto sacks of mail and paper; a costly fire was the immediate result.

This article on electrical safety was delivered by Captain Estes before the Marine Section of the National Safety Council during the 1961 National Safety Congress in Chicago, Ill.—ED.

This rule of connecting all exposed metal to ground potential is simple and direct. Unfortunately it is sometimes not followed. During the last year our Record of Marine Casualties lists three deaths by electrocution. While working on a barge in Florida a young shore worker was stripped to the waist. When he reached over to pull on a portable fan his bare sweating chest touched a hatch coaming as his hands contacted the faulted electric fan. Death resulted. This would not have happened if the exposed parts of the fan had been held to the potential of the barge by a grounding connection. Similarly a death occurred during repair work on the Dutch yacht *Frieda* in a U.S. port when a worker's body was in contact with the metal hull while his hands held a "hot" electric sander. Here a jury rig extension cord had been employed which did not contain a grounding conductor to ground the tool housing. A real booby trap was set up on a T2 tanker. The ground strap to one propulsion cable armor was defeated by someone who insulated it with tape. This permitted 2,300 volts on this cable armor when a ground fault occurred and an unsuspecting engineer was electrocuted.

I could go on and on giving examples such as shock to welders or shock by tools and resulting falls off ladders. The latest published figures indicate that 12 deaths were caused in 1957 by electric shock on U.S. Navy Ships.

What is the answer to this electrical shock problem? Whether in your small boat or in an ocean liner, it boils down to not bridging parts of the body across a voltage source. If the electrical device is completely disconnected by a disconnect switch then it can be touched in safety. Disconnect switches which open all supply conductors are needed in order to service equipment without exposure to shock. The servicing personnel sometimes fail to use the disconnect and work

"hot." Preventing this is a matter of indoctrination and education. But for electrical equipment that is energized and running, reducing shock hazard is a matter of connecting all exposed metal to ground potential. In a metal hulled vessel the ground is the hull. In a plastic or wooden hulled small vessel, ground is the bonding system which connects all metal enclosures together. One caution to you who may be doing it yourself. The grounding conductor that connects the tool frame to ground should be of good size and with tight connections so it will be of minimum resistance. This is to insure that on tool fault this grounding conductor will carry sufficient current to interrupt the fuse or breaker and keep the tool housing at ground potential. The same size grounding conductor as supply conductors is a good rule. The best scheme is to have a multi conductor supply cable for all tools with the green colored wire used for grounding. Frequent maintenance checks to see that the grounding connections are properly connected and of low resistance is a good precaution. An ohmmeter check between tool housing and ground should read less than 3 ohms.

FIRE

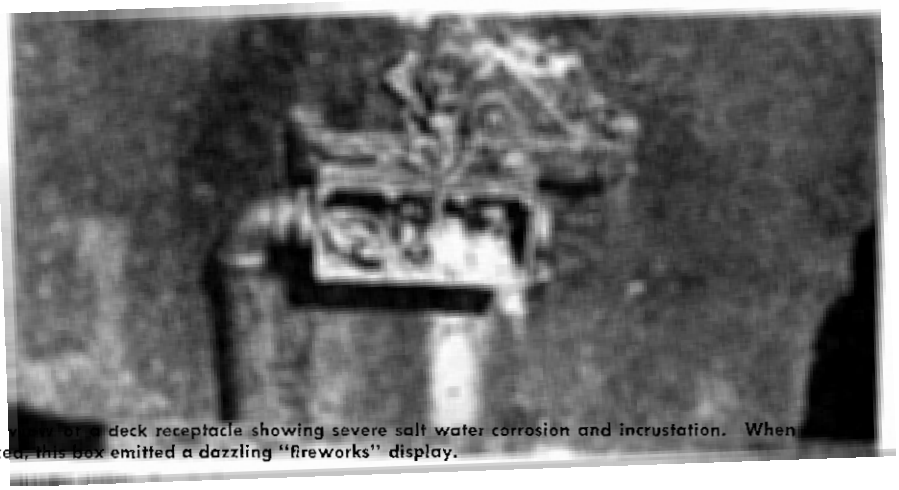
Fire is the greatest dread of seamen, and rightfully so. In the last 3 years our casualty report files indicate 163 fires attributed to electrical origin. One-half of the vessels were a total loss and 15 deaths resulted. So as not to alarm you who operate large ships, let me quickly point out that these fires, loss of vessels and deaths were primarily attributed to small pleasure vessels and fishing vessels. On large Coast Guard inspected vessels of over 500 gross tons during this period there were 25 fires reported but no loss of vessels and no deaths. Being an electrician I feel that electricity is blamed for many casualties without justification. When the investigator doesn't know what caused the fire he "presumes" it to be of electrical origin. However there is one statistic I cannot deny—the reports for year 1960 show 14 small-boat fires started at the instant the engine starter button was pushed. Oh yes, it could be argued that this doesn't mean there was any faulty electrical equipment. The starting battery, contactors and starting motor were probably operating in a perfectly normal fashion and if the explosive vapors had not been in the engine compartment these fires or explosions would not have occurred. It could be argued that the presence of gasoline vapors, propane gas or other combustibles was the proximate cause of the fire. But this is a fine point because the normal sparking of contacts or motor commutators can ignite explosive vapors. The problem is solved equally well by removing either the electrical equipment or the hazardous vapors so that the two are not present together. The vessels involved in these reports were generally small in size and gasoline was the principal source of explosive vapor. In small boats we rely on the use of a blower system to clear out any explosive vapors prior to energizing the electrical equipment in the engine compartment. A good sniff with the nose before starting is also highly recommended! In large ships the accumulation of combustible gases in the engine room is less likely since this is a manned and well ventilated space. However, to be safe from fires of electrical origin large and small vessels must be designed, built and maintained with precautions in mind. Fire hazard can exist wherever electrical potential is present and the electrical installation covers a far greater area on a vessel than any other type of installation. We must guard against over fusing circuits; locating electrical equipment in spaces where flammable vapors or gases may normally accumulate; using equipment with less than minima electrical clearances; overheating, particularly of lighting fixtures, in proximity to combustibles. Much of electrical safety is just common sense.

PANIC

Finally, consider panic. When in 1904 the *General Slocum* burned in New York Harbor with 957 victims, mostly women and children, there was panic. In 1912 the sinking of the *Titanic* with loss of 1,517 lives, and in 1932 the burning of the *Morro Castle* with a loss of 124 lives, there was panic aboard. One of my jobs today is to "sell" you on the idea that electricity can add safety to a ship by reducing panic. The human being is by nature afraid of the dark. Place him in the dark, in a strange place, with other people, in threatening circumstances, and the stage is set for panic. Part of the answer to panic aboard ship, even in time of great danger, is to keep the lights on and to tell the person how to help himself, all of which can be done with proper electrical arrangements. The SOLAS Conventions have brought about international recognition of this fact but it is sometimes hard to "sell" to the man who pays the bill for an emergency lighting system. SOLAS 1929 first required emergency lighting systems in pasenger ships and SOLAS 1960 has extended this requirement to cover international cargo vessels.

The idea of protecting the unsuspecting passenger by furnishing him with sufficient lights to find his way to the lifeboats as required by the SOLAS Conventions is sound. Having emergency lights to assist the crew in restoring normal services or to better employ fire fighting and damage control methods is also sound.

For example, recently on a cargo vessel an electrical failure to the only electrical system, left the ship in total darkness below decks. The chief engineer in his one man panic and haste to restore service tripped over a deck plate, fell, struck his head near the switchboard, and died. If his ship had been built under the present requirements he would have had sufficient emergency lighting to effect repairs.



Inside view of a deck receptacle showing severe salt water corrosion and incrustation. When energized, this box emitted a dazzling "fireworks" display.

None of us will quarrel with the need of emergency lights in the operating rooms of hospitals. (Lights off—How would you like to be performing a delicate operation on a person or on machinery at a time like this? You are seven decks down in the bowels of a ship, how do you get to safety?—Lights On.)

Probably the best argument I can give for keeping the lights on in an emergency is the case of the *Andria Doria*. True there were 43 lives lost in this collision, but about 1,700 were saved. I make the statement: "All the while lifeboats were being lowered and even as the ship was over at 45° and sinking the emergency lights were burning." Now I ask the question: "How many deaths might we have had that night on the *Andria Doria* if the ship had been in total darkness, with no guiding lights or announcing system to lead the passengers and crew from the underdecks to the boats?"

With this "panic argument" I hope to have "sold" all of you on the need for an emergency lighting system. Lights are needed to restore services after casualty and lights are needed to guide passengers to the open decks and lifeboats or liferafts.

THREE WIRE cord from an electric sander was connected to this 2-prong "household" plug in the haphazard fashion shown. The ground wire was not used. Sander motor shorted to frame and this operator died from electrical shock.

SUMMARY

To summarize, we have discussed shock, fire and panic hazards aboard ship. The remedy to the shock and fire hazards lies in well designed robust electrical equipment with the exposed metal parts grounded, proper protection against overcurrents, good connections, isolating high temperature items from combustibles, etc., and proper maintenance. Fortunately the electrical industry has generally supplied equipment which has been designed to combat shock and fire. Unfortunately the human doesn't always install or use this equipment properly.

The remedy to panic is in not letting a panic situation arise. A partial answer to the casualty and panic situations lies in providing an emergency lighting system. Lights under emergency conditions give those on board a better chance.

In the marine electrical safety field as in any safety field continuing efforts by "all hands" must be made to educate those who haven't yet learned.

U.S. DEEP SEA TRADE

U.S.-flag ships carried 9.7 percent of total U.S. oceanborne trade in 1959. U.S. tankers carried 4 percent of the tanker trade, dry cargo non-liners carried 7 percent of the tramp and industrial cargoes, and U.S.-flag dry cargo liners carried 30 percent of the liner cargoes. Other countries' fleets carried from 2.4 percent (India) to 77.1 percent (Sweden) of their trade with the United States.

These figures are compiled in a new report entitled "Participation of Principal National Flags in United States Oceanborne Foreign Trade, 1959," issued by the Maritime Administration, U.S. Department of Commerce.

The report, prepared by the Administration's Office of Ship Statistics, contains a summary analysis of the oceanborne foreign trade of the United States with 18 principal maritime nations and with all other nations combined. The four tables contained in the report show the participation of U.S. flag, national flag, and third country flags in inbound and outbound trade between the United States and each of 18 principal maritime nations and with all other nations combined, on cargo tonnage and percentage bases, by liner, other-than-liner, tanker, and all services combined.

The latest available percentage of selected countries' total oceanborne foreign trade carried by their national flag ships is shown in comparison with that for the United States.

The printed report may be obtained from the Superintendent of Documents, Washington 25, D.C., at 10 cents per copy.

Revised editions of two reports previously issued by the Maritime Administration are also now available. One is "Ore Carriers and Ore/Oil Carriers in the World Fleet . . . as of December 31, 1960." The report shows that the total number of ore carriers in the world fleet has more than doubled in the 4 years from 1957 through 1960, from 123 of 1,870,750 deadweight tons on March 31, 1957, to 263 of 4,523,090 deadweight tons on December 31, 1960. Only in the United States has there been a decline, from 8 of 194,377 deadweight tons to 6 of 146,511 deadweight tons. Ore/oil carriers similarly increased from 36 of 753,375 deadweight tons to 64 of 1,458,010 deadweight tons, with the United States again showing a drop from 2 of 41,173 deadweight tons to none.

This report is for sale by the U.S. Department of Commerce, Washington 25, D.C., for 25 cents per copy.

The second revised report is "Domestic Oceanborne and Great Lakes Commerce of the United States, 1959, With Summary for 1951–1959." This report includes summary and detail tables and charts giving dry cargo and tanker ship trade in coastwise, noncontiguous, and Great Lakes areas by commodity. The report indicates that dry cargo traffic in the domestic deep sea trades is declining—from 26.8 million tons in 1951 to 22.1 in 1959—while tanker traffic is increasing—from 137.3 million tons in 1951 to 156.5 million tons in 1959. Dry cargo trade in the Great Lakes fluctuated, with a high of 167.3 million tons in 1953 and a low of 112.4 million tons in 1959, compared to a 1951 base year level of 157.6 million tons. Great Lakes tanker trade increased from 7.3 million tons in 1951 to 9.0 million in 1959.

The report may be obtained from the Superintendent of Documents, Washintgon 25, D.C., for 70 cents per copy.

Now, 'Ear This—

SOUND IDEAS ON NOISE

By John R. Wolfe, COMSTS Safety Director

The following remarks are excerpted from an article by Mr. Wolfe published in the June, 1961 issue of SEALIFT. ED.

PICTURE A SHIP feeling her way through pea soup fog at a busy ocean crossroads: Whistles, horns, bells, and kettledrums from unseen ships surround her. On her bridge, a watch officer whose hearing isn't what it used to be, calls out:

"Was that four blasts for danger ahead? Was that a proper single blast or two from that ship looming up on the port bow . . .?"

Picture a sailor edging forward, climbing over a deck cluttered with hatch beams, pontoons, and cargo-working bric-a-brac. Preoccupied, he steps into the bight of a cargo runner. Hearing impaired, he was not aware of a shipmate's warning. . . .

Practical situations like these led MSTS, several years ago, to investigate not only hazards from impaired hearing aboard ship, but noises themselves and how they affect seamen and the very ships, the safety of passengers and cargoes.

In the '50's, medical studies were proving that continuous exposure to excessive noise could destroy both hearing and health.

Area command medical officers in MSTS tested a sample 500 employees with audiometers and found a significant number suffering from hearing loss. This showed up particularly in the "black gang." Younger men, of course, made a better showing than their elders.

But why should the unlicensed men average more acute hearing than the officers? And why couldn't older MSTS employees hear as well as men of the same age in occupations ashore?

The MSTS area command safety divisions checked "unwanted sound" levels aboard P2's and Victory ships. They discovered noise readings to cause them concern, in the light of their studies—in the engine room, laundry, galley, even on open decks while power tools were being used for scaling and chipping.

The medical department, to get the record straight, added an audiometer test to all new employees' medical exams. And they now recheck with an "Oto-Check" device during annual physicals. Any hint of impairment that shows up requires a reexamination by true tone audiometer.

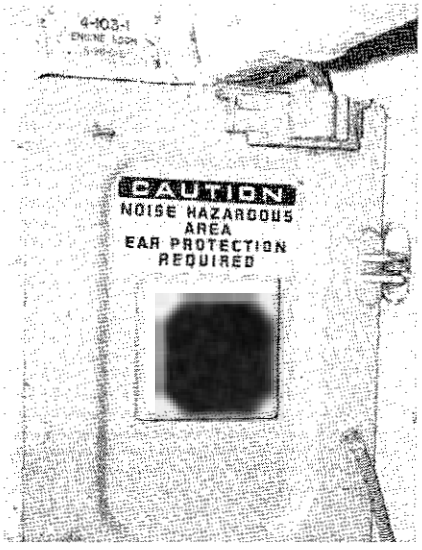
People aboard were taught to use sound meters all over their ships, then a safety division representative would come down to check out their initial findings with octave band analyzers.

As soon as possible, signs were posted aboard wherever needed: "CAUTION—Noise Hazardous Area—Ear Protection Required."

Most important, the safety people set out to spread the gospel, to engineers particularly, that in a noisy place, you can actually hear better with ear plugs.

Why? Simply stated, plugs cut out much more high intensity noise than low intensity waves produced by human vocal chords, allowing the voice to carry with less interference.

The area command Maintenance and Repair Officers are also hard at work finding ways and means to control noise at the source. They redesign machinery or screen it from personnel where feasible. Other areas can be soft-pedaled by acoustical tile or other coating to absorb hazardous sound.



SIGNS OF THE TIMES: This sign on an engine room hatch cautions against going below without ear plugs.

RULES OF THE ROAD PANEL

The Rules of the Road Coordinating Panel of the Merchant Marine Council of the Coast Guard met on September 6 in New York City and considered a number of proposals for incorporation in the "Rules of the Road," including a proposal that small boats keep clear of commercial vessels which can navigate only within a channel or fairway.

The meeting was opened by Rear Admiral Edwin J. Roland, Commander Third Coast Guard District, who introduced Rear Admiral I. J. Stephens, the new Chief of the Office of Merchant Marine Safety of the Coast Guard and Chairman of the Merchant Marine Council. The panel elected a permanent chairman, N. C. Barnard, a representative of the U.S. Power Squadrons.

Of primary interest to the new panel was the proposed adoption into U.S. rules of two new international rules concerning sailing vessels and power-operated vessels under 65 feet in length not hampering large vessels or vessels difficult to maneuver when operating in narrow channels, together with the initial U.S. proposal made at the Safety of Life at Sea Conference in London in 1960, concerning such operation of small vessels in channels or fairways. The panel accepted the proposals in principle and designated a working committee to draft acceptable language.

STUDIES LIGHTS, FOG SIGNALS

The panel also considered proposed legislation to amend the Inland, Great Lakes, and Western Rivers Rules of the Road concerning lights and fog signals for vessels or barges while at anchor or moored. The panel agreed to continuation of the present exemption of all vessels 65 feet and under in length from carrying or exhibiting anchor lights in "special anchorage areas," and to a modification of the lighting requirements in "designated anchorage areas" for barges, canal boats, scows or other nondescript craft, and also to exempt all such vessels when in those areas from sounding fog signals.

A proposal by the Coast Guard to amend section 80.16 of the Inland Rules of the Road, to make scow lighting requirements identical with those for barges, was deferred pending consideration of the proposal by the Rules of the Road committee of the Western Rivers Panel. A proposal by the Coast Guard to standardize distress signals, as recognized under the International Rules for incorporation in the Inland, Great Lakes, and Western Rivers rules was agreed to by the Rules of the Road Coordinating Panel.

SPONTANEOUS COMBUSTION

THIS CHEMICAL ACTION, forever active in nature's scheme of things, is an old bugaboo, hashed and rehashed in countless directives, letters, and pamphlets. Shipping companies are always on the mailing lists because this phenomenon is well known to them. Masters who have had to divert to wayports because of a fire at sea can testify to that.

The actual act of seeing this dangerous happening blossom forth is rare, however. Generally it develops in closed areas and is only observed when smoke seeps out of ventilators, hatches, or stowage lockers.

We present an actual eyewitness report (reprinted from *Calship Safety Bulletin*—subsidiary of the *Standard Oil Company of California*):

SPONTANEOUS COMBUSTION

The Mate was spinning the yarn:

"I always thought that spontaneous combustion was just a figment of some guy's imagination until I saw it happen. During the war I was on a tanker (non-Company), loaded with 100-octane gas, in the South Pacific. The Bosun had set three cans of paint covered rags outside the paint locker door on the main deck up against the fo'c'stle head bulkhead. It was night time and I was on watch. I thought I could see a glow up forward, so I sent the man on standby to investigate. Just as he got there flames shot about 20 feet into the air. I got her stern up into the wind to keep the flames from blowing aft toward the cargo tanks. The A.B. handled the situation in a calm, cool manner. He had heavy gloves with him. He got ahold of the cans and gave them the deep six."

Spontaneous combustion is far from a myth.

CONDITIONS

Under the right conditions a fire can start, and many have started, from spontaneous combustion. Here is a set of conditions sometimes found on a ship which will produce a fire from spontaneous combustion:

A rag soiled with vegetable oil, paint or linseed oil is discarded or stowed in a warm place. The oil starts to oxidize, that is to combine chemically with the oxygen in the air. This chemical action produces heat which, in a vicious circle, hastens the oxidization thus generating more heat. This cycle continues until the rag bursts into flame. Then, if something else is around that will burn, you will have a real fire on your hands.

HOW TO PREVENT

The best way to prevent fires of this sort is to keep things shipshape. Discard soiled rags which might ignite spontaneously. Equally important, clean up materials that might feed a fire such as wastepaper, oil-soaked dunnage and old rope. Keep clean rags in a metal container. Store paint thinners and solvents in closed containers.

I. Q. TEST

How is your knowledge on the "tendency" of well-known commodities to ignite spontaneously? The commodities listed are common, both as cargo and as ship's stores. Column two has been left blank—fill it in, using the following:

Possible
Very Slight or Slight
Moderate
High
Moderate to Low
Moderate to High
Variable

This information has been derived from the National Fire Protective Association Handbook. It has been compiled by experts and the answers will be found on *page 18*.

COMMODITY	TENDENCY	PRECAUTIONS	DATA
Burlap Bags....	1. _____	Keep cool and dry.....	If oily, dangerous; if used, have tendency to heat.
Copra.....	2. _____	Keep cool and ventilated.	Heats if wet; fermentation also causes warmth.
Feeds.....	3. _____	Avoid extra high or low moisture content.	Ground feeds must be carefully processed; dangerous to stow unless cooled.
Fish Meal.....	4. _____	Keep moisture 6% to 12%; avoid exposure to heat.	Dangerous if overdried or packaged over 100° F.
Grains.....	5. _____	Avoid moisture extremes.	Ground grains may heat if wet and warm.
Hides.....	6. _____	Keep cool and ventilated.	Bacteria in untreated hides may initiate heating.
Jute.....	7. _____	Keep cool and dry.....	Avoid stowing in hot wet piles; partially burned or charred jute is dangerous.
Linseed Oil....	8. _____	Avoid contact with rags, cotton, or other combustible material.	Rags or fabric so impregnated are extremely dangerous; store in closed metal containers.
Metal Powder..	9. _____	Keep in closed containers.	Moisture accelerates oxidation (heating) of most metal powders.
Oiled Clothing.	10. _____	Dry thoroughly before stowing.	Dangerous if wet and stowed in piles without ventilation.
Oiled Fabric...	11. _____	Dry thoroughly before stowing.	Impregnated dried fabrics are extremely dangerous.
Oiled Rags....	12. _____	Avoid storing in bulk in open.	Dangerous if wet with drying oil.
Olive Oil.....	13. _____	Avoid leakage on rags, cotton, or other fibrous materials.	Impregnated fibrous materials may heat unless ventilated.
Paint Containing Drier.	14. _____	Avoid leakage on rags, cotton, or other fibrous materials.	Fabrics, rags impregnated with paints that contain drier or drying oils are extremely dangerous.
Peanuts (Red Skin).	15. _____	Avoid badly ventilated stow.	This is part of the peanut between outer shell and peanut itself.
Powdered Eggs.	16. _____	Keep in cool place.....	Bacterial growth promotes heat.
Rags.....	17. _____	Avoid contamination with drying oils; avoid charring; keep cool and dry.	Tendency depends on previous use of rags; partially burned or charred rags are dangerous.

COMMODITY	TENDENCY	PRECAUTIONS	DATA
Roofing Felts and Paper.	18.	Avoid overdrying.....	Felts, etc., should have a controlled moisture content.
Sawdust.....	19.	Avoid contact with drying oils; hot or humid stowage.	Partially burned, dirty, or charred sawdust is dangerous.
Scrap Leather..	20.	Avoid contamination contact with drying oils.	Oil-treated leather scraps may generate heat.
Scrap Rubber..	21.	Buffings of rubber need ventilation.	Can generate heat.
Soap Powder..	22.	Inhibit efficiently.....	Uninhibited powders occasionally cause fires.
Sisal.....	23.	Keep cool and dry.....	Partially burned or charred material is particularly liable to ignite spontaneously.
Soy Bean Oil..	24.	Avoid contact with rags, cotton or fibrous material.	Impregnated fibrous material may heat, unless ventilated.
Tung Oil.....	25.	Avoid contact with rags, cotton, or fibrous material.	Impregnated fibrous material may heat, unless ventilated.
Varnished Fabrics.	26.	Keep cool and ventilated.	Varnished fabrics must be thoroughly dry.
Waste Paper...	27.	Keep cool and ventilated.	Wet paper will heat in warm locations.
Wool Wastes..	28.	Keep cool and dry; avoid high moisture.	Most wool waste contains oil from the weaving and spinning and is liable to spontaneous combustion, wet wool wastes liable to possible ignition.

OCEANWIDE SURVEY

Secretary of Commerce Luther H. Hodges announced recently that an entirely new approach to deep sea oceanography will be tested this year by the Coast and Geodetic Survey Ship *Pioneer* in the North Pacific Ocean.

The 311-foot *Pioneer* will conduct a systematic study of 3 million square miles of ocean between the Hawaiian Islands and the Aleutian Islands. This marks the first serious attempt by the Government to study wide ocean areas with systematic, closely-spaced observations encompassing nearly all aspects of oceanography.

The President recently asked Congress for additional funds to spend on a national oceanography program, in order that more comprehensive surveys, such as this one, may be undertaken. The Coast and Geodetic Survey will provide the necessary leadership to implement the Department of Commerce phase of the oceanographic program. The pilot project now being initiated will be followed by more comprehensive programs as facilities and personnel are expanded to meet developing requirements.

Operating out of Alaska and Hawaii, the *Pioneer* will navigate along a series of north-south line spaced 10 miles apart across an area about 300 miles wide and 200 miles long. The first line is planned to follow a course 10 miles east of the 158th meridian, commencing at a point just south of the Alaska Peninsula and extending southward to the Island of Oahu, Hawaii. Subsequent lines will move eastward during the 1961 season.

The project ultimately will extend from the Hawaiian Archipelago to the Aleutian Islands and from the 153d meridian westward to the 180th meridian. Ocean surveys of this magnitude have never been attempted before. In the past, oceanographic expeditions have been limited to relatively isolated reconnaissance lines or have concentrated on one particular phase of oceanography related to a specific research problem.

A systematic survey of the oceans is possible today with the development of modern techniques, equipment, and data processing. The *Pioneer* will be fitted with Loran C positioning equipment for control purposes. Anticipated range of this system is 1,500 nautical miles for ground waves and 3,000 nautical miles for sky waves. Accuracy of position is reported to be 1,000 feet at 1,000 miles using ground waves. Loran C Stations in the Hawaiian Islands are not yet operational. Work during the first part of the season will be limited to that area effectively covered by the Aleutian Loran C control system.

The first phase of the survey will include a continuous profile of the ocean bottom obtained with a precision depth recorder, a continuous profile of the total magnetic field made by a towed Varion Proton Magnetometer, regular gravity observations by a La Coste-Romberg gravity meter, regular meteorological balloon releases, and a sea water temperature observation every two hours. Aboard the *Pioneer* during this phase will be geophysicists from the U.S. Geological Survey and the Coast and Geodetic Survey, a meteorologist from the U.S. Weather Bureau, oceanographers from the Coast and Geodetic Survey, and if present plans materialize, student oceanographers from one or more universities. This is in addition to the 90-man crew of the *Pioneer*, including 21 commissioned officers of the Coast and Geodetic Survey. The vessel is commanded by Capt. William F. Deane.

Additional observations at predetermined locations will be made during the second phase beginning in September. At these locations bottle casts will be made for temperature, salinity, dissolved oxygen, and such other variables as the cooperating agencies may wish to measure. Sediment cores will be made at each station, and the U.S. Geological Survey will process this sediment data. Plankton tows are planned with the U.S. Bureau of Commercial Fisheries supplying biologists and equipment. Current measurements are planned in the Alaska Boundary Current. These oceanographic observations will be spaced along a course north from the Hawaiian Islands to the Aleutian Trench, west along the axis of the trench to turn south in the area of Adak, and proceeding past Midway Island to 23°30′ north, thence east to Hawaii.

The Committee on Oceanography of the U.S. National Academy of Sciences—National Research Council proposed this survey approach to oceanography in chapter 9 of its report, Oceanography 1960–1970. This report recommends an oceanwide survey with all maritime nations cooperating. If the job is ever to be completed, it must obviously be an international effort of formidable proportions. The Coast and Geodetic Survey in the *Pioneer* surveys is undertaking a trial run to see how much one ship can accomplish, to see what observations should be undertaken, and to see if the results justify the effort.

621530—61——2

MARITIME SIDELIGHTS

The Atlantic Refining Company of Philadelphia has ordered a big tanker for its oil carrier fleet.

The vessel will be a 745-foot steamship with a beam of 102 feet, a depth of 51 feet and a service speed of 17 knots. She will carry a crew of 50 and is scheduled for delivery by October, 1963.

The huge oil carrier, one of the largest merchant ships to be built in the Delaware Valley, will have a cargo capacity of 366,273 barrels. She is intended for the transportation of crude oil from Texas to Philadelphia.

⚓ ⚓ ⚓

St. Lawrence Seaway officials have deferred a proposed change in regulation to make it mandatory for vessels transiting the Seaway to carry a stern anchor pending further study.

The authorities have agreed to defer the proposed change until the entire matter has been made a subject of intensive study of a joint American-Canadian board of research, composed of representatives of the Seaway authority and shipping interests.

⚓ ⚓ ⚓

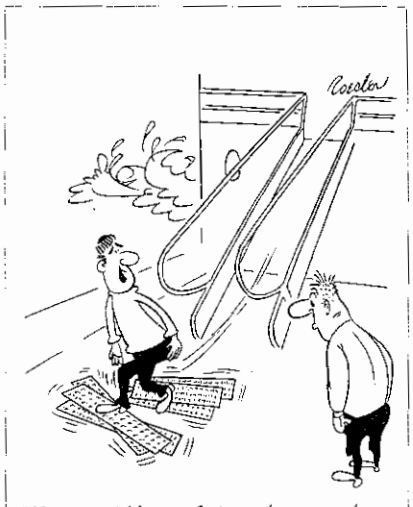
Design and development of a high-speed ship on the "surface-effect" principle is being initiated by the Federal Maritime Administration. A design contract is being negotiated for such a *Hovership,* which will actually not travel in the water, but at a very low height above it, supported by air trapped between its bottom and the water. It is estimated that a 100-ton surface-effect ship would measure 142 by 76 feet, with 22,000 horsepower capable of driving it at over 100 knots, carrying about 46 tons of payload.

⚓ ⚓ ⚓

The keel of the first of a class of 11 high-speed freighters for the United States Lines has been laid at Newport News, Va., recently.

The keel-laying marked the start of a $450 million 46 vessel cargo-ship replacement program being undertaken by the line with Government construction aid.

The ship is one of five on order from the Newport News Shipbuilding and Dry Dock Company. Contracts for six additional vessels have been placed with the Quincy, Mass., yard of the Bethlehem Steel Company.



"These skid-proof treads sure have holding power!"

Courtesy Maritime Reporter.

The new vessel, upon launching next spring, will be known as the *American Challenger.* She is a modified Mariner-type of ship of 10,714 deadweight tons with a length of 560 feet, a beam of 75 feet and a speed of 20 knots.

The new ships will be the fastest freighters ever constructed for service in the North Atlantic. They will be able to cross to West German ports in 8 days, or 2 days faster than vessels now being used on that route by the line.

⚓ ⚓ ⚓

The Maritime Administration has recently approved a request for a construction loan and mortgage insurance for the construction of two roll-on roll-off container ships. The vessels will be 430 feet long, 3,600 gross tons, speed of 18 knots, and will hold 200 containers of 20-foot capacity plus 75 trucks. The vessels will be used for the Pacific coastwise trade.

The stevedoring industry in the port of New York will save approximately $5 million a year as a result of lowered workman compensation insurance premium rates according to the U.S. Department of Labor. The new rates reflect improved safety practices in the waterfront industry during the past 3 years.

⚓ ⚓ ⚓

The Federal Maritime Board announced recently that U.S. flag service into the Great Lakes will be offered by Moore-McCormack Lines, Inc. This company is the first American Shipping Line to request permission to extend the service into the Lakes under a recent determination by the Maritime Administration that eight existing U.S. foreign routes could be extended for a trial period of 4 years into the Great Lakes area.

⚓ ⚓ ⚓

Moore-McCormack Lines announced recently that it is in the market for six 21-knot dry cargo freighters. The company intends to use the new vessels on its African routes. The new vessels will be 1 knot faster than any American dry cargo vessel now in service. Power will be supplied by steam turbines rated at 20,900 SHP, and the vessels will have a capacity of 12,910 long tons. Provisions will be made to carry a crew of 52 plus 12 passengers and will provide about 40,000 cubic feet of refrigerated cargo space.

⚓ ⚓ ⚓

SAFETY AWARDS

Forty-three vessels from nine American steamship companies were honored with the new Jones F. Devlin Award at a recent luncheon meeting sponsored jointly by the American Merchant Marine Institute and the Marine Section of the National Safety Council. Rear Admiral Irvin J. Stephens, Chief of the Office of Merchant Marine Safety, U.S. Coast Guard, made the presentations. American vessels which have gone 2 years without a lost time accident are eligible for the award, which is sponsored by the AMMI.

nautical queries

DECK

Q. Your vessel is on course 235° true at speed 16 knots.

At 0300 a vessel is observed on the PPI scope bearing 240° T at a range of 6 miles.

At 0312 the vessel is observed bearing 250° T at a range of 4.1 miles.

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

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

A. (a) The distance between your vessel and the vessel observed at the closest point of approach, assuming that course and speed were held would be 2 miles (at 0332)

(b) The course of the vessel observed is 260.5° True.

The speed of the vessel observed is 6.5 knots.

Q. What is meant by the term, "vulgar establishment of a port"?

A. The interval between the moon's meridian passage at any place and the time of the next succeeding high water, as observed on the days when the moon is at full or change, is called the vulgar (or common) establishment of that place, or, sometimes, simply the establishment. This interval is frequently spoken of as the time of high water on full and change days (abbreviated "H.W.F. & C."); for since, on such days the moon's two transits (upper and lower) over the meridian occur about midnight and noon, the vulgar establishment then corresponds closely with the local times of high water.

Q. (a) What is meant by the figures "1:75000" on a chart?

(b) For what type navigation would such a chart be suitable?

A. (a) 1:75000 is the scale of the chart, or ratio the chart bears to the region it represents. 1:75000 means that one unit of the chart represents 75,000 of the same units on the earth.

(b) Charts whose scales range between 1:50000 and 1:100000 are planned for inshore navigation; for entering bays and harbors of considerable width, and for navigating large inland waterways.

Q. How would you determine if the visibility given for a light on a chart or in a light list is the geographic range or luminous range of the light?

A. The candlepower listed for a light in the light list will give some indication as to whether the visibility is limited by the geographic or luminous range.

A definite determination may be made by computing the geographic range for the height of the light and 15 feet height of eye on the part of the observer. If the range of visibility given is less, it is limited by the luminous range.

ENGINE

Q. What are the requirements as to maintenance and operation in order to insure the proper vacuum in a marine steam turbine installation?

A. In order that the vacuum may be attained economically, the following precautions shall be taken:

(a) Keep gland packing in good condition.

(b) Keep feather of steam coming from steam-sealed glands at all times.

(c) Insure that there are no air leaks in condenser, exhaust trunks, throttles, lines to air pumps, etc.

To insure tightness, joints of all lines under vacuum of main condenser should be painted with shellac or asphaltum paint at least once a quarter; the painting to be done while there is a vacuum of at least 20 inches of mercury on the condenser.

(d) Keep air pumps and ejectors in excellent condition.

(e) Keep the temperature of the overboard discharge 5°–8° below the corresponding vacuum temperature.

(f) Do not attempt to attain a vacuum greater than 29" of Hg. as the additional demands on the pumps and air ejectors may require more heat energy for their operation than is saved by reducing the back pressure further.

Q. What are the major adjustments for a main propulsion turbine, and how are they obtained?

A. In all main propelling turbines installed on ships there are two major adjustments. These adjustments are the fixing of the rotor in its proper radial and axial position. The radial position of the rotor is maintained by the main bearings and the axial position by the thrust bearings.

The bridge-gauge will detect any change in the height of the turbine rotor. A rough method of checking the height of the shaft may be made as follows:

Make a center punch mark on a point directly under the shaft, as a reference point, and another mark on the shaft itself; then measure with an extension micrometer. This may be quickly applied and will indicate any change in height.

The axial clearance between the rotating and stationary parts of a turbine is controlled by the adjusting of thrust blocks. There are two methods in use for obtaining the amount of this clearance—by the finger-plate and the clearance-indicator. The finger-plate consists of a steel plate suitably secured with its free end projecting into a groove turned in the rotor shaft. The clearance indicator is fitted at the steam inlet end of the turbine casing; its spindle is set parallel with the axis of the rotor and in line with the dummy ring. The longitudinal movement of the spindle is measured by a micrometer. The spindle is first advanced to a fixed stop in the interior, then the spindle is turned and advanced until it takes against the dummy ring and the second measurement taken, the readings are compared with known clearance and disarrangement, if any.

The clearance is the distance between the after side of the finger point and the after side of the groove.

Q. What precautions shall be taken before and after reassembling a turbine that has been opened?

A. Before reassembling a turbine after it has been opened, a very careful examination shall be made of the rotor and the interior of the casing for any articles left behind, such as chisels, hammers, screw drivers, loose blades, packers, etc. This examination shall be made (1) before the rotor is lowered into place and (2) before the casing is lowered and secured in place. After it has been assembled, circulate oil through bearings, jack the rotor slowly, and listen carefully for any unusual sounds. Should any unusual noise be observed, steps shall be taken to determine and remedy the trouble before the turbine is used.

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 13–61

NOVEMBER 14, 1961

Subj: International Convention for the Prevention of the Pollution of the Sea by Oil, 1954; implementing legislation "Oil Pollution Act, 1961" and regulations issued pursuant thereto

PURPOSE

To advise vessel operators, shipboard personnel, Coast Guard personnel, and others of the provisions of subject matter.

BACKGROUND

The International Convention for the prevention of the Pollution of the Sea by Oil, 1954 has been ratified by the United States, and the provisions thereof become effective on 8 December 1961. Public Law 87–167, 75 Stat. 402, an act to implement the Convention, approved by the President on 30 August 1961, is enclosed herewith. Under the provisions of Public Law 87–167 the Secretary of the Army will issue certain regulations which should appear in the Federal Register sometime in November 1961.

HIGHLIGHTS OF PUBLIC LAW 87–167

Section 2 consists of definitions including the term "ships," to which the act applies. Generally speaking this act applies to all seagoing ships of American registry of 500 gross tons and upward. Section 9 sets forth the requirement that every ship to which this act applies shall carry an Oil Record Book in the form specified under Section 13. Note, under Section 13(b), the Oil Record Book will be provided by the Government. Section 12 describes the prohibited zones in which no oil or oily wastes shall be discharged into the sea. Since the passage of this act, Canada has instituted a prohibited zone extending 100 miles from its shoreline. Section 13 describes the content of the Oil Record Books, one for tankers and one for vessels other than tankers. Section 16 specifically points out that nothing in this act shall be construed to modify or amend the provisions of the Oil Pollution Act of 1924, which still remains in full force and effect.

OIL RECORD BOOK

The Department of the Army is currently printing the Oil Record Books and by agreement between the Department of the Army and the Coast Guard they will be stocked at all Coast Guard Marine Inspection Offices, except those on the inland rivers and certain small Great Lakes ports. These books may be obtained from the Officer-in-Charge, Marine Inspection after 1 December 1961. The regulations of the Department of the Army will provide for the disposition of the Oil Record Books as follows:

(a) Masters of vessels engaged on foreign voyages shall remove all pages containing entries made during each voyage and deliver them to the nearest Coast Guard Marine Inspection Office when the voyage is terminated.

(b) Masters of vessels engaged on other than foreign voyages shall retain the book on board the vessel until completely filled in. When completely filled, the book shall be retained on board the vessel or in the principal office of the vessel's owner or operator for a period of 2 years following the date of the last entry. It may be destroyed following this 2-year period.

INSTRUCTIONS

Masters of vessels subject to the provisions of this act shall obtain the Oil Record Book, applicable to their vessel, from a Marine Inspection Office in order to commence the required entries as soon as possible after 8 December 1961. For vessels at sea on the effective date, the Oil Record Book shall be obtained at the first opportunity upon return to a U.S. port. The Oil Record Books shall be filled in as set forth in the instructions in the book and shall be available for inspection as provided for in section 8 and 12 of this act and in accordance with the Convention.

Effective Date. Upon receipt.

NS SAVANNAH

(Continued from page 3)

USCG (2), Matson (1), U.S. Lines (1), American Export Lines (1), Maryland Shipbuilding & Drydock Co. (2), Socony (1), Cities Service (1), Todd Shipyards (1), New York Shipbuilding Corp. (6), Texaco (1), Esso Shipping (1).

On May 18, 1959, the trainees began field training at AEC reactor installations to obtain operating experience.

A second course, with 11 engineering officers selected by States Marine, 7 by AEC Division of International Affairs, and 1 by Bethlehem Steel Co., was initiated at Lynchburg on April 15, 1959. This course paralleled the first engineers' course and has provided personnel to relieve normal attrition and rotation of officers.

On May 4, 1959, a special training course was begun to prepare senior deck officers for their duties aboard the new nuclear ship. After 4 months of formal classroom work, the deck officers received further instruction at various AEC sites on practical physics, management, and personnel health and safety problems encountered in dealing with reactor facilities.

A simulator has been developed by Westinghouse Electric Corp., Pittsburgh, Pa. It is engineered so that an operator can experience on a duplicate N.S. *Savannah* control console the same instrumentational responses as with the actual reactor.

On October 4, 1961, the AEC Regulatory Staff certified 17 States Marine Lines marine engineers who will operate the reactor. This certification will be entered on their Merchant Mariners documents by the U.S. Coast Guard.

RADIUS AND FUEL COST

300,000-nautical mile range during an estimated 3 years (52,000 megawatt days) without refueling. Only 60 kilograms of the 7,050 kgm. of UO^2 would be actually consumed; valuable isotopes and some 18 kgm. of plutonium, a salable product, should be reclaimed.

CHARACTERISTICS

Length: 545′ between perpendiculars; 595′6″ overall
Beam: 78′ (molded)
Displacement: 21,840 tons (full load at design draft of 29′6″)
Horsepower: 20,000 SHP normal
22,000 SHP maximum
Speed: 20.25 knots sustained sea speed
Passengers: 60
Bale Cubic: 746,200 cu. ft. cargo capacity

VESSEL CASUALTIES

During fiscal 1961 there were 2,015 casualties to commercial vessels reported to the Coast Guard. This compares with 1,988 the year before. Seven of these casualties were considered major and were investigated by Marine Boards of Investigation. In fiscal 1961, 156 persons lost their lives in vessel casualties aboard commercial vessels of all sizes as opposed to 153 in fiscal 1960.

Forty of these deaths occurred on inspected vessels and 116 on uninspected vessels. Among the uninspected vessels those engaged in commercial fishing once again accounted for the most deaths with a total of 58. Uninspected tugs ran second with a total of 21. The classification of vessel casualty which accounted for the greatest percentage of these deaths on uninspected vessels was flooding, sinking, and capsizing. In the case of commercial fishing vessels 29 lost their lives in casualties of this type and on uninspected tugs 16 lost their lives.

The most serious casualties during the year were the collision between the U.S. passenger vessel *Alcoa Corsair* and the Italian freight vessel *Lorenzo Marcello* in the lower Mississippi River with the loss of five passengers and five crew members from the *Alcoa Corsair* and the breaking in two of the U.S. tanker *Pine Ridge* off Cape Hatteras with the loss of seven crew members.

CASUALTIES TO VESSELS—OTHER THAN PLEASURE VESSELS—FISCAL YEAR 1961

1 July 1960–30 June 1961

	Groundings	Flooding, capsizings, sinkings	Collisions with vessels	Collisions with objects other than vessels	Fires and explosions	Heavy weather damage	Material failure	Cargo damage, no damage to vessel	Undetermined or insufficient information	Casualty not otherwise classified	Total
Number of vessel casualties	504	172	444	489	148	23	213	1		21	2,015
Number of vessels involved	556	228	1,129	655	162	23	218	1		27	2,999
Number of inspected vessels involved	309	22	358	350	48	17	172	1		16	1,293
Number of uninspected vessels involved	247	206	771	305	118	6	46			11	1,710
Types of vessels involved—Passenger:											
Vessels over 65′—Inspected	6	1	9	21	3	1	6			1	48
Vessels not over 65′—Inspected	14	7	12	18	14		4			1	70
Freight:											
Vessels—Inspected	172	3	157	170	14	12	115	1		11	655
Barges—Inspected and uninspected	32	48	145	58	1	2	4			1	291
Tank:											
Ships	85	2	61	65	5	4	44			1	267
Barges	25	8	109	68	8						218
Public	1		4	3							8
Towing:											
Inspected	6		7	5			2			2	22
Uninspected	68	61	288	154	18	2	5			2	598
Fishing (commercial)	96	63	107	32	69	1	34			3	405
Motorboats (commercial) not over 65′ in length											
uninspected	5	8	9	4	9		1				36
Foreign flag	37	2	128	31	6		2			1	207
Miscellaneous	8	24	93	26	14	1	2			4	172
Property damage:											
Excess $1,500	237	158	550	403	138	17	118	1		12	1,634
Vessels totally lost:											
Inspected	4	8	1	6	8		1				28
Uninspected	37	32	11	10	41		1			1	133
Lives lost in vessel casualties:											
Passengers:											
Inspected vessels			5								5
Uninspected vessels		6									6
Crew members:											
Inspected vessels		9	7		2		7				25
Uninspected vessels	11	50	31	3	9	1	3				108
Longshoremen/shore workers:											
Inspected vessels					7		1				8
Uninspected vessels											
Others:											
Inspected vessels					1						1
Uninspected vessels			3								3
Injured and incapacitated over 72 hours:											
Passengers—Inspected vessels			7								7
Passengers—Uninspected vessels											
Crew—Inspected vessels		1	4		5		4				14
Crew—Uninspected vessels	6	4	9	2	11		1			1	34
LS/SW [1]—Inspected vessels					2		11				13
LS/SW [1]—Uninspected vessels					6						6
Others—Inspected vessels											
Others—Uninspected vessels											
Number of casualties due directly to personnel fault:											
Inspected vessels	87	5	138	67	8		13			5	323
Uninspected vessels	73	12	126	46	10		1			1	269

[1] Longshoremen/shore workers.

Deaths not Involving Casualty to Vessel:

Natural Causes	191
Homicide	3
Suicide	15
Disappearance and Undetermined	20
Personal Accidents	167

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 12–61

NOVEMBER 9, 1961

Subj: Inspection procedures for approved inflatable life rafts held in storage

PURPOSE

The purpose of this circular is to establish a uniform inspection procedure for approved type inflatable life rafts which have been in storage for extended periods of time since manufacture.

BACKGROUND

Approved type, fully equipped, inflatable life rafts are normally held in storage at the place of manufacture or at one of the manufacturer's approved servicing facilities until sold and placed on board a vessel. This period of storage may extend to 1 year from date of manufacture. Rafts stored for periods of 10 months, for example, would require annual servicing approximately 2 months after installation in accordance with 46 CFR 160.051–6. This added cost of servicing superimposed on the original cost of the rafts could discourage many ship owners from using this type of lifesaving equipment. Also, a purchaser of an inflatable life raft should expect the raft to be service and/or repair free for a reasonable period of time after the date of sale.

ACTION

Based upon the above discussion, the following inspection procedures may be carried out for fully equipped inflatable life rafts that have been in storage at place of manufacture or at manufacturer's approved servicing facility:

(a) *Rafts stored up to 6 months from date of manufacture:* Place in service without disassembling, and the first servicing as set forth in 46 CFR 160.051–6(e) will be due no later than 1 year from date of installation on board the vessel. In order to identify a raft in this category, the raft manufacturer shall furnish the master of the vessel or his representative with a copy of the bill of sale showing the manufacturer's name and address, the serial number of the raft, the date of manufacture, and the sales date. In addition, an affidavit shall be required showing the date that the raft was installed on board the vessel. Both the affidavit and bill of sale shall be maintained on board the vessel.

(b) *Rafts stored from 6 months to 1 year from date of manufacture:* Before placing in service, the rafts shall be opened by an approved servicing facility in the presence of a marine inspector to visually check the condition of the raft, check and weigh the CO_2 cylinder(s), and replace the flashlight batteries. After checking, the rafts shall be repacked by the approved serving facility and stamped by the marine inspector using the procedure set forth in 46 CFR 160.051–6(e). Regular annual servicing as set forth in 46 CFR 160.051–6(e) will be due 1 year from date of this stamp.

(c) *Rafts stored longer than 1 year from date of manufacturer:* Perform annual servicing per 46 CFR 160.051–6(e) before placing in service.

Upon completion of the first servicing as set forth in 46 CFR 160.051–6(e), as modified by paragraphs (a), (b), and (c) above, subsequent servicing requirements shall follow the procedures in paragraphs 33.25–15(d) of Subchapter D, 71.25–15(a)(6) of Subchapter H, and 91.25–15(a)(6) of Subchapter I. These require that the rafts be serviced "every 12 months or not later than the next vessel inspection for certification provided the total time since date of last servicing does not exceed 15 months."

Effective date: Upon receipt.

PERSONAL CASUALTIES

In this tabulation of personnel accidents aboard commercial inspected vessels the category which accounted for the greatest number of deaths in fiscal 1961 was death from natural causes. The total was 165. In this category 80 of the deaths to crew members resulted from one of the cardio vascular diseases.

The second largest number of deaths from personal accidents on board inspected vessels occurred as a result of falling overboard. Sixteen persons were killed from this cause of which nine were crew members.

Aboard uninspected commercial vessels the situation was reversed. Natural causes was second, having accounted for 26 deaths of which 21 resulted from cardio disease to crew members.

The major cause of death from personal accidents aboard uninspected commercial vessels was falling overboard. A total of 70 lives were accounted for in this category of which 28 were crew members off fishing vessels and 27 were crew members off tugs and tows.

The third largest number of deaths from personal accidents on inspected commercial vessels occurred as a result of suicide. Twelve persons died in this manner of which nine were crew members and three were passengers. In addition, 11 crew members disappeared from inspected vessels under circumstances which suggested the possibility of suicide.

The third largest number of deaths from personal accidents on uninspected commercial vessels resulted from disappearances of which there were nine cases, eight of which involved crew members. While some of these cases might have been suicides, six cases were on fishing vessels which tends to increase the probability that accidental falls were involved.

Among the categories which account for the greatest number of nonfatal personal accidents resulting in incapacitation for a period in excess of 72 hours, "slips and falls on deck" and "other slips and falls-same level" accounted for the most with a combined total of 202 injury cases on all commercial vessels both inspected and uninspected. In these categories no one was killed aboard inspected vessels but two were killed on uninspected vessels. The principal causes of these accidents were unsafe practices and poor maintenance or housekeeping which accounted for 57 cases; human error not otherwise classified, which means a misstep on the part of the individual, accounted for 46 cases; weather conditions were given as the cause in 53 cases.

The second largest group of injuries occurred as a result of slips and falls on ladders and stairs. There were 116 injury cases in this group covering all commercial vessels plus 2 deaths on inspected vessels but none on uninspected vessels. Principal causes were unsafe practices or conditions and missteps in that order.

STATISTICAL SUMMARY OF PERSONAL INJURIES ABOARD COMMERCIAL VESSELS

1 July 1960–30 June 1961

PERSONNEL CASUALTIES		HUMAN							ENVIRONMENT					OTHER							
Injuries total	Reported during period of—Classification	Intoxication	Physical deficiency	Unsafe movement (running, jumping, etc.)	Psychological (immaturity, insanity)	Unsafe practice	Law violation	Other human errors	Weather conditions	Poor maintenance (housekeeping)	Inadequate lighting	Inadequate rails, guards, etc.	Other	Failure approved equipment or material	Failure unapproved equipment or material	Supervision inadequate	Life preservers insufficient	Lack of tools/equipment	Lack of protective gear	Insufficient info. to classify as to cause	Miscellaneous causes
-----	Natural cause	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
-----	Homicide	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
3	Suicide (and attempts)	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
-----	Disappearance	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
-----	Drowning (*other than falls*)	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
-----	Ashore	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
-----	Persons not members of crew	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
116	Slips and falls—Ladders	9	1	2	--	33	--	28	12	5	--	--	3	----	4	--	--	--	--	18	1
43	Slips and falls—Gangways	5	--	1	--	8	--	6	9	1	--	--	1	----	4	--	--	--	--	7	1
87	Slips and falls—On deck	4	--	----	--	7	--	17	37	9	--	--	3	----	2	1	--	--	--	6	1
115	Slips and falls—Other—Same level	6	--	----	--	26	--	29	16	15	--	--	5	----	4	--	--	--	1	11	2
2	Falls from vessel—Into water	--	--	----	--	----	--	----	----	--	--	--	1	----	----	--	--	--	--	1	-
-----	Falls from vessel—Other	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
13	Falls into hold, tank	--	--	----	--	5	--	----	1	-	--	1	2	----	1	--	--	--	--	2	1
102	Falls—Other—Different level	8	--	1	--	36	--	29	8	--	2	--	5	----	7	--	--	--	--	6	--
87	Struck by—Falling object	--	--	----	--	27	--	25	4	4	--	1	3	----	12	--	--	--	--	3	8
20	Struck by—Flying object	--	--	----	--	5	--	2	2	--	--	--	1	----	3	--	--	--	-	3	4
79	Struck by—Moving object (*other than vessel*)	--	--	----	--	6	--	11	11	--	1	--	10	----	26	--	--	--	--	3	11
1	Struck by—Boat or ship	--	--	----	--	----	--	-	----	--	--	--	1	----	----	--	--	--	--	----	--
-----	Exposure	--	--	----	--	----	--	----	----	--	--	-	--	----	----	--	--	--	--	----	--
3	Asphyxiation	--	--	----	--	1	--	1	----	--	--	-	1	----	----	--	--	--	--	----	--
57	Struck against	--	--	----	--	12	--	17	13	--	1	--	7	----	----	--	--	--	--	5	2
2	Cargo handling	--	--	----	--	----	--	2	----	--	--	--	--	----	----	--	--	-	-	----	--
64	Machinery—Tools	--	--	--	--	31	--	6	4	--	--	--	4	1	9	1	--	1	--	3	4
31	Burns	1	--	----	--	14	--	----	----	--	-	--	7	----	7	--	--	--	-	1	1
49	Scalds	1	--	----	--	28	--	2	3	--	--	--	3	----	9	1	--	--	--	----	2
-----	Electric shock	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
16	Lines, caught in	--	--	----	--	7	--	1	1	--	--	--	1	----	5	--	--	--	--	----	1
91	Pinching—Crushing	1	--	----	--	34	--	23	13	--	--	1	8	----	6	1	--	--	--	3	1
-----	Heavy weather	--	--	--	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
62	Overexertion	--	--	1	--	11	--	39	2	1	--	--	1	----	----	2	--	--	--	2	3
76	Sprains and strains	1	--	4	--	16	--	37	6	5	--	--	--	----	1	--	--	--	--	5	1
88	Cuts, punctures, etc	2	--	4	--	33	--	8	12	4	1	1	6	----	3	1	--	--	--	6	7
9	Galley accidents	--	-	----	--	6	--	1	1	--	--	--	1	----	----	--	--	--	--	----	--
92	Fights	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
7	Unknown causes	--	--	----	--	----	--	----	1	--	--	--	3	----	----	--	--	--	--	3	--
28	Not otherwise classified	3	--	1	--	3	-	3	2	--	--	--	--	----	2	--	--	--	--	7	7
*1,343	Total	41	1	14	--	349	--	287	158	41	5	4	77	1	105	7	--	1	1	95	58

*Crew members 1,343.

STATISTICAL SUMMARY OF DEATHS ABOARD UNINSPECTED COMMERCIAL VESSELS

1 July 1960–30 June 1961

PERSONNEL CASUALTIES		HUMAN							ENVIRONMENT					OTHER							
Deaths (total)	Reported during period of—Classification	Intoxication	Physical deficiency	Unsafe movement (running, jumping, etc.)	Psychological (immaturity, insanity)	Unsafe practice	Law violation	Other human errors	Weather conditions	Poor maintenance (housekeeping)	Inadequate lighting	Inadequate rails, guards, etc.	Other	Failure approved equipment or material	Failure unapproved equipment or material	Supervision inadequate	Life preservers insufficient	Lack of tools/equipment	Lack of protective gear	Insufficient info. to classify as to cause	Miscellaneous causes
26	Natural causes	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
2	Homicide	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
2	Suicide (and attempts)	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
9	Disappearance	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
7	Drowning (other than falls)	--	--	----	2	----	--	----	----	--	--	--	--	----	----	--	--	--	--	4	1
----	Ashore	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
----	Persons not members of crew	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
----	Slips and falls—Ladders	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
1	Slips and falls—Gangways	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	1	--
2	Slips and falls—On deck	--	--	----	--	----	--	1	1	--	--	--	--	----	----	--	--	--	--	----	--
----	Slips and falls—Other—Same level	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
70	Falls from vessel—Into water	6	2	----	--	9	--	3	8	2	--	4	1	----	1	--	--	--	--	30	4
1	Falls from vessel—Other	----	----	----	----	1	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
5	Falls into hold, tank	--	--	----	--	2	--	----	----	--	--	1	--	----	----	--	--	--	--	2	--
1	Falls—Other—Different level	1	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
5	Struck by—Falling object	--	--	----	--	4	--	----	----	--	--	--	--	----	----	--	--	--	--	----	1
1	Struck by—Flying object	--	--	----	--	----	--	----	----	--	--	--	--	----	1	--	--	--	--	----	--
1	Struck by—Moving object (other than vessel	--	--	----	--	1	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
1	Struck by—Boat or ship	----	----	----	----	----	----	1	----	--	--	--	--	----	----	--	--	--	--	----	--
----	Exposure	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
4	Asphyxiation	--	--	----	--	1	--	----	----	--	--	--	--	----	1	2	--	--	--	----	--
----	Struck against	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
1	Cargo handling	--	--	----	--	1	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
----	Machinery—Tools	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
2	Burns	--	--	----	--	2	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
----	Scalds	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
1	Electric shock	--	--	----	--	1	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
5	Lines, caught in	--	--	----	--	4	--	----	----	--	--	--	--	----	----	--	--	--	--	1	--
3	Pinching—Crushing	--	--	----	--	1	--	1	----	--	--	--	--	----	----	--	--	--	--	----	1
----	Heavy weather	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
----	Overexertion	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
----	Sprains and strains	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
----	Cuts, punctures, etc	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
----	Galley accidents	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
----	Fights	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
----	Unknown causes	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
3	Not otherwise classified	--	--	----	1	1	--	----	----	--	--	--	--	----	----	--	--	--	--	1	--
*153	Total	7	2	----	3	28	--	6	9	2	--	5	1	----	3	2	--	--	--	39	7

*Crew members 119, passengers 1, longshoremen and shore workers 22, and others 11.

STATISTICAL SUMMARY OF DEATHS ABOARD INSPECTED COMMERCIAL VESSELS

1 July 1960–30 June 1961

PERSONNEL CASUALTIES		HUMAN							ENVIRONMENT					OTHER							
Deaths total	Reported during period of—Classification	Intoxication	Physical deficiency	Unsafe movement (running, jumping, etc.)	Psychological (immaturity, insanity)	Unsafe practice	Law violation	Other human errors	Weather conditions	Poor maintenance (housekeeping)	Inadequate lighting	Inadequate rails, guards, etc.	Other	Failure approved equipment or material	Failure unapproved equipment or material	Supervision inadequate	Life preservers insufficient	Lack of tools/equipment	Lack of protective gear	Insufficient info. to classify as to cause	Miscellaneous causes
165	Natural cause	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
1	Homicide	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
13	Suicide (and attempts)	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
11	Disappearance	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
5	Drowning (other than falls)	--	--	----	--	----	--	----	----	--	--	--	1	----	----	--	--	--	--	4	--
------	Ashore	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Persons not members of crew	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
2	Slips and falls—Ladders	1	--	----	--	----	--	1	----	--	--	--	--	----	----	--	--	--	--	----	--
1	Slips and falls—Gangways	1	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Slips and falls—On deck	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Slips and falls—Other—Same level	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
16	Falls from vessel—Into water	1	--	----	2	6	--	1	1	--	--	1	--	----	----	--	--	--	--	2	2
1	Falls from vessel—Other	--	--	----	--	1	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
8	Falls into hold, tank	--	--	----	--	3	--	1	----	--	--	1	--	----	----	1	--	--	--	1	1
3	Falls—Other—Different level	--	1	----	--	1	--	----	----	--	--	--	--	----	1	--	--	--	--	----	--
3	Struck by—Falling object	--	--	----	--	2	--	----	----	--	--	--	--	----	----	--	--	--	--	----	1
------	Struck by—Flying object	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
1	Struck by—Moving object (Other than vessel)	--	--	----	--	----	--	1	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Struck by—Boat or ship	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Exposure	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
2	Asphyxiation	--	--	----	--	2	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Struck against	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Cargo handling—Not otherwise classified	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Machinery—Tools	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Burns	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Scalds	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
1	Electric shock	--	--	----	--	----	--	----	----	1	--	--	--	----	----	--	--	--	--	----	--
2	Lines, caught in	--	--	----	--	1	--	----	----	--	--	--	--	----	----	--	--	--	--	----	1
1	Pinching—Crushing	--	--	----	--	1	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Heavy weather	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Overexertion	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Sprains and strains	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Cuts, punctures, etc	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Galley accidents	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Fights	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
------	Unknown causes	--	--	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	----	--
7	Not otherwise classified	1	2	----	--	----	--	----	----	--	--	--	--	----	----	--	--	--	--	2	2
*243	Total	4	3	----	2	17	--	4	1	1	--	2	1	----	1	1	--	--	--	7	7

*Crew members 166, passengers 55, longshoremen and shore workers 19, and others 3.

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 25, D.C.]

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

[CGFR 61-44]

SHIPBOARD CARGO GEAR, POWER-OPERATED INDUSTRIAL TRUCKS AND MISCELLANEOUS AMENDMENTS RESPECTING DANGEROUS CARGOES

The Merchant Marine Council held a public hearing on March 27, 1961, for the purpose of receiving comments, views and data with respect to proposals regarding shipboard cargo gear, power-operated industrial trucks, and the handling of certain dangerous cargoes. The notice of proposed rule making was published in the Federal Register on February 15, 1961 (26 F.R. 1278-1286). The Merchant Marine Council Public Hearing Agenda (CG-249), dated March 27, 1961, set forth the proposed regulations in detail and copies thereof were furnished to all who indicated an interest in the subjects set forth therein. In this Agenda, Item I dealt with "Shipboard Cargo Gear," while Item II dealt with "Power-Operated Industrial Trucks." A large number of comments were received. In response to many requests for additional time to submit additional comments, a second notice of proposed rule making was published in the Federal Register on May 2, 1961 (26 F.R. 3775-3778), granting the additional time requested as well as additional proposals or revisions being considered, which were based in part on comments already considered. All comments with respect to Items I and II submitted were considered, and the Coast Guard is most appreciative of these comments submitted and assistance in drafting revised regulations intended to promote safety on board commercial vessels.

This document is the ninth of a series regarding the regulations and actions considered at the March 27, 1961 Public Hearing and Annual Session of the Merchant Marine Council.

NOTICE

Vessel and boat owners and operators are reminded that effective January 1, 1962, in accordance with the notice published in the Federal Register for September 6, 1958 (CG FR 58-30), carbon tetrachloride fire extinguishers and others of the toxic vaporizing liquid type such as chlorobromomethane are no longer acceptable as approved equipment by the Coast Guard.

On December 6, 1958, approvals were withdrawn on this type of extinguisher manufactured on or after that date. However, extinguishers of this type that were in service on that date were permitted to be kept in service as approved equipment until January 1, 1962, provided they were still in usable condition.

Approvals were withdrawn on the use of extinguishers with toxic mediums because of accidents and injuries occurring as a result of their use.

This document contains the final actions taken with respect to the proposals in Items I and II. The seventh document in this series contained the miscellaneous amendments to the vessel inspection regulations and was published in the Federal Register of September 30, 1961 (26 F.R. 9253-9304). In this document was a description of the actions taken to date with respect to the various items on the agenda. The eighth document dealt with smoke detecting systems on passenger vessels (Item VIII, portion), and was published in the Federal Register of September 23, 1961 (26 F.R. 8979). Item VI regarding "Bulk Grain Cargoes" (CG-249), (pp. 142-159), is still under consideration.

The proposals in Item I regarding "Shipboard Cargo Gear" as revised are approved. The proposals in Item II regarding "Power-Operated Industrial Trucks" as revised are approved.

(Federal Register of November 23, 1961.)

EQUIPMENT APPROVED BY THE COMMANDANT

[EDITOR'S NOTE.—Due to space limitations, it is not possible to publish the documents regarding approvals and terminations of approvals of equipment published in the Federal Register dated November 3, 1961 (CGFR 61-46), and (CGFR 61-47), and Federal Register dated November 18, 1961 (CGFR 61-48). Copies of these documents may be obtained from the Superintendent of Documents, Washington 25, D.C.]

ANSWERS

(From page 8)

1. Possible
2. Slight
3. Moderate
4. High
5. Very Slight
6. Very Slight
7. Very Slight
8. High
9. Moderate
10. High
11. High
12. High
13. Moderate to Low
14. Moderate
15. High
16. Very Slight
17. Variable
18. Moderate
19. Possible
20. Very Slight
21. Moderate
22. Moderate
23. Very Slight
24. Moderate
25. Moderate to High
26. High
27. Moderate
28. Moderate

ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of ships' stores and supplies certificated from 1 November to 30 November 1961, inclusive, for use on board vessels in accordance with the provisions of Part 147 of the regulations governing "Explosives or Other Dangerous Articles on Board Vessels" are as follows:

CERTIFIED

The Falcon Corporation, 80 Middagh St., Brooklyn 1, N.Y., Certificate No. 498, dated 16 November 1961. CALFONEX PRACTICAL DEGREASER-CLEANER.

The Falcon Corporation, 80 Middagh St., Brooklyn 1, N.Y., Certificate No. 499, dated 16 November 1961. CALFONEX PRACTICAL TANK CLEANER.

The Falcon Corporation, 80 Middagh St., Brooklyn 1, N.Y., Certificate No. 500 dated 16 November 1961. CALFONEX PREMIUM DEGREASER-CLEANER.

AFFIDAVITS

The following affidavits were accepted during the period from 15 October 1961 to 15 November 1961:

Tube Turns Plastics, Inc., Thirtieth & Magazine Sts., Louisville 11, Ky., FITTINGS, FLANGES AND VALVES.

R.E.C. Corp., 47 Cedar St., New Rochelle, N.Y., BOLTING.

Flo-Bend, P.O. Box 635, 10000 Sand Springs Rd., Sand Springs, Okla., FITTINGS.

Iino Shipbuilding & Engineering Co., Ltd., 2-22 Iino Bldg., Uchisaiwaicho, Marunouchi, Tokyo, Japan FLANGES, FITTINGS, AND BOLTING.

Jackes-Evans Manufacturing Co., 4427 Geraldine Ave., St. Louis 15, Mo., VALVES.

Beloit Eastern Corporation, Downingtown, Pa., CASTINGS.

MERCHANT MARINE SAFETY PUBLICATIONS

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

CG No.	TITLE OF PUBLICATION
101	Specimen Examination for Merchant Marine Deck Officers (7–1–58).
108	Rules and Regulations for Military Explosives and Hazardous Munitions (8–1–58).
115	Marine Engineering Regulations and Material Specifications (2–1–61).
123	Rules and Regulations for Tank Vessels (12–1–59.) F.R. 3–30–60, 10–25–60, 11–5–60, 12–8–60, 7–4–61, 9–30–61, 11–23–61.
129	Proceedings of the Merchant Marine Council (Monthly).
169	Rules of the Road—International—Inland (5–1–59). F.R. 5–21–59, 6–6–59, 5–20–60, 9–21–60, 4–14–61, 4–25–61.
172	Rules of the Road—Great Lakes (5–1–59). F.R. 1–7–60, 3–17–60, 5–20–60, 9–21–60.
174	A Manual for the Safe Handling of Inflammable and Combustible Liquids (7–2–51).
175	Manual for Lifeboatman, Able Seamen, and qualified Members of Engine Department (9–1–60).
176	Load Line Regulation (9–2–58). F.R. 9–5–59, 8–2–60, 11–17–60.
182	Specimen Examinations for Merchant Marine Engineer Licenses (12–1–59).
184	Rules of the Road—Western Rivers (5–1–59). F.R. 6–6–59, 5–20–60, 9–21–60, 10–8–60, 12–23–60, 4–14–61, 4–25–61.
190	Equipment Lists (4–1–60). F.R. 6–21–60, 8–16–60, 8–25–60, 8–31–60, 9–21–60, 9–28–60, 10–25–60, 11–17–60, 12–23–60, 12–24–60, 5–2–61, 6–2–61, 6–8–61, 7–21–61, 7–27–61, 8–16–61, 8–29–61, 8–31–61, 9–8–61, 9–9–61, 10–18–61, 11–3–61, 11–18–61.
191	Rules and Regulations for Licensing and Certificating of Merchant Marine Personnel (11–1–60). F.R. 11–30–60, 1–4–61, 4–19–61, 10–25–61.
200	Marine Investigation Regulations and Suspension and Revocation Proceedings (7–1–58). F.R. 3–30–60, 5–6–60, 12–8–60, 7–4–61.
220	Specimen Examination Questions for Licenses as Master, Mate, and Pilot of Central Western Rivers Vessels (4–1–57).
227	Laws Governing Marine Inspection (7–3–50).
239	Security of Vessels and Waterfront Facilities (8–1–61).
249	Merchant Marine Council Public Hearing Agenda (Annually).
256	Rules and Regulations for Passenger Vessels (3–2–59). F.R. 4–25–59, 6–18–59, 6–20–59, 7–9–59, 7–21–59, 9–5–59, 1–8–60, 5–6–60, 8–18–60, 10–25–60, 11–5–60, 11–17–60, 12–8–60, 12–24–60, 12–29–60, 4–19–61, 7–4–61, 9–30–61, 11–23–61.
257	Rules and Regulations for Cargo and Miscellaneous Vessels (3–2–59). F.R. 4–25–59, 6–18–59, 6–20–59, 7–9–59, 7–21–59, 9–5–59, 5–6–60, 5–12–60, 10–25–60, 11–5–60, 11–17–60, 12–8–60, 12–24–60, 7–4–61, 9–30–61, 10–25–61, 11–23–61.
259	Electrical Engineering Regulations (12–1–60) F.R. 9–30–61.
266	Rules and Regulations for Bulk Grain Cargoes (5–1–59).
268	Rules and Regulations for Manning of Vessels (9–1–60). F.R. 5–5–61, 6–28–61.
269	Rules and Regulations for Nautical Schools (3–1–60). F.R. 3–30–60, 8–18–60, 11–5–60, 7–4–61, 9–30–61.
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 (3–7–60).
320	Rules and Regulations for Artificial Islands and Fixed Structures on the Outer Continental Shelf (10–1–59). F.R. 10–25–60.
323	Rules and Regulations for Small Passenger Vessels (Not More than 65 feet in Length) (7–1–61).
329	Fire Fighting Manual for Tank Vessels (4–1–58).

Official changes in rules and regulations are published in the Federal Register, which is printed daily except Sunday, Monday, and days following holidays. The Federal Register is a sales publication and may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. It is furnished by mail to subscribers for $1.50 per month or $15 per year, payable in advance. Individual copies desired may be purchased as long as they are available. The charge for individual copies of the Federal Register varies in proportion to the size of the issue and will be 15 cents unless otherwise noted in the table of changes below.

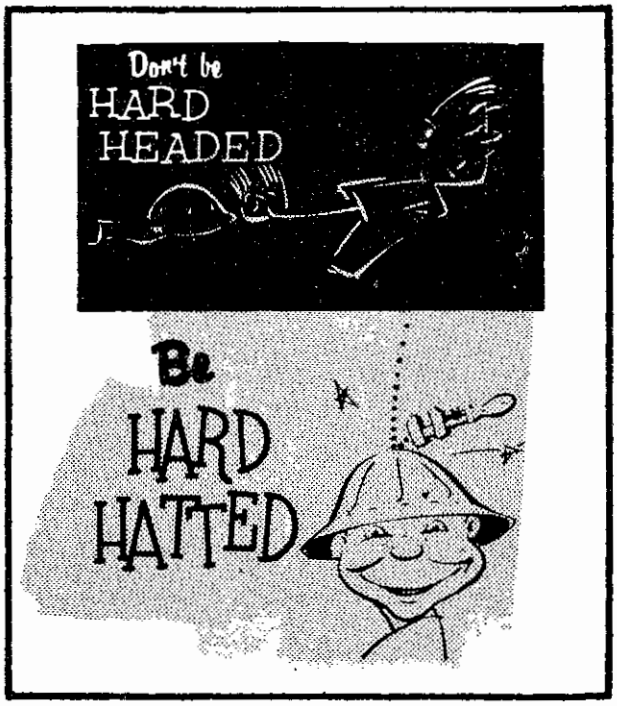
CHANGES PUBLISHED DURING NOVEMBER 1961

The following have been modified by Federal Registers:

CG–190 Federal Registers, November 3, 1961 (20 cents), and November 18, 1961.

CG–123, CG–256, and CG–257 Federal Register November 23, 1961.

U.S. GOVERNMENT PRINTING OFFICE: 1961



National Safety Council.