

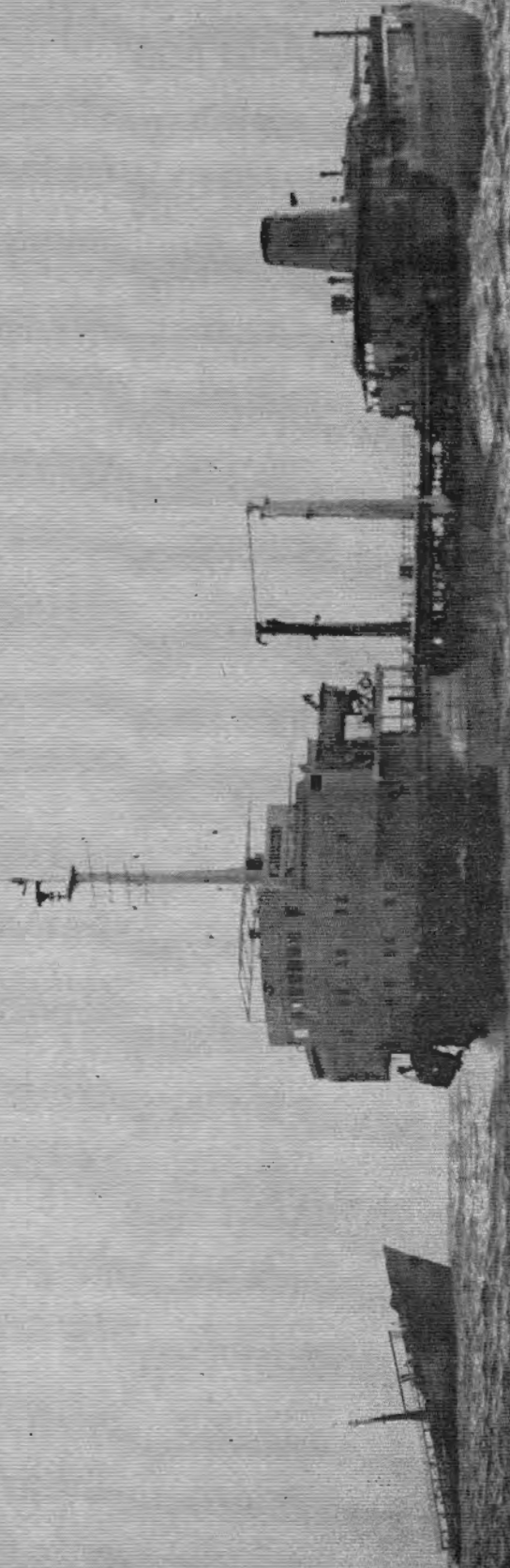
# PROCEEDINGS

OF THE MERCHANT MARINE COUNCIL



UNITED STATES COAST GUARD  
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# PROCEEDINGS

OF THE

## MERCHANT MARINE COUNCIL

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The Merchant Marine Council of the United States Coast Guard

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## FRONT COVER

A striking photograph of the two sections of the Liberian tanker SS *African Queen* after grounding off Ocean City, Md. Five hours after receipt of the grounding message, all 47 men aboard the ship were landed without injury at the Coast Guard's Ocean City Lifeboat Station. The New York and Norfolk Coast Guard Rescue Coordination Centers dispatched Navy and Marine Corps aircraft and Coast Guard aircraft and ships to remove the seamen.

## BACK COVER

The bridge—as figured from the engineroom. Second of two cartoons by A. E. Merrikin from the *Range Light*, published by the *Marine Department* of the *Texas Company*.

## DISTRIBUTION (SDL 68)

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A SPECIAL U.S. PUBLIC HEALTH SERVICE award for vessel sanitation has been awarded to each of American President Lines 26 ships for 1958. The *Special Citation for Vessel Sanitation*, first of its kind presented to a West Coast passenger ship company, indicates a rating of 95 or better on 166 items of sanitary construction and maintenance. In accepting the award from Rear Adm. David E. Price, Assistant Surgeon General of the Public Health Service, seen at the right, Dr. Rodney A. Yoell, Chief Surgeon, American President Lines, paid tribute to the "operating and engineering personnel of the company and in particular, the steward's department." Rear Admiral Price made the presentation in ceremonies held aboard the SS *President Coolidge* in San Francisco. Photo Courtesy American President Lines.

February 1959

# MARINERS HONORED IN MEMORIAL CHAPEL



MR. AND MRS. ABRAHAM BLUM view the granite memorial in the American cemetery at Cambridge, England. Dedicated to American war dead in World War II, the cemetery was visited as part of the ceremonies held in St. Paul's Cathedral commemorating the common sacrifice in the last war. Official U.S. Air Force Photo.

Parents of Murray M. Blum, only winner of the Merchant Marine Distinguished Service Medal awarded for heroism in the Battle for Britain, served as representatives of all merchant mariners at the dedication ceremonies of the American Memorial Chapel in London commemorating the common sacrifice in World War II.

The Chapel, in St. Paul's Cathedral, was dedicated on November 26, 1958, "to the Glory of God and in memory of the Americans who gave their lives in military operations from the British Isles." The Roll of Honor, listing their names, was presented to the Cathedral on July 4, 1951, by General of the Army Dwight D. Eisenhower.

Her Majesty, Queen Elizabeth II unveiled the plaque honoring those Americans whose names are recorded on the Roll of Honor and President

Eisenhower was represented by Vice President Richard M. Nixon.

Mr. and Mrs. Abraham Blum of Brooklyn, N.Y., joined 11 other next of kin representing the Army, Navy, Air Force, Coast Guard, Marine Corps, and the Merchant Marine in the impressive ceremonies.

Blum received the Distinguished Service Medal posthumously and a Liberty ship was launched in Brunswick, Ga., on October 25, 1944, as the *SS Murray M. Blum*.

A copy of the citation presented to Radio Officer Blum follows:

The President of the United States takes pleasure in presenting the **MERCHANT MARINE DISTINGUISHED SERVICE MEDAL TO MURRAY MORRIS BLUM, CHIEF RADIO OPERATOR.**

## CITATION:

For heroism beyond the line of duty.

In the middle of the night, his ship, *SS Leonidas Polk*, was steaming in blacked-out convoy through icy North Atlantic waters when it collided with another ship which sank almost immediately. Radio operator Blum, hearing cries of a drowning survivor who was beyond the range of buoy lines, dived overside into a rough sea filled with wreckage and was last seen swimming away from his ship in search of the distressed man. That he was unsuccessful in his mission does not detract from the glory of his effort, but his heroism was further sanctified when, in his attempt to rescue the drowning man, he gave his own life.

His utter disregard of the odds against his own survival was a heroic manifestation of the spirit which so inalienably characterizes the men of the United States Merchant Marine.



# THE PORT SECURITY PROGRAM

By LIEUTENANT JUNIOR GRADE JACK P. MORGAN, USCG

UNTIL THE termination of the present national emergency, or at such other time as the President may direct, the Commandant of the Coast Guard is charged with the safeguarding of vessels, harbors, ports, and waterfront facilities in the United States, and all territory and water, continental or insular, subject to the jurisdiction of the United States, exclusive of the Canal Zone. Federal supervision of this important phase of our national security and economy is authorized by Congress under Title 50, United States Code, section 191, when such action is deemed necessary by the Chief Executive. 50 U. S. C. 191 contains section 1. Title II of the Act of June 15, 1917 (Espionage Act), was amended by the Magnuson Act of August 9, 1950. By Executive Order 10173 (further amended by Executive Order 10277 and 10352), the President of the United States declared such authorized supervision was necessary in the national interest. (See Part 6, Title 33 CFR.)

The Commandant of the Coast Guard has issued certain regulations regarding the safety and protection of vessels and waterfront facilities. These regulations are incorporated as Parts 121, 122, 124, 125, and 126 of chapter I, Title 33, Code of Federal Regulations (Navigation and Navigable Waters).

The protection of vessels and waterfront facilities, while including safeguards against loss or destruction due to sabotage or other subversive activity, has as one of its more important functions that of preventing accidental loss or damage through careless or negligent acts. In the prevention of such accidents, the Dangerous Cargo Regulations (46 CFR 146-149) are enforced as an integral part of Port Security functions.

## LOGICAL CHOICE

The Coast Guard was a logical choice for the enforcement of this program, as its statutory obligations are primarily humanitarian in nature and its law enforcement activities geared to the protection of life and property. Also, the cooperative atmosphere prevalent between Coast Guard commands and local maritime interests was a well established basis upon which assurance of reasonable compliance could be placed.

The Coast Guard, as the principal Federal Maritime Law Enforcement Agency, prefers to consider itself as an educator, not a policeman. The education of the public in regard to



ONE OF THE ACTIVITIES of Port Security is identification of incoming vessels. In this simulated photograph a Coast Guard 95-footer and a helicopter supervise harbor entrance.

the necessities controlling its regulatory powers in the field of marine navigation has always been the chief aim of Coast Guard law enforcement policy. Basing its policy on the premise that more can be gained through cooperation than force, the Coast Guard seeks stricter compliance through increased knowledge of marine laws, the regulations stemming from these laws, and the reasoning behind such laws and regulations. While sufficient authority exists to make compliance mandatory, this authority is exercised only in extreme cases. The penalties provided for violation of the Port Security or Dangerous Cargo regulations are substantial, and persons who may become involved in their enforcement should be aware of such provisions.

Any person who knowingly fails to comply with, or knowingly obstructs the enforcement of Port Security regulations is liable to 10 years in prison and \$10,000 fine.

The Dangerous Cargo regulations provide penalties of \$2,000 for each violation, and \$10,000 where such violation results in the loss or injury of life, limb, or property. In addition, those persons licensed by the Coast Guard may find their licenses in jeopardy if any culpability exists on their part.

These regulations are binding upon all persons who come within their purview, and upon all vessels, foreign or domestic. In specific cases, the vessel involved may be subject to

seizure to satisfy lien, or to forfeiture.

Operators of vessels and waterfront facilities may become lax in their compliance with existing regulations if not reminded of their responsibilities from time to time. The enforcement of these regulations by the Coast Guard in no way relieves the masters, owners, operators or agents of vessels and waterfront facilities of their primary responsibility to provide security and protection for their vessels or facilities. Compliance with conditions and requirements which may be applicable are their defined obligation.

The Coast Guard functions in the capacity of supervisor, making periodic inspections and examinations to insure compliance with current requirements. The Coast Guard will assist persons in their efforts to comply by providing explanations or requiring certain corrective action. In cases of aggravated noncompliance, willful neglect, or deliberate violation, the Coast Guard has no alternative but to assess penalties or take such other authorized action as the situation may demand.

## DEVOTED TO SAFETY

The Port Security Program is devoted to safety, not harassment. Everyone in the maritime industry is presumably interested in safety; therefore, it is not unreasonable for a member of the Coast Guard to expect a cooperative attitude in any

matter which aids in the prevention of accidents. Most instances of non-compliance are caused by a lack of knowledge concerning the dangers involved in certain commodities, conditions, or types of handling.

The Port Security Program has enjoyed a considerable measure of success since its present reactivation in 1950. Gratifying progress has been made in alerting maritime concerns as to the requirements of Port Security and to their duties in that regard. However, some concerns have apparently become inured to routine inspection and react with indifference to advisory warnings. This is an attitude that must be discouraged if accidents occurring on or to vessels and waterfront facilities are to be kept at a minimum.

Certain port areas have a Coast Guard Captain of the Port assigned. His duty is primarily that of law enforcement, and his office is available to answer any inquiry into matters pertaining to Port Security. Where a captain of the port office is not assigned, the district commander, or such other officer that he may designate, is charged with the local enforcement of applicable regulations. However, even in areas with a duly assigned Captain of the Port, the district commander is the officer empowered with the authority to mitigate or impose monetary penalties, or to institute prosecution if the circumstances warrant. The captain of the port, or officer acting in that capacity, is empowered to take certain immediate corrective measures, including the suspension or termination of the permission granted to certain waterfront facilities to handle dangerous cargo.

#### LOCAL CONDITIONS

Obviously, the responsible Coast Guard command must enforce the regulations with due regard for any local condition or peculiarity which might necessitate departure from a portion of the regulations. Realizing that such conditions might exist, the Commandant has provided a waiver authority to be used in any unusual or special circumstance (33 CFR 19.01 and 33 CFR 126.11). The local laws enacted by State and municipal governments must also be considered, and if a discrepancy is found between Federal and local requirements, the final decision must always be on the side providing maximum safety. While it is true that the cognizant Coast Guard command has the authority to waive certain conditions or requirements, *reasonable* compliance is a duty that cannot be minimized or ignored. Therefore, waivers will only be granted after careful deliber-



PROTECTION OF SHIPPING and waterfront facilities is another duty of the Coast Guard Captain of the Port in enforcing Port Security Regulations. This photograph, taken solely to demonstrate activities of the Coast Guard, shows a boarding party assisting Customs men in search for contraband goods.

ation into every facet of safety surrounding the condition.

A constant source of violation, and one of potentially serious consequence, is that of incompatible stowage of dangerous cargo. Certain dangerous commodities are permitted to be carried on board vessels when their properties are known and their hazards guarded against. Permitted articles of a dangerous nature are allowed water transportation only if they are clearly identified, and the proper packing, marking, and stowage is observed. Mixed (noncompatible) stowage of articles of different dangerous properties under certain conditions may cause fire, explosion, or may develop harmful vapors. Violations of this nature can be alleviated to some degree if the agents who accept dangerous articles would demand the required certification of compliance with applicable Coast Guard or Interstate Commerce Commission regulations. Shippers who disregard the requirements to certify, label, mark, or assign a proper shipping name contribute to the possibility of incompatible stowage. Failure on the part of supervisors and ships' officers to recognize or acknowledge the dangers inherent in the several hundred articles found in the dangerous commodities list only adds to the dangers in a given situation.

The obvious course to pursue in the enforcement of Port Security and Dangerous Cargo regulations remains that of education. Operators, agents, and other interested people must be made cognizant of the requirements, and should have some knowledge of the background necessitating the regulations. While a violation may have been caused by a lack of knowledge or failure to comprehend a potential danger, the fact remains that it is still a violation, and as such, a likely source of accident, loss, or injury. The Coast Guard member who notes such violation should attempt to explain the reason corrective action must be taken, but he definitely is not authorized to excuse, disregard, or fail to report such violation.

#### PROGRESS THROUGH SAFETY

When studied in its intended perspective, it should become clear that the Port Security Program is dedicated to the progress through safety of the maritime industry. The program is neither designed nor enforced to place financial encumbrance or unrealistic requirements on marine interests. Its purpose is to keep the ports of this country and the vessels which service them operating safely with the least possible interference.

(Continued on page 40)



# FIRE-FIGHTING MANUAL FOR TANK VESSELS



**FIRE ABOARD** ship regardless of size, location, or time of occurrence, demands immediate action.

To assist seagoing personnel in taking proper action the Coast Guard has published a *Fire-Fighting Manual for Tank Vessels* which has been distributed to all American flag tankers.

Prepared by the American Petroleum Institute in cooperation with the Coast Guard, the new manual proposes to familiarize all mariners with the nature of fire and fire-fighting equipment in addition to the methods by which the fire hazard can be controlled most effectively.

The manual includes chapters on "The Chemistry of Fire and Fire Fighting," "Characteristics of Cargo," "Fire-Fighting Agents and Equipment," "Fighting Fires," and concludes with a chapter on "Case Histories of Tanker and Barge Fires and Explosions."

Profusely illustrated, the 43-page manual, although specifically designed for tank vessel operation, is available without charge to any vessel. The nature of fire and fire-fighting equipment and methods discussed in this manual have application on any vessel—passenger, cargo or tanker.

In the introduction it is pointed out that "all seamen through their study of this manual and their training should be prepared for a fire emergency and know what immediate action should be taken if a fire occurs."

"Fire fighting anywhere and any time is a highly specialized job, and for this reason it is necessary for the person who is to fight the fire to know his job. A general knowledge of the theory of combustion and the hazards and precautions involved in the safe handling of petroleum products will enable seagoing personnel to more intelligently make use of the equipment required in the technique of fire fighting. Water, steam, foam, carbon dioxide (CO<sub>2</sub>) and dry chemicals are conveyed to the fire scene where they are converted by the equipment described in this manual into the most convenient form for efficient use in cooling and smothering fires. Without such equipment and a knowledge of its proper application in an emergency, the extinguishing agent is likely to be ineffective.

"It is essential for the safety of 'all hands' and the vessel itself, that all fire-fighting equipment be properly maintained and kept in its proper place, clean and in first-class condi-

tion ready for instant use. After being used, either for drill or for actual fire fighting, equipment should be inspected, reconditioned or renewed, if necessary, and returned to its designated location.

"Inspection of fire-fighting equipment at regular intervals is a basic requirement for proper maintenance. An appropriate time for this inspection would be at the time of weekly fire and lifeboat drills. Furthermore, consciousness of the condition and maintenance of fire-fighting equipment should be a constant concern to all in the normal course of duty. The absence of proper maintenance is equivalent to no protection.

- "A plan of action should be formulated in advance. If fire strikes, act quickly! Lives depend on proper action being taken instantly.

- "Avoid recklessly abandoning a burning vessel. More lives have been lost by premature boat launchings and men going over the side in panic than have ever been lost on deck.

- "Fight the fire always, if only as a rear guard action. It will increase the chances of survival."

## APPROVED RADAR OBSERVER SCHOOLS

Maritime Administration Radar Observer Schools in New York, San Francisco, and New Orleans have been approved by the Coast Guard. A certificate of successful completion of a course of instruction at any of these schools will be considered acceptable evidence of the holder's qualification as radar observer.

The holder of such certificate will not be required to take an examination as radar observer when he applies for examination for an original deck officer's license, raise of grade, or in-

crease in scope of license for service on ocean, coastwise, or Great Lakes vessels of 300 gross tons and over.

Certificates issued on or after the date of the first class held by each of the following schools will be accepted:

**Maritime Administration Radar Observer School**

c/o Atlantic Coast Director  
45 Broadway  
New York, N.Y.

First class held November 18, 1957.

**Maritime Administration Radar Observer School**

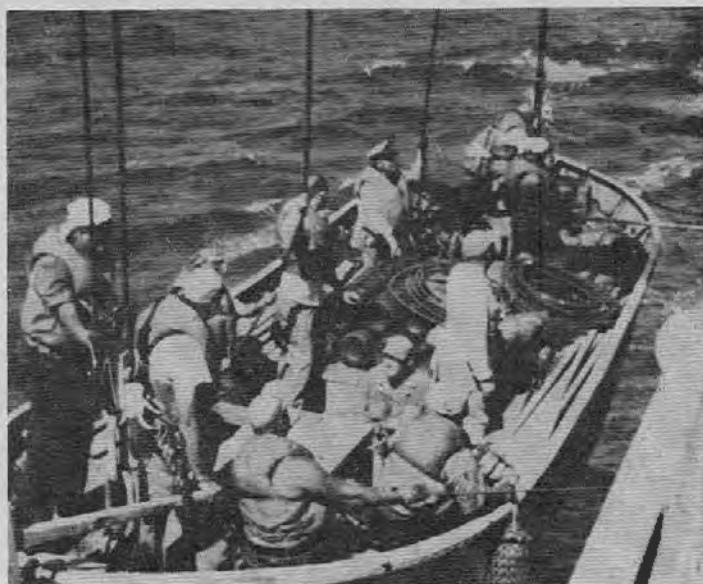
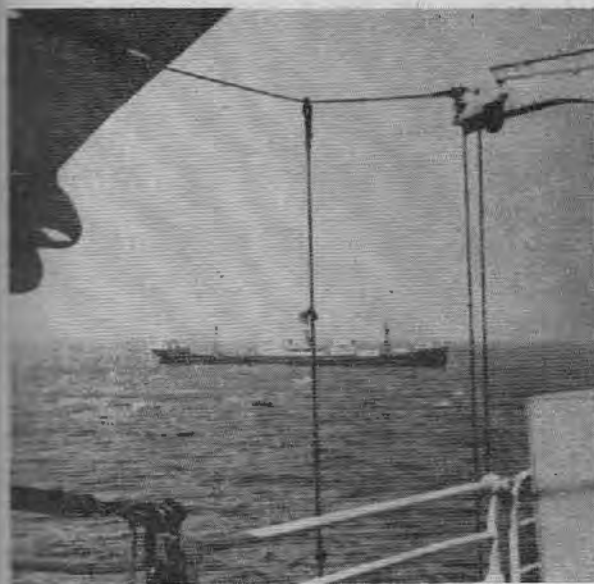
c/o Pacific Coast Director  
180 New Montgomery Street  
San Francisco, Calif.

Physical location: Fort Mason, San Francisco Army Terminal  
First class held March 3, 1958.  
**Maritime Administration Radar Observer School**

c/o Gulf Coast Director  
Masonic Temple Building  
333 Saint Charles Street  
New Orleans, La.

Physical location: New Orleans Army Terminal  
First class held July 14, 1958.

## TRAINING PAYS DIVIDENDS



DURING THE past year an outstanding example of shipboard training paid dividends. The Isthmian Lines SS *Steel Age* was on the 1,472 mile leg between Djibouti and Karachi when the following message crackled over the air waves:

XXX URGENT TO ALL SHIPS

CROSTAFELS/DDTM 0530  
GMT IN POSITION 23.21N  
65.02E COURSE 50 DE-  
GREES SPEED 10 KNOTS  
X HATCH NO 5 ON FIRE X  
EXTINGUISHING BY WA-  
TER IMPOSSIBLE BEING  
CALCIUM CARBIDE X  
SHIPS IN VICINITY WITH  
CO<sub>2</sub> PLEASE STAND BY

Quickly ascertaining the distance between the 2 ships as 74 miles, Captain W. W. Meyer of the *Steel Age*, notified the German freighter *Crosta-fels* of his position and that he was en route to render assistance. The *Steel Age*, ex *Sea Flasher*, is a C-3 type ship fitted with 71 100-pound bottles of CO<sub>2</sub> in its main bank.

Through radio contact, particulars of the *Crosta-fels*' emergency equipment, size of the hold on fire, and other information was obtained. The motor lifeboat of the *Steel Age* was prepared for launching. Twelve 100-pound CO<sub>2</sub> cylinders were loaded in the boat with piping, hose, a self contained breathing apparatus, and a fresh air breathing rig.

The Chief Mate, Third Mate, Chief Engineer, First Assistant, and six un-

licensed men manned the boat. Once aboard the German freighter a consultation was held with the Master. With the hatches and ventilators securely battened down, it was decided to cut a hole in the deck and release the CO<sub>2</sub> bottles one at a time into the hold. This was done and with the fire under control the *Crosta-fels* was able to proceed on its destination.

The *Steel Age*'s fire and rescue party was back aboard their ship less than 2 hours after leaving it. In his report of this effective open sea rescue work, Captain Meyer said:

"The safety and education program as carried out on this vessel during the present voyage proved of considerable benefit in our successful assistance of the German vessel. All the officers and crew who assembled the emergency equipment and operated same on the *Crosta-fels* were very familiar with its use, as well as the equipment's limitations. By being well acquainted and having recently witnessed active demonstration of the emergency gear, the men lost no time in employing the equipment once on board the stricken vessel.

"It is never pleasant to be faced with a near disaster to gain experience in the ability of our emergency equipment, but the men of the *Steel Age* who were fortunate enough to be included in the assisting crew, saw quite forcefully demonstrated how the CO<sub>2</sub> gas, O.B.A., and Fresh Air Mask equipment are of great importance.

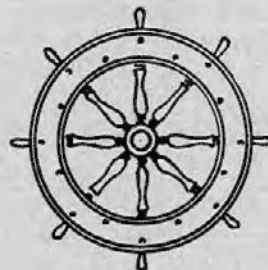
"I am sure that the feeling of my

crew is that the time taken at each weekly drill and further education conducted during the monthly departmental safety meetings in the explanation and active use of the various pieces of equipment, is most worthwhile.

"I can report that our assistance to the *Crosta-fels* was carried out in a seamanlike manner by the participating men. This I attribute to the men knowing what was required and the knowledge that if the equipment was properly used, a serious condition of fire at sea, even on a strange vessel, could be successfully combated by them."

Let's not kid ourselves—in accomplishing a feat of this type training does pay off.

Photos Courtesy Isthmian Lines Safety Bulletin.



# MARINE MACHINERY BREAKDOWNS

By J. H. MILTON

Senior Surveyor in charge of Engineering Investigation, Lloyd's Register of Shipping

Reprinted from the Transactions, North East Coast Institution of Engineers and Shipbuilders, Volume 73, 1957, this Paper will cover, in this and subsequent issues, some of the problems which can confront Surveyors and Superintendents when serious defects, necessitating the delay of a vessel, have developed at sea or have been brought to light at a survey. The cases will cover the following groups: (a) Steam Reciprocating Engines, (b) Boilers, (c) Turbines and Gearing, (d) Diesel Engines, (e) Thrust and Inter Shafting, (f) Tailshafts.

## TURBINES

IN VIEW of the fact that details of serious troubles with turbines do not come readily to mind, it follows that this class of prime mover is perhaps less susceptible in this respect. When, however, all the necessary accessories are considered, gearing, condensers, pumps, etc., the balance levels itself out. One aspect of turbine machinery, as opposed to reciprocating engines, that undoubtedly occurs to most of us, is the blind faith one has to have in the condition of the inside of the turbines, with their myriads of very fine clearances. The condition of turbines when opened up can be amazing: one case immediately comes to mind, that of an I.P. turbine of a large passenger vessel opened up on account of a tinkling sound having been heard by the officers on watch while approaching port. The number of small globules of blade material, more or less tightly packed at one end of the lower half of the casing, was incredible, and yet the machinery had apparently gone on operating satisfactorily.

In direct contrast it is quite usual to see a turbine casing lifted after a year or more's operation and find no visible evidence of it having been in service.

### VIBRATION OF BLADING

It is fairly safe to say that the majority of turbine defects which have occurred during recent years have been either blading failures or bent rotors. One case in the former category was considered to be due to blade vibration, steam excited. In the H.P. turbine in question the initial stages of rotor reaction blading were of end-tightened blades inserted in segments of about 15 blades each, and the segments were not laced to one another in any way. Experiments showed that these segments of blades vibrated freely when suitably excited.

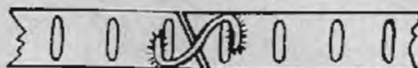


Figure 1.



Figure 2.

The failures, which took place at the blade root, were considered to be due to bending fatigue originating from vibration caused through discontinuities in steam flow. It was evident that to stop this vibration each segment had to be linked to its neighbor in such a way that thermal expansion of the shrouding, at the expansion gaps, was not interfered with. The radial clearance between the rotor shrouding and turbine casing was found to be considerable and a cure was effected in this case by brazing flexible S-shaped monel metal wire bridges across the expansion gaps of the shrouding of the affected rows of blading (see fig. 1).

### THERMAL DISTORTION OF ROTORS

The ratio of body length to diameter of H.P. turbine rotors has increased considerably during recent

years and this factor, coupled with the greater range of operating temperature, has no doubt increased the susceptibility of these finely balanced components to thermal distortion. An unfortunate aspect of this trouble is that most failures actually occur while maneuvering into port, and are not detected until the turbines are "full-away" after leaving.

The actual causes of rotor distortion are generally acknowledged to be sudden local heating or cooling. The former can be brought about by casing distortion causing a labyrinth rub and the latter by water content of gland steam—both of these conditions being more likely during maneuvering.

Cases of rotor distortion are not uncommon and nowadays it is usual practice to endeavor to straighten them by a thermal process. This process is in reality a repeat of that



which originally produced the distortion, applied to the rotor surface in a position diametrically opposite to that where the rotor "rubbed". Briefly, the bending of these solid forged rotors is brought about as follows:

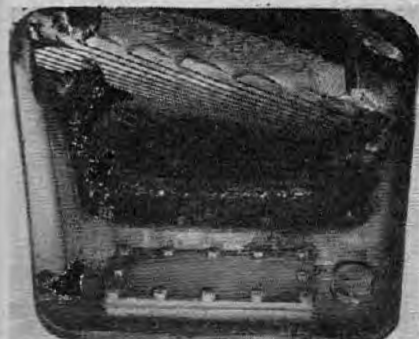


Figure 3.

Intense local heating (produced by a "rub" or applied for straightening) tends to produce expansion in and around this local area in all directions. The surface material of the solid cylinder is free to expand radially simply by locally increasing its already curved surface, but axially it is restrained by the adjacent cool straight longitudinal surfaces. This axial restraint compresses the material in the locally heated area beyond its yield point, and the intense local axial contraction on cooling is sufficient to cause bending.

Blading troubles which suddenly present themselves when a turbine casing is lifted during a short stay in port, are, if not too extensive, normally dealt with by simply cropping off the complete rows concerned—this usually preserves the rotor balance and enables the turbine to continue operating until a convenient repair period presents itself.

## TURBINE DEFECTS

Before passing on from turbines, two outstanding cases come to mind—the first concerned the rotor of an exhaust steam turbine which was coupled back through a quill shaft and gearing to the main shaft of a steam engine. The quill shaft fractured at sea and as the governor was out of action the turbine literally "ran away." The vessel made port on the engine only, and when the turbine was opened up, examination showed that about a quarter of an inch had been ground off the tips of the blades at the exhaust end of the

rotor. These blades, secure at their roots, were fouling the casing at their tips and had been stretched by centrifugal force during the overspeeding of the turbine.

The second case also concerned a triple expansion engine and exhaust turbine installation. Here, the turbine when put in operation, caused no increase in propeller revolutions. This instance, although not strictly a breakdown, was indicative of what could occur in a superheated installation when excessive quantities of cylinder oil were fed into the engine cylinders.

Cylinder oil in all forms, from sludge to carbon, was everywhere. The H.P. and M.P. piston rings of the main engine were carboned up solid, the turbine stator blading was almost solid, the hotwell filters choked, and the Scotch boilers somehow managing to carry on.

## GEARING FAILURES

The immobilization of turbine vessels through gearing failures would appear to be more predominant since the war. The use of new materials allowing higher tooth loading, and the fabrication of wheels and gearboxes by electric welding, are fairly certain to create new problems, which can only be overcome by a lengthy period of operating experience.



Figure 4.

A very serious gearing failure is illustrated in figures 2, 3, and 4; in this case one of the main wheel shrouds fractured and parted company with its wheel while the machinery was running at full revolutions. The vessel was towed into port, and, as one would expect, the damage found was so extensive as to require complete renewal of the gearing.

## EXTENSION LADDERS

The use of extension ladders aboard ship has become the subject of careful scrutiny by an increasing number of safety engineers. There have been cases reviewed at Coast Guard Headquarters which indicate that the use of these ladders have done more harm than good, and in some companies their use is prohibited.

A case in point involved a shipyard worker, but the circumstances could apply to any shipboard personnel.

This workman was directed to burn away a deck beam to allow installation of a ventilation fan in the deck of a T-2 type tanker. It was decided to make the removal from the tank and a 32-foot aluminum ladder was set up to enable the man to ascend from the bottom of the tank to the work location. The foot of the ladder was braced against a longitudinal floor and the top set against a transverse bulkhead. A shipfitter, who weighed 130 pounds, mounted the ladder to its top and marked up the beam to be cut. After he came down, the burner, who weighed between 175-180 pounds, made his way up the ladder with his flame cutting torch.

At the top of the ladder he lit his torch and turned to start cutting. Just at this moment the locking devices holding the ladder extension slipped. After slipping five rungs the locking devices caught but the man was shaken loose by the impact and fell head first to the bottom of the tank. Two days later he died from injuries sustained in the fall.

The investigation revealed that the rope used to extend the ladder was not secured as a preventer and no thought was given to the locking devices as they had held the lighter man who mounted the ladder without mishap.

Be guided by this Lesson From Casualty. If your ship uses extension ladders, make sure they are properly rigged, locked in position, and secured with a preventer.





# MARITIME SIDELIGHTS

A remarkable safety record of 4 years and 23 days without a lost-time accident has been recorded by the Texas Company's SS *Indiana*. When this unbroken stretch came to an end with a sprained ankle aboard ship, a member of the crew addressed the vessel's safety meeting, in part, by saying:

"I hope that we all understand that we don't practice safety just to have a long safety record but primarily to reduce pain and suffering and time lost from the job. Therefore, I hope that every one of you will work just as hard in the future as we have in the past to make the *Indiana* as safe a ship as possible."



Fischer-Malik, Inc., of Bay Shore, Long Island, N.Y., has been awarded a contract for the construction of a Memorial Chapel at the U.S. Merchant Marine Academy, Kings Point, Long Island, N.Y. The memorial is to the men of the U.S. Merchant Marine who lost their lives in defense of their country. The chapel will be inter-faith, providing appropriate facilities for worship and religious activities of Protestant, Catholic, and Jewish faiths.

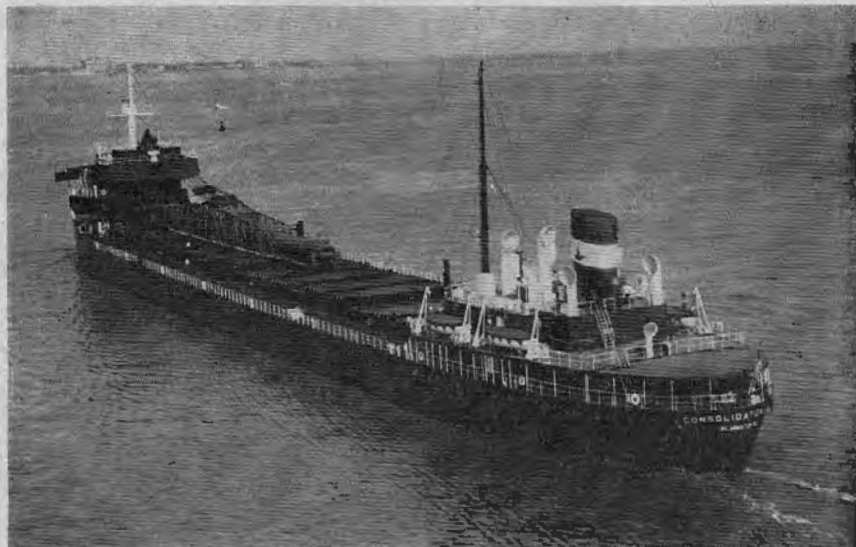


Falls are the second most frequent source of accidental death in the United States, according to the National Safety Council. They cause nearly 21,000 deaths a year. Number 1 accidental killer: motor vehicle accidents.



The latest edition of the United States Coast Pilot 5, which has just been published by the Coast and Geodetic Survey, U.S. Department of Commerce, cancels two 1949 editions which formerly covered, in separate volumes, the Gulf Coast and West Indies.

The new 286-page fourth edition, which has been more than 2 years in the making, covers the Gulf Coast of the United States from Key West to the Rio Grande and also Puerto Rico and the Virgin Islands in the West Indies. By eliminating certain duplicated material and adopting a radical new format, the new mariners' bible now contains nautical information



PRIDE OF THE POCAHONTAS FLEET is the self-discharging supercollier *Consolidation Coal* pictured above on her maiden trip from Hampton Roads to Salem, Mass. Described as the first of its type designed for ocean service, the ship is capable of discharging a ton a second over its 250-foot boom seen in the forward midship section. Photo Courtesy Newport News Shipbuilding and Dry Dock Co.



that previously required more than 800 pages. The new edition of Coast Pilot 5 is available at the sales agents, district offices, and Washington office of the Coast and Geodetic Survey. Price \$2.50 a copy.



Work is underway on a multimillion dollar project to widen and increase the control depth of the Suez Canal from 34 feet to 37 feet.



Eight submarines which will never fire a shot in anger are to be built by Todd Shipyards Corp., Los Angeles for use in "Tomorrowland" at nearby Disneyland. Complete with conning tower and diving planes, the undersea craft will be 52 feet in length and powered by diesel-electric motors.



The Army Corps of Engineers' hopper dredge *Chester Harding* is back in service on the West Coast after an extensive conversion which included the installation of two 2,150-

horsepower diesels and two controllable pitch propellers. Considered the first of her type to have c-p wheels, the ship is manned mostly by survivors of the dredge *William T. Rossell* which was lost off the entrance to Coos Bay, Oreg., in 1957.



Application by American President Lines for operating-differential subsidy covering American-flag cargo vessels to serve a proposed Great Lakes-St. Lawrence River-Mediterranean trade route was announced by Clarence G. Morse, Chairman, Federal Maritime Board, and Maritime Administrator, U.S. Department of Commerce. APL submitted in support of their application traffic data indicating that study of traffic movement between the United States' "fourth seacoast" and the Mediterranean Sea had convinced them that this was "an essential service in the foreign commerce of the United States."



## ACCIDENTS IN BRIEF

Here is a condensation of some accidents reported to Coast Guard Headquarters during the past month. A capsule glimpse into the cause \* \* \* and effect. In each case the victim was incapacitated at least 72 hours.

### CAUSE

### EFFECT



Glove entangled in wire... Loss of three fingers.

Descending slack ganline.....	Fractured right ankle.
Accidental discharge of flare.....	One week incapacitation.
Door slammed in seaway.....	Fractured left hand.
Making ash tray out of old tin can.....	Lacerated thumb.

Unsecured hot coffee pot..... Burns on back and legs.



Shifting preventer guy.....	Fractured face bone.
Using chair for ladder.....	Right shoulder injury.
Slipped on slushy deck.....	Sprained back.
Slipped dumping garbage.....	Injured back.
Nail in dunnage.....	Lacerated foot.



Cleaning fish..... Fish scale in eye.

## MERCHANT MARINE STATISTICS

There were 947 vessels of 1,000 gross tons and over in the active ocean-going U.S. merchant fleet on December 1, 1958, according to the Maritime Administration. This was three more than the number active on November 1, 1958.

There were 23 Government-owned and 924 privately owned ships in active service. These figures did not include privately owned vessels temporarily inactive, or Government-owned vessels employed in loading grain for storage. They also exclude 27 vessels in the custody of the Departments of Defense, State, and Interior.

There was an increase of four active vessels and a decrease of three inactive vessels in the privately owned fleet. Two new tankers, the *Eagle Transporter* and the *Kings Point*, were delivered into service, and one freighter, the *Anne Butler*, was returned from foreign to U.S. flag. Two freighters, the *Ponce* and the *Talamance*, were transferred to foreign flag. This increased the total privately owned fleet by a net of 1 to 1,005.

Of the 81 privately owned inactive vessels, 35 dry cargo ships and 34 tankers were laid up for lack of employment, 5 more than on November 1. Most of the others were undergoing repair or conversion.

The Maritime Administration's active fleet was one less than that of the previous month, while its inactive fleet decreased by nine. Thirteen Liberty ships were sold for scrap. Three transports owned by the Navy were turned over to the Administration. This decreased the Government fleet by 10 to a total of 2,127. The total merchant fleet of 3,132 active and inactive ships was 9 less than the fleet on November 1, 1958.

No new ships were ordered. Two new tankers were delivered for U.S. flag. The converted Great Lakes bulk carrier *Robert C. Norton* was delivered. Three tanker orders were canceled. The total of large merchant ships on order or under construction in U.S. shipyards dropped by 6 vessels to 86.

Seafaring jobs on active ocean-going United States flag ships of 1,000 gross tons and over, excluding civilian seamen manning Military Sea Transportation Service ships were 51,761. Prospective officers in training in Federal and State nautical schools numbered 2,196.



# KNOW YOUR COMPRESSED GAS CYLINDERS

CYLINDERS containing a compressed gas approved for shipboard use serve many useful purposes. They are built to exacting standards and must comply to strict regulation. In fact, they are so dependable that casualties involving their use have become increasingly rare.

However, casualties do occur and usually with disastrous results to life and property. Most of these are the result of ignorance and mishandling.

A case in point involved two men removing new hand CO<sub>2</sub> extinguishers from a shipping carton. For some unknown reason, perhaps thinking the cylinders needed recharging, one man fitted a 15-inch crescent wrench and started to back off the screw cap on the charging side of the bottle.

As he loosened the cap a hissing sound was heard. "It's leaking gas," shouted his helper. The cap was screwed back and this man began reading the instruction tag attached to the cylinder. As he was reading the instructions, the helper removed the cap from the discharge line and started to again loosen the plug on the charging side. Suddenly there was a loud "pop" and the area became dense with CO<sub>2</sub>.

Result: One man dead and the other critically injured.

The investigation determined that when the charging plug was backed off the escaping gas fractured the rupture disc on the discharge side which allowed the gas to pass out through two openings. This set the cylinder violently whirling striking the two men and smashing the wrench through the floor.

## SOME SUGGESTIONS FOR HANDLING COMPRESSED GASES

- Never open the valve of any compressed gas cylinder on a ship, unless the cylinder is hooked up to the equipment or system it is intended for.

- Check hose piping and valves of systems using compressed gas to be certain they are tight.

- Under no circumstances should cylinders of compressed gas be used in any manner on board a ship except that for which they were designed and built. This applies to whether the cylinders are filled with an inflammable or a noninflammable gas.

- If the valve mechanism of a cylinder seizes or otherwise becomes inoperative, do not attempt to force the valve open. If the valve is stuck open and cannot be closed and the contents of a cylinder should escape into a



INTERIOR VIEW of a 53-foot passenger motorboat taken after an explosion of a 10-pound CO<sub>2</sub> portable extinguisher. There were no casualties in this case.

compartment or into the atmosphere on deck, immediately extinguish all sources of ignition, vent the compartment, or if on deck, wait sufficient time for the gases to diffuse before resuming operations.

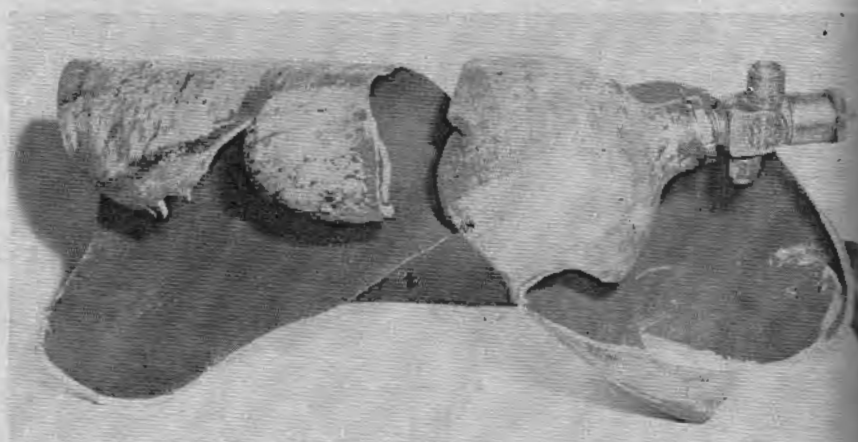
- Do not apply oil to any valve mechanism, couplings or piping of a system using a compressed gas.

- Do not expose cylinders to abnormal heat either from the sun's rays or sources of artificial heat. Men have been known to apply a blowtorch to a nearby empty cylinder of compressed gas to expand the residue

in the cylinder and thus secure the maximum amount of gas on the theory that they paid for that gas; therefore it belongs to them. This is a very risky practice and instead of saving money by exhausting the last ounce of gas the person who insists on doing this may pay considerable more money in hospital bills and lost wages.

- Do not subject a cylinder to shock.

- Never use any compressed gas cylinder as a roller to move heavy weights.



THIS PHOTOGRAPH shows another CO<sub>2</sub> cylinder following an explosion. Note how the tremendous pressure curled the metal.



# nautical queries

Q. (a) What is the purpose of the inclining experiment on a vessel?

(b) What is the value of a rough inclining test such as by the lifting of known weight on the cargo booms or checking the GM by timing the rolling period?

A. (a) An inclining experiment is for the purpose of accurately determining the vertical height of the vessel's center of gravity. The position of the center of buoyancy and the metacenter are functions of the vessel's geometric form, but without an inclining test the height of the center of gravity can only be estimated.

(b) The rough inclining test and the timing of a vessel's roll can be used to approximate the GM corresponding to the condition of the vessel at the time of observation. This also may be used to check the accuracy of other means of calculation.

Q. How is the initial metacentric height or GM used in the construction of a curve of righting arms?

A. If the GM is erected as an ordinate at one radian ( $57.3^\circ$ ), a straight line to the origin is the initial slope of the curve of righting arms.

Q. Describe the possible effects of trim on the transverse stability of a vessel.

A. The height of the metacenter above the center of buoyancy depends primarily on the beam of the waterplane. If the effect of the trim is such that the increase in the breadth of the waterplane at the immersed end of the vessel is greater than the reduction in beam at the emerged end of the vessel, the BM and thus the metacentric height will be increased, and vice versa.

Thus vessels usually gain GM in trim by stern and lose it when trimmed by the head.

Q. (a) What is the purpose of longitudinal swash bulkheads in a tank?

(b) Do longitudinal swash bulkheads in a tank reduce free surface?

A. (a) Longitudinal swash bulkheads reduce the dynamic effects of moving water in a tank.

(b) Longitudinal swash bulkheads limit the effect on rolling of free surface of a vessel with a quick rolling period; but where a vessel has a sustained list or long rolling period, the effect of swash bulkheads in reducing the effect of free surface is negligible.

Q. The lubricating oil pump which supplies oil to the main bearings and governors of a turbine-generator set is operated through gearing connected to the reduction gear shaft. How is oil pressure provided for the speed controls and bearings lubrication before the unit is started up?

A. A hand-operated oil pump is mounted on the side of the gear casing. Pump oil by hand in order to lift the controlling valves by hydraulic pressure of the oil and furnish the bearings with lubrication until the turbine is placed in operation and the geared pump is functioning to maintain the required pressure.

Q. Explain the operation of a steam seal.

A. The operation of a steam seal is as follows: Assume that steam is admitted about the middle of the gland at a pressure of 8 pounds per square inch gage. The steam will leak through the labyrinth passage-way in both directions, part of it going into the turbine and part outward to the atmosphere. If steam is leaking outward to the atmosphere, it is obvious that air cannot at the same time leak into the turbine casing. The steam which leaks into the casing will have practically no effect on the vacuum, whereas air would, if permitted to leak in, tend to lower the vacuum considerably.

Q. Explain how under normal operating conditions a higher vacuum can be maintained while using one set, rather than both sets, of the air ejection nozzles of the main air ejector.

A. The capacity of the nozzles of the air ejector is sufficient so that under all conditions of normal operation, including full power, one nozzle for each stage is sufficient. When using both sets of ejection nozzles the increased temperature of the air ejector will cause a reduction in the possible vacuum.

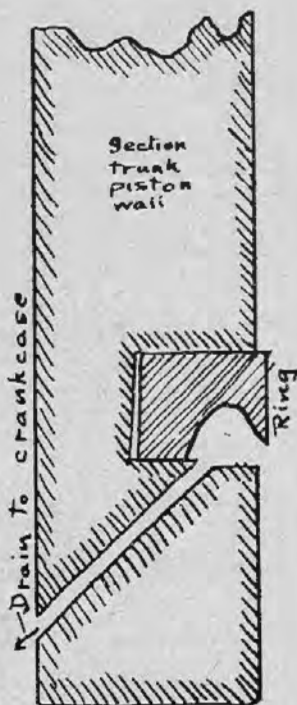
Q. For what applications may the critical speeds of turbine rotors be below the normal operating speeds, and for what applications should they be above the normal operating speeds?

A. When operating speeds are

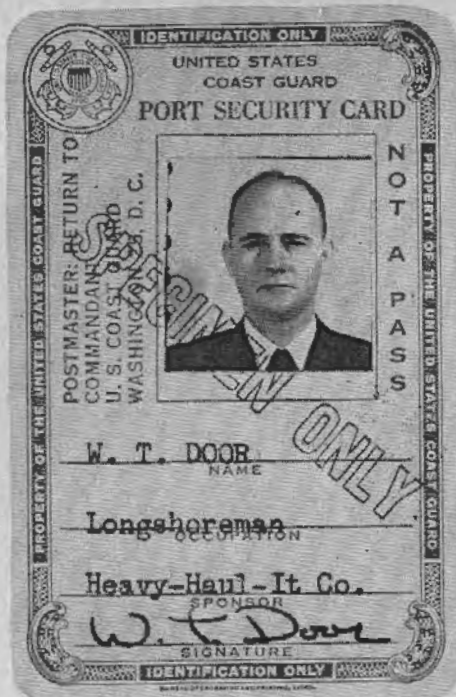
constant as in driving generators, critical speeds may be 25 percent or more below the operating speed since the turbine only passes the critical speed when starting up or slowing down; when operating speeds are subject to constant variation as with a turbine driving a propeller shaft, critical speed should be at least 20 percent above maximum operating speed.

Q. (a) What is the object of the scraper ring on diesel engine pistons?

(b) Make simple section sketch.



A. (a) The scraper ring on diesel engine pistons is usually the lowest ring on the piston proper, particularly on crosshead-type engines. The ring is fitted to scrape off the lubricating oil from the cylinder walls on the down stroke so that this will not come into the air charge and cause improper combustion. The oil is scraped off the surface of the cylinder by the hook edge shown and is drained away through the drain hole shown in the piston.



CHECK YOUR EXPIRATION DATE NOW!

IF FOUND, DROP IN NEAREST U. S. MAIL BOX

ISSUED	EXPIRES	CITIZENSHIP	PLACE OF BIRTH
1 Feb 59	1 Feb 67	U. S.	Boston, Mass.
AGE	HEIGHT	COLOR EYES	COLOR HAIR
35	5'11" 153	Blue	Blond
SEX	SOCIAL SECURITY NUMBER		INDEX FINGER—RIGHT HAND
M	044-18-2416		
SPECIMEN ONLY			
CARD NO. A000084			
A. B. SEA, CDR USCG			
VALIDATED—UNITED STATES COAST GUARD			

**COAST GUARD PORT SECURITY CARDS:** The specimen card reproduced above is valid for eight years from the date of issuance, unless sooner surrendered or canceled by proper authority. All holders of this card are requested to "check the expiration date now!" This card is issued by the Coast Guard as one means of identification of persons regularly employed on vessels or waterfront facilities or those having regular business connected with the operation, maintenance, or administration of vessels, their cargoes, or waterfront facilities. If your card has, or is about to expire, you may apply for a new one at once. Full details of section 125.12 of title 33, Code of Federal Regulations, is reprinted in the appendix of this issue.

## APPEAL DECISIONS

Found guilty of misconduct, this engineering officer had his license and all seaman documents revoked by a Coast Guard examiner and the Commandant affirmed the order on appeal. "In view of this man's prior record and his position as a ship's officer the order imposed is considered appropriate. Appellant has showed an ever increasing disregard for the obligations he incurs in signing shipping articles and the added responsibilities he assumes when sailing as an officer," the Commandant said.

★ ★ ★

For failure to make proper allowance for leeway and set; failure to use an available large scale chart; and failure to call the Master when in doubt as to position—the first two which contributed to the grounding of

his vessel—this deck officer was found guilty of negligence by a Coast Guard examiner. His seaman documents were suspended for 2 months outright and 2 months on 8 months' probation. The order was affirmed by the Commandant on appeal.

★ ★ ★

For wrongfully placing his hands on the person of a female passenger, this member of the stewards department was found guilty of misconduct and his documents and seaman papers were revoked by a Coast Guard examiner. In affirming the appeal, the Commandant said: "For over a century our law has held that a passenger's right to personal privacy should be inviolate. When a seaman molests a female child passenger, revocation is the only appropriate order."

For wrongfully having marijuana in his possession, this seaman was found guilty of misconduct and all his documents and other seaman papers were revoked by an examiner. The Commandant affirmed the order on appeal. "It is the regulatory policy of the Coast Guard to revoke the documents of all seamen found guilty of possession or other association with narcotics (46 CFR 137.03-1)," he said.

★ ★ ★

For wrongfully addressing a ship's officer with profane and abusive language and failure to turn to and perform his duties, this able-bodied seaman was found guilty of misconduct and an examiner suspended him for a period of 2 months outright and 4 months on 12-months' probation. The Commandant affirmed the order on appeal.



THE FOLLOWING account is taken from the investigation of an accident in which a cargo boom fell resulting in a fatality. A man was killed by being caught in a topping lift wire as it unreeled from the drum under acceleration imparted by a falling boom. The winch involved was a steam winch which was being used to position a boom prior to cargo unloading. Not known at the time was the fact that the drum ratchet-clutch interlock assembly was not completely effective as a safeguard.

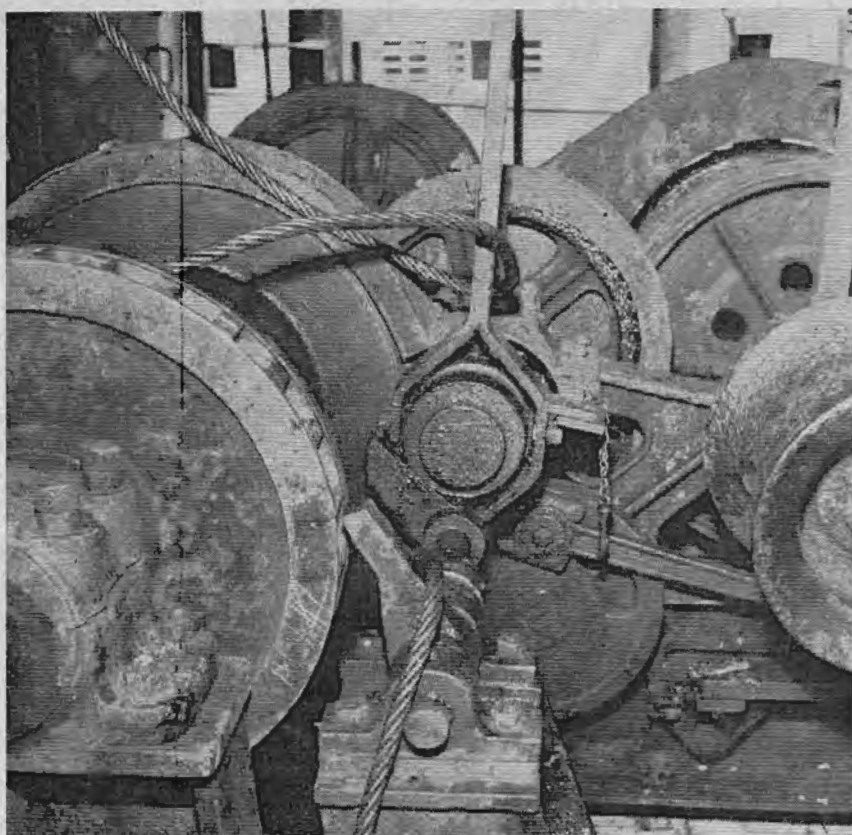
The accident occurred in the following manner:

After the boom had been lowered into position, the winch driver was ordered to engage the drum ratchet pawl. This would simultaneously move the clutch interlock arm permitting disengagement of the clutch. The lever was shifted as ordered, but the pawl failed to engage the drum ratchet. However, the clutch interlock arm was rotated sufficiently to permit disengagement of the clutch. Suddenly the boom began falling. During its fall the wire flew off at great speed until all cable passed from the drum. The hatch tender who was assisting at the winch was killed instantly by being caught in loops of unwinding cable.

As can be seen in the picture the drum ratchet pawl is on the end of a shaft about 2 feet in diameter and 20 inches long. Secured to the other end of this shaft is the clutch interlock arm, set at a small angle to the pawl so as to permit disconnection of only one part at any time, control being applied through a lever at the winch operator's station. As designed, the pawl and interlock arm assembly functions to prevent an accident of this kind. As installed in this case, a slight excess angularity existed between the pawl and interlock arm. The winch could be operated without accident, as it previously had been, as long as the control lever was methodically operated all the way from one position to the other before disengagement of the clutch. In view of the latent danger revealed here, it is strongly recommended that all winches having this type of clutch interlock be examined to determine that no excess clearance exists.

To correct this deficiency the bearing was repositioned by welding up three of the four original bolt holes in the top of the pedestal foundation and redrilling and reaming the bolt holes so that the clutch interlock could not permit disconnection of the clutch without the drum ratchet pawl being engaged. Fitted bolts were used to prevent movement and standard tests applied to the gear after repairs.

## SAFETY INTERLOCKS ON WINCHES—ARE YOURS SAFE?



### DON'T USE OUT-OF-DATE CHARTS

Collecting old charts can be a satisfying hobby and in years to come may even be a basis for some small claim to fame, but the economy-minded skipper or pilot who tries to get a few more months use from an out-of-date chart is only asking for trouble, Rear Adm. H. Arnold Karo, Director of the Coast and Geodetic Survey, U.S. Department of Commerce, said.

Admiral Karo cautioned against such practices since constant changes in landmarks, aids to navigation, and submerged obstructions necessitate frequent revisions and corrections on modern charts which, unless applied, make the charts obsolete and hazardous to use.

The Coast and Geodetic Survey publishes 814 nautical and 1,492 aeronautical charts covering the United States and its possessions. In an attempt to keep up with the constant changes, the Survey made more than 8 million hand corrections on its

nautical charts last year. These corrections were made at the Survey's Washington office, the New York district office and the San Francisco district office for distribution to the 441 sales agents throughout the country. When more than 40 hand corrections must be made on a chart, a new print is issued.

New prints are made of more than half of the nautical charts each year and approximately 75 charts are issued as new prints twice a year. The aeronautical charts are revised on an average of twice a year but certain instrument flight charts are revised monthly.

For those who want to collect old charts the Coast and Geodetic Survey has on file a large number of original copperplate engravings of early editions of nautical charts, some of which date back to the 1850's. More than 70 different charts are available in prices ranging from \$1 to \$2.50.

And the key word is "Operating." Everyone loses when accidents, regardless of cause, disrupt the flow of traffic. Attuned to the word "operating," the Coast Guard is ever alert to changing conditions, eager and ready to assist the maritime industry in every way possible under the law. Matters of exigency are often resolved in mutual satisfaction by local command.

Maritime interests who may find serious objection to conditions, definitions, or requirements, or who feel that inconsistencies exist in the Dangerous Cargo Regulations (46 CFR 146-149) are urged to make written comment to Commandant (OPL) Coast Guard Headquarters, Washington 25, D. C. Comments regarding Port Security Regulations should also be made in writing to Commandant (OPL).

While the educational phase of this program progresses as time and personnel permit, interested people must continue to expect that corrective action will be required when violations are noted. The issuance of Port Security Advisory Warnings and the filing of Reports of Violation, together with any resultant penalties, will remain as necessary deterrents to dangerous practices.

To clarify an issue in which there may be some doubt, the Port Security and the Dangerous Cargo regulations are not mutually dependent entities. The existence of the Port Security Program and its related regulations depend to a great extent upon international tensions and the needs of internal security. The Dangerous Cargo Act (46 CFR U. S. C. 170) is a separate piece of legislation, and the enforcement of regulations pertaining thereto is not conjunctive with the Port Security Program. However, as previously mentioned, the Dangerous Cargo Regulations are enforced as an integral part of the Port Security Program, whenever the Program is in effect.

While the Coast Guard today has jurisdiction over all waterfront facilities, its chief concern on the waterfront is with those facilities that are "Designated Waterfront Facilities." Designated Waterfront Facilities are those facilities that meet certain minimum standards and are approved to handle dangerous cargo. These facilities receive frequent inspections to check on their degree of compliance with applicable regulations. Other waterfront facilities may expect spot checks at less frequent intervals to insure that they are not handling dangerous cargo in violation of the

## SUBMARINE SIGNAL MEANINGS

Submarine emergency identification signal colors and meanings are as follows:

(a) *Green*.—Indicates a torpedo has been fired. Will be used to simulate torpedo firing on special exercises such as convoy exercises.

(b) *Yellow*.—Indicates that submarine is about to come to periscope depth from below periscope depth. Surface craft terminate anti-submarine counterattacks and clear vicinity of submarine. Do not stop propellers!

(c) *Red*.—Indicates an emergency condition within the submarine and she will surface immediately, if possible. Surface vessels clear the area and stand by to give assistance after the submarine has surfaced. In case of repeated red signals, or if the submarine fails to surface within a reasonable time, she may be assumed to be disabled. Buoy the location, look for submarine marker buoy, and attempt to establish sonar communications. Advise naval authorities.

The foregoing, all of which mark the submarine's position, are fired from a submerged signal ejector into the air to a height of about 300 feet, then float downward slowly, suspended from a small parachute, and give colored illumination for about 30 seconds.

Submarines are also equipped with messenger buoys which are about 3 feet in diameter, and are painted international orange. A submarine on the bottom in distress and unable to surface will, if possible, release this buoy. An object of this description which is sighted on the surface of the water should be investigated and naval authorities advised.

regulations. Dangerous cargo, in any amount, is prohibited on any facility not meeting the requirements or conditions of a "Designated Waterfront Facility."

The Coast Guard pamphlet, "Security of Vessels and Waterfront Facilities," (CG-239) contains the Port Security Regulations, and is available at no cost from the various Coast Guard district commanders, captains of the ports, and marine inspection offices. This publication was reissued 1 July 1958; this edition being corrected to that date. Further additions, corrections, or amendments are published in the Federal Register as they occur.

## APPENDIX

### AMENDMENTS TO REGULATIONS

[EDITOR'S NOTE.—The material contained herein has been condensed due to space limitations. Copies of the Federal Registers containing the material referred to may be obtained from the Superintendent of Documents, Washington 25, D.C.]

#### TITLE 46—SHIPPING

##### Chapter I—Coast Guard, Department of the Treasury

[CGFR 58-49]

##### PROOF OF OWNERSHIP OF UNDOCUMENTED VESSELS REQUIRED FOR NUMBERING

The current practices followed with respect to the numbering of undocumented vessels under the Act of June 7, 1918, as amended (46 U.S.C. 288), require the applicant to submit documentary evidence of ownership of the undocumented vessel prior to the Coast Guard's issuing a certificate of award of number for such undocumented vessel. The Federal Boating Act of 1958 states that this Act of June 7, 1918, as amended, is repealed effective April 1, 1960, and replaces this law with new numbering procedures and requirements to be followed on and after April 1, 1960, insofar as numbering of undocumented vessels is performed by the Coast Guard. This Federal Boating Act of 1958 states that the word "owner" means "the person who claims lawful possession of a vessel by virtue of legal title or equitable interest therein which entitles him to such possession." Since the Federal Boating Act of 1958 eliminates the necessity for submission of supporting documents of title by applicants for certificates of number, which will be followed on and after April 1, 1960, by the Coast Guard, there appears to be no need for continuing the present practice of requiring applicants for certificates of award of number for undocumented vessels under the Act of June 7, 1918, to require a prima facie showing of ownership. In the past this requirement has resulted in extensive correspondence due to lack of knowledge of legal requirements on the part of boat owners, particularly in cases where the boats have never been numbered before, with an unavoidable delay in issuing certificates of award of number. Therefore, the



applicant's claim of ownership of an undocumented vessel, now contained on the application Form CG-1512, will be accepted in all cases where the undocumented vessel has not been previously numbered, without any supporting documents of title, such as bills of sale or builders' certificates. With respect to undocumented vessels currently numbered by the Coast Guard, the current practice of requiring the execution of a bill of sale on the reverse side of a certificate of award of number and the application form thereon will be continued until April 1, 1960, in cases where such certificates are outstanding. These changes in the regulations will permit the introduction of an interim procedure for numbering vessels not previously numbered which is analogous to the system intended to be followed by the Coast Guard under the Federal Boating Act of 1958 on and after April 1, 1960. It is hereby found that compliance with the Administrative Procedure Act (respecting notice of proposed rule making, public rule making procedure thereon, and effective date requirements thereof) would serve no practical purpose and is, therefore, deemed unnecessary. These changes are relaxations from current requirements and are based on the new practices which will be required for the Coast Guard under the Federal Boating Act of 1958. No change will be made in the numbering procedures now in force with respect to numbers issued by Customs Districts or in the form of certificate of award of number issued under the act of June 7, 1918, as amended.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Orders 120, dated July 31, 1950 (15 F.R. Doc. 6521), and 167-32, dated September 23, 1958 (23 F.R. 7605), to promulgate regulations in accordance with sections 1-5, 40 Stat.

602, as amended (46 U.S.C. 288), the following amendments are prescribed and shall become effective on December 31, 1958:

[Federal Register of December 9, 1958]

## TITLE 46—SHIPPING

### Chapter I—Coast Guard, Department of the Treasury

#### Subchapter N—Explosives or Other Dangerous Articles or Substances and Combustible Liquids on Board Vessels

[CGFR 58-48]

#### PART 146—TRANSPORTATION OR STORAGE OF EXPLOSIVES OR OTHER DANGEROUS ARTICLES OR SUBSTANCES, AND COMBUSTIBLE LIQUIDS ON BOARD VESSELS

##### MISCELLANEOUS AMENDMENTS

The provisions of R.S. 4472, as amended (46 U.S.C. 170), require that the land and water regulations governing the transportation of dangerous articles or substances shall be as nearly parallel as practicable. The provisions in 46 CFR 146.02-18 and 146.02-19 make the Dangerous Cargo Regulations applicable to all shipments of dangerous cargoes by vessels. The Interstate Commerce Commission in Orders Nos. 35 and 36 has made changes in the ICC regulations with respect to the definitions, descriptions, descriptive names, classifications, specifications of containers, packing, marking, labeling, and certification, which are now in effect for land transportation. Various amendments to the Dangerous Cargo Regulations in 46 CFR Part 146 have been included in this document in order that these regulations governing water transportation of certain dangerous cargoes will be as nearly parallel as practicable with the regulations of the Interstate Commerce Commission which govern the land transportation of the same commodities.

Since the amendments in this document are revised requirements to agree with existing ICC Regulations or are editorial in nature, it is hereby found that compliance with the Administrative Procedure Act (respecting notice of proposed rule making, public rule making procedure thereon, and effective date requirements thereof) is unnecessary. The Federal Register Division will issue a pocket supplement to the volume of the Code of Federal Regulations containing 46 CFR Parts 146 to 149 which will set forth in full text the regulations as revised since January 1, 1958. This supplement contains all of the changes to the regulations in 46 CFR Parts 146 and 147 published during the calendar year 1958.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Orders 120, dated July 31, 1950 (15 F.R. 6521), 167-14, dated November 26, 1954 (19 F.R. 8026), and CGFR 56-28, dated July 24, 1956 (21 F.R. 5659), to promulgate regulations in accordance with the statutes cited with the regulations below, the following amendments are prescribed and shall become effective on December 31, 1958:

[Federal Register of December 12, 1958]

## TITLE 33—NAVIGATION AND NAVIGABLE WATERS

### Chapter I—Coast Guard, Department of the Treasury

#### Subchapter L—Security of Waterfront Facilities

[CGFR 58-52]

#### PART 125—IDENTIFICATION CREDENTIALS FOR PERSONS REQUIRING ACCESS TO WATERFRONT FACILITIES OR VESSELS

##### COAST GUARD PORT SECURITY CARDS

The United States Coast Guard is authorized to issue Coast Guard Port Security Cards (Form CG-2514) as one means of identification of persons regularly employed on vessels or waterfront facilities or persons having regular public or private business connected with the operation, maintenance, or administration of vessels, their cargoes, or waterfront facilities.

There are presently outstanding Coast Guard Port Security Cards originally issued to holders on applications made during the years since 1951. In many instances the application information furnished by the holders of such cards is outdated. Furthermore, outstanding Coast Guard Port Security Cards bear various expiration dates which have been extended from time to time by notices published in the Federal Register. A new regulation designated 33 CFR 125.12 is added to the regulations by this document in order to provide the Coast Guard with current information concerning the holders of Coast Guard Port Security Cards and to establish a uniform period of validity of eight years from the date of issuance. A person who applies for a new Coast Guard Port Security Card must surrender the old or expired Coast Guard Port Security Card at the time he receives his new one or in event the old Coast Guard Port Security Card was lost, stolen, or destroyed the applicant must comply with the provisions in 33 CFR 125.51, regarding the replacement of a lost Coast Guard Port Security Card.

## NOTICE

Regulations of the Congressional Joint Committee on Printing and Binding require annual verification of all mailing lists maintained for the purpose of free distribution of Government publications.

All addresses on the mailing list for the *Proceedings* have been sent a card requesting that an affirmative reply be returned to the Commandant (CMC), United States Coast Guard, Washington 25, D. C.



The Coast Guard Document CGFR 57-3, entitled "Coast Guard Port Security Cards," dated January 22, 1957, and published in the FEDERAL REGISTER January 29, 1957 (22 F.R. 581), which specified the period of validity of a Coast Guard Port Security Card, is canceled and is superseded by the regulations in this document.

Since the security interests of the United States call for the application of the provisions in Executive Order 10173, as amended, and because of the national emergency declared by the President, it is found that compliance with the Administrative Procedure Act (respecting notice of proposed rule making, public rule making procedures thereon, and effective date requirements thereof) is impracticable and contrary to the public interest.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Executive Order 10173, as amended by Executive Orders 10277 and 10352, the following regulation designated § 125.12 is prescribed and shall become effective on and after January 1, 1959:

§ 125.12 *Period of validity of Coast Guard Port Security Cards.* (a) The Coast Guard Port Security Card (Form CG-2514) shall be valid for a period of eight years from the date of issuance thereof unless sooner suspended or revoked by proper authority. On the first day after eight years from the date of issuance, the Coast Guard Port Security Card (Form CG-2514) is hereby declared invalid and shall be considered null and void for all purposes.

(b) The holder of a Coast Guard Port Security Card, which is about to expire or has expired, may apply for a new Coast Guard Port Security Card in accordance with the procedures set forth in § 125.21. In the event the applicant's Coast Guard Port Security Card has expired, such card shall accompany the application for a new Coast Guard Port Security Card. In the event the applicant is holding a valid Coast Guard Port Security Card at the time he submits his application for a new card, such person shall surrender the old or expired Coast Guard Port Security Card at the time he is issued a new Coast Guard Port Security Card. In the event the old Coast Guard Port Security Card was lost, stolen, or destroyed, then the applicant shall comply with the provisions in § 125.51, regarding the replacement of a lost Coast Guard Port Security Card and the new card issued as a replacement for a lost card which has expired or is about to expire shall bear a current issuance date.

(40 Stat. 220, as amended; 50 U.S.C. 191; E.O. 10173, 15 F.R. 7005, 3 CFR, 1950 Supp., as amended by E.O. 10277, 16 F.R. 7537,

3 CFR, 1951 Supp., E.O. 10352, 17 F.R. 4607, 3 CFR, 1952 Supp. Interpret or apply: R.S. 4517, as amended, 4518, as amended, sec. 19, 23 Stat. 58, as amended, sec. 2, 23 Stat. 118, as amended, sec. 7, 49 Stat. 1936, as amended; 46 U.S.C. 570, 571, 572, 2, 689)

Dated: December 9, 1958.

[SEAL] A. C. RICHMOND,  
Vice Admiral, U.S. Coast Guard,  
Commandant.

[F.R. Doc. 58-10432; Filed, Dec. 17, 1958;  
8:48 a.m.]

## TITLE 33—NAVIGATION AND NAVIGABLE WATERS

### Chapter I—Coast Guard, Department of the Treasury

#### Subchapter D—Navigation Requirements for Certain Inland Waters

##### PART 80—PILOT RULES FOR INLAND WATERS

#### Subchapter F—Navigation Requirements for Western Rivers

##### PART 95—PILOT RULES FOR WESTERN RIVERS

[CGFR 58-45]

LIGHTS AND DAY SIGNALS FOR VESSELS,  
DREDGES OF ALL TYPES, AND VESSELS  
WORKING ON WRECKS AND OBSTRUCTIONS,  
ETC., NAVIGATING CERTAIN IN-  
LAND WATERS OR WESTERN RIVERS

(Federal Register of December 20,  
1958)

## TITLE 33—NAVIGATION AND NAVIGABLE WATERS

### Chapter I—Coast Guard, Department of the Treasury

[CGFR 58-46]

#### PART 126—HANDLING OF EXPLOSIVES OR OTHER DANGEROUS CARGOES WITHIN OR CONTIGUOUS TO WATERFRONT FACILITIES

#### PORTABLE FIRE EXTINGUISHERS FOR PIER AUTOMOTIVE EQUIPMENT

By Executive Order 10173 the President found that the security of the United States is endangered by reason of subversive activities and prescribed certain regulations relating to the safeguarding against destruction, loss, or injury from sabotage or other subversive acts, accidents, or other causes of a similar nature of vessels, harbors, ports, and waterfront facilities in the United States, and all territory and waters, continental or insular, subject to the jurisdiction of the United States, exclusive of the Canal Zone. Because of the national emergency declared by the President it is found that compliance with the Administrative Procedure Act (respecting notice

of proposed rule making, public rule making procedure thereon, and effective date requirements thereof) is impracticable and contrary to the public interest.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Executive Order 10173, as amended by Executive Orders 10277 and 10352, the following amendment to § 126.15(e) in this document is prescribed and shall become effective upon the date of publication of this document in the FEDERAL REGISTER:

§ 126.15 *Conditions for designation as designated waterfront facility.* \* \* \*

(c) *Pier automotive equipment.* That tractors, stackers, lift trucks, hoisters and other equipment driven by internal combustion engines used on the waterfront facility are of such construction and condition and free from excess grease, oil, or lint as not to constitute a fire hazard; that each unit of such equipment is provided with an approved type fire extinguisher attached, except where waterfront facilities are provided with fire extinguishers approved by the Captain of the Port as being adequate in numbers, type and location for additional protection of pier automotive equipment; that, when not in use, such equipment is stored in a safe manner and location; that gasoline or other fuel used for such equipment is stored and handled in accordance with accepted safe practices and is not stored on the waterfront facility, except in conformity with paragraph (g) of this section; and that refueling of such equipment or any vehicle is prohibited on any pier or wharf within the waterfront facility.

(40 Stat. 220, as amended; 50 U.S.C. 191, E.O. 10173, 15 F.R. 7005, 3 CFR, 1950 Supp., E.O. 10277, 16 F.R. 7537, 3 CFR, 1951 Supp., E.O. 10352, 17 F.R. 4607, 3 CFR, 1952 Supp.)

Dated: December 18, 1958.

[SEAL] J. A. HIRSHFIELD,  
Rear Admiral, U.S. Coast Guard,  
Acting Commandant.

[F.R. Doc. 58-10703; Filed, Dec. 29, 1958;  
8:49 a.m.]

## 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 December 31, 1958 (CGFR 58-53). Copies of these documents may be obtained from the Superintendent of Documents, Washington 25, D.C.]

## ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of ships' stores and supplies certificated from 1 December to 31 December 1958, inclusive, for use on board vessels in accordance with the provisions of Part 147 (46 CFR 146-147) of the Dangerous Cargo Regulations are as follows:

### CERTIFIED

*Magnus Chemical Co., Inc., Garwood, N.J., Certificate No. 324, dated 8 December 1958, MAGNUS AUTOMATIC TANK WASH.*

*Magnus Chemical Co., Inc., Garwood, N.J., Certificate No. 326, dated 8 December 1958, MAGNUS D-CARBEL.*

*Magnus Chemical Co., Inc., Garwood, N.J., Certificate No. 329, dated 8 December 1958, MAGNUS DEGREASER 7-11.*

*Magnus Chemical Co., Inc., Garwood, N.J., Certificate No. 330, dated 8 December 1958, MAGNUS FUEL OIL TREATMENT.*

*Magnus Chemical Co., Inc., Garwood, N.J., Certificate No. 331, dated 8 December 1958, MAGNUS LUBRIFIN.*

*Magnus Chemical Co., Inc., Garwood, N.J., Certificate No. 333, dated 8 December 1958, MAGNUS SUPER SCALE SOLVE.*

*Magnus Chemical Co., Inc., Garwood, N.J., Certificate No. 352, dated 8 December 1958, MAGNUS FUEL OIL TREATMENT SPECIAL.*

*E. F. Drew & Co., 15 East 26 Street, New York 10, N.Y., Certificate No. 355, dated 19 December 1958, DREW ELECTRIC MOTOR AND PARTS CLEANER.*

### AFFIDAVIT

The following affidavit was accepted during the period from 15 November 1958 to 15 December 1958:

*Durabla Manufacturing Co., 114 Liberty St., New York 6, N.Y., VALVES.*

### FUSIBLE PLUGS

The regulations prescribed in subpart 162.014 subchapter Q, Specifications, require that manufacturers submit samples from each heat of fusible plugs for test prior to plugs manufactured from the heat being used on vessels subject to inspection by the Coast Guard. A list of approved heats which have been tested and found acceptable during the period from 15 November 1958 to 15 December 1958 is as follows:

*The Lunkenheimer Co., Cincinnati 14, Ohio, Heat No. 591.*

## MARINE SAFETY PUBLICATIONS AND PAMPHLETS

The following publications and pamphlets are available and may be obtained upon request from the nearest Marine Inspection Office of the United States Coast Guard, except for cost publications which may be obtained upon application to the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Date of each publication is indicated following title.

### CG No.

### Title of Publication

- 101 Specimen Examinations 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. 3-1-58
- 123 Rules and Regulations for Tank Vessels. 4-1-58
- 129 Proceedings of the Merchant Marine Council. Monthly
- 169 Rules to Prevent Collisions of Vessels and Pilot Rules for Certain Inland Waters of the Atlantic and Pacific Coasts and of the Coast of the Gulf of Mexico. 4-1-58
- 172 Pilot Rules for the Great Lakes and Their Connecting and Tributary Waters. 4-1-58
- 174 A Manual for the Safe Handling of Inflammable and Combustible Liquids. 7-2-51
- 175 Manual for Lifeboatmen and Able Seamen, Qualified Members of Engine Department, and Tankerman. 6-1-55
- 176 Load Line Regulations. 9-2-58
- 182 Specimen Examinations for Merchant Marine Engineer Licenses. 5-1-57
- 184 Pilot Rules for the Western Rivers. 7-1-57
- 190 Equipment Lists. 4-1-58
- 191 Rules and Regulations for Licensing and Certifying of Merchant Marine Personnel. 9-15-55
- 200 Marine Investigation Regulations and Suspension and Revocation Proceedings. 7-1-58
- 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. 7-1-58
- 249 Merchant Marine Council Public Hearing Agenda. Annually
- 256 Rules and Regulations for Passenger Vessels. 3-1-57
- 257 Rules and Regulations for Cargo and Miscellaneous Vessels. 6-1-55
- 258 Rules and Regulations for Uninspected Vessels. 7-1-55
- 259 Electrical Engineering Regulations. 6-1-55
- 266 Rules and Regulations for Bulk Grain Cargo. 2-13-53
- 267 Rules and Regulations for Numbering Undocumented Vessels. 1-15-53
- 268 Rules and Regulations for Manning of Vessels. 9-3-57
- 269 Rules and Regulations for Nautical Schools. 11-1-53
- 270 Rules and Regulations for Marine Engineering Installations Contracted for Prior to July 1, 1935. 11-19-52
- 290 Pleasure Craft. (Formerly "Motorboats"). 1-2-59
- 293 Miscellaneous Electrical Equipment List. 4-15-58
- 320 Rules and Regulations for Artificial Islands and Fixed Structures on the Outer Continental Shelf. 1-2-57
- 323 Rules and Regulations for Small Passenger Vessels. (Not More Than 65 Feet in Length) 6-1-58
- 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 \$15.00 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 on the table of changes below.

### Changes Published During December 1958

The following have been modified by Federal Register:

- CG-267 Federal Register December 9, 1958.
- CG-239 Federal Register December 18, and December 30, 1958.
- CG-169, CG-184 Federal Register December 20, 1958.
- CG-256, CG-257, CG-258 and CG-267 Federal Register December 25, 1958.
- CG-190 Federal Register December 31, 1958.



