PROCEEDINGS
OF THE MARINE SAFETY COUNCIL

DEPARTMENT OF TRANSPORTATION UNITED STATES COAST GUARD

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COVERS

FRONT COVER: One was killed, and five were injured as a result of the collision between the SS *Transhawaii* and the SS *Republica de Colombia* shown on our cover. The collision was attributed to a steering failure aboard the Colombian vessel. See "Fatal Collision" on page 135.

BACK COVER: The safety poster on our back cover won second prize for Petty Officer Ian MacCartney, U.S. Coast Guard, in the Marine Safety Poster Contest sponsored by the Marine Section of the National Safety Council. This poster is included among posters available for sale from the Marine Section's Audio/Visual and Poster Committee, care of Ship's Operational Safety, Inc., 103 Huntington Road, Port Washington, NY 11050.

DIST. (SDL No. 97)
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PROCEEDINGS

OF THE

MARINE SAFETY COUNCIL

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Lieutenant (jg) A. W. Vander Meer, Jr., Editor

FATAL COLLISION

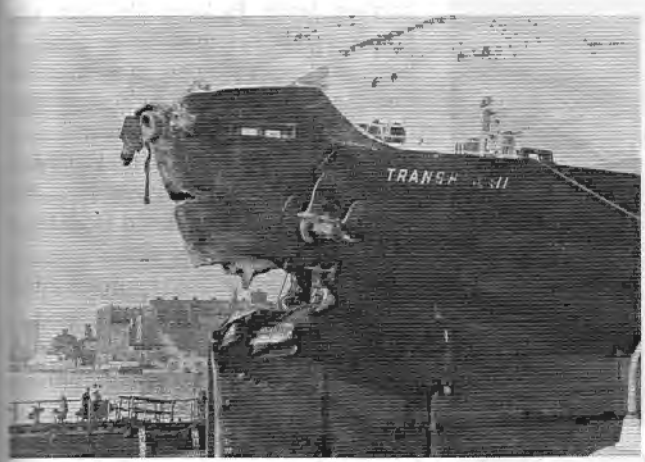
THE MASTER OF the SS *Transhawaii* had been on the bridge of his ship for 6 hours. The ship, underway from San Juan, Puerto Rico, bound for Baltimore was approaching Cape Hatteras, when, at about 4:10 in the afternoon the SS *Republica de Colombia* was sighted overtaking the *Transhawaii* from the stern. Some 30 minutes later, the *Republica de Colombia* passed abeam, approximately one-half mile to starboard of the *Transhawaii*. Believing that the overtaking had been completed without incident, the master of the *Transhawaii* left the pilot house to go below. He had gotten only as far as the base of a ladder leading to his quarters when he heard the Second Mate on watch summoning him back to the pilot house.

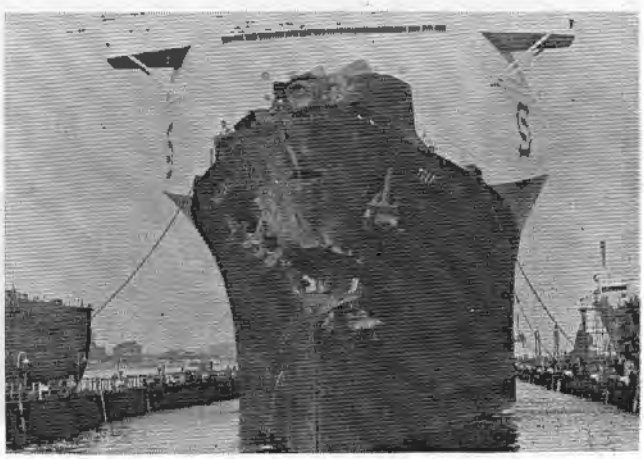
The second mate had observed the apparent safe passage to the starboard of the *Republica de Colombia* and had heard the master say he was going below. The mate, following ship custom, proceeded to fix the *Transhawaii's* position as of the quarter hour. He had checked his distance from Diamond Shoal Light by radar, noting it to be 12 miles. He then stepped to the port wing of the bridge to take the associated visual bearing. Having done so, he turned to reenter the pilot house. Now, for the first time, he noticed that the Colombian vessel had taken a sheer to her port and was then crossing the bow of the *Transhawaii!* It was then that he shouted for the master to come back and ordered the helmsman to put the wheel hard left.

The master of the *Transhawaii* rushed back to the bridge and saw the *Republica de Colombia* swing in a port turn across his bow. Collision seemed inevitable. Since the second mate had already put the wheel hard left and had begun to blow the danger signal, the master sounded the general alarm. Thinking that the force of a collision would cause men to fall into the water, he put his engines on "Stop" so that no injuries would be caused by the turning screw. The two vessels collided at about 4:44 p.m. on September 14, 1972, the bow of the *Transhawaii* penerating some 30 feet into the port side of the *Republica de Colombia* just aft of the port bridge wing. The *Transhawaii's* bow cut into the other vessel's galley area and into the engineroom, rupturing oil tanks. At the moment of impact, the rudder had come to a stop in the full-left position. The head of the vessel had swung only a degree or two to the left.

The *Republica de Colombia* had departed Jacksonville, Fla., at 4:55 p.m., on September 13 and was also bound for Baltimore. Her master had personally tested her steering gear prior to departing Jacksonville. Once to sea, the ship's steering was placed on automatic and the voyage proceeded without problems along the East Coast of the United States.

It was 4 p.m. on September 14, when the ship's first officer and her helmsman assumed the watch. It was customary on this vessel that the helmsman performed routine maintenance duties during his watch when the vessel was being steered automatically. The helmsman was sent to the boat deck, one deck below the pilothouse, to scrape the deck in the vicinity of the starboard lifeboat. The area in which he was working





The above photos show the extent of the bow damage incurred by the SS *Transhawaii*. Repairs were made in Baltimore.

was in full view of the starboard bridge wing. Course changes were fed manually into the automatic steering mechanism by the first officer.

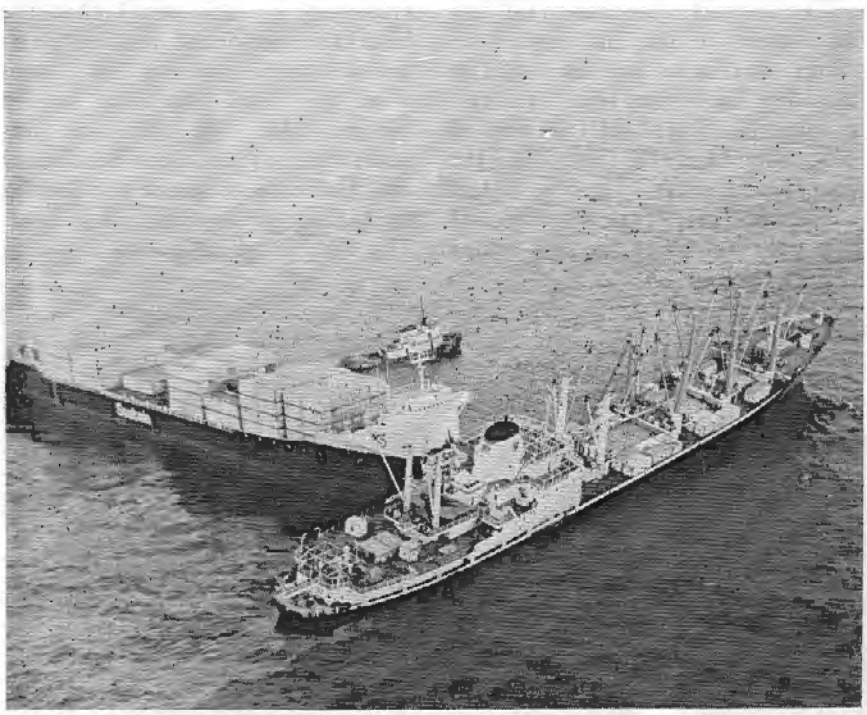
At about 2 minutes after 4, the first officer directed a course change from 047° True to 357° True. The vessel, in the vicinity of Diamond Shoal Light was making about 19 knots. As the *Republica de Colombia* began to overtake the *Transhawaii,* the master of the Colombian ship saw that the two vessels were on slightly converging courses. He ordered that his vessel's course be changed to 005° T. The *Republica de Colombia* passed the *Transhawaii* about ½ mile to port. The master of the Colombian ship ordered that the course be returned to 357°. He observed the vessel on the ordered course for about a minute before he left the pilothouse to take in some laundry from the deck above the pilot house.

As the master took in the laundry he heard a shout from one of his crewmembers who was aloft, painting a kingpost. He looked and saw the seaman pointing toward the *Transhawaii.* The master saw the American ship closing rapidly on a collision course—collision was inescapable. He scrambled down the starboard ladder from the top of the pilot house and had just reached the starboard bridge wing when the *Transhawaii* ploughed into the side of his vessel.

The first indication that engineroom personnel on the *Republica de Colombia* had of an emergency situation came when the engine order telegraph from the bridge directed them stop the engines. They were able to get the engines stopped before the collision. The collision caused the engineroom to fill with hot water, oil, and sea water. Four of the five men who had been there were able to escape, injured and covered with oil, from the engineroom—exactly how no one knows. The fifth man—the first assistant engineer who had been the licensed officer on watch has never been seen since the collision. He is presumed to have died.

It seems that the chain of events which led to the collision described above began on the *Republica de Colombia.* After the master of that vessel ordered its course returned to 357° True, the first officer fed that course change into the automatic steering. Having done so, he stepped out on the port bridge wing to look for the next navigational buoy, which he expected to sight ahead. It was shortly thereafter that he became aware that the *Republica de Colombia* was taking a sheer to her left. He saw the rudder angle indicator slowly move to the left and eventually come to a stop in the full left position. He immediately attempted to correct this situation by switching to hand steering. His efforts failed. He then pushed a separate button on the steering column, which when held in a closed position, directs the rudder to go in the ordered direction The first officer, without asking fur help, or notifying the master or engineroom, tried unsuccessfully for approximately 3 to 4 minutes to restore steering. Just before impact, that officer sounded several short blasts on the whistle, and placed the engine ordered telegraph on "Stop." The radio officer of the *Republica de Colombia,* noted in his log at 4:40 p.m. that there was a power failure in the radio room. He then walked out on the bridge and so informed the first officer, whom he found busily engaged in trying to restore steering to the vessel.

The course recorder of the Colombian vessel was turned on upon departure from Jacksonville, but was not correctly oriented as to time. A large and unexplained movement of the quadrant needle indicated that the collision probably occurred at a time opposite 1100 hours on the trace. The course recorder shows that the vessel's course was changed from 047° to 357° approximately 42 minutes before the collision, or approximately 4:02 p.m., and was next changed to course 005° approximately 20 minutes before the collision, or approximately 4:24. The next change in course to 357° was ordered approximately 15 minutes before the collision.



It took rising seas and the aid of a tug to get the vessels apart. The *Republica de Colombia* had to be towed into port for temporary repairs.

Although both the master and first officer testified that the vessel had satisfactorily steadied on 357° True, this is not borne out by examination of the course recorder, which shows the vessel to have been on approximate course 000° True for the 15 minutes before the collision, during which time the quadrant pen was oscillating. A close examination of the trace of the quadrant pen opposite 1100 hours shows a wild jump across four quadrant boxes, and the pen continued slightly off the ruled area. In addition, all further oscillation of both pens ceased at this time, indicating an interruption of electrical power to the course recorder.

No one in the engineroom had any indication of electrical difficulties on the bridge.

Subsequent to the collision, the majority of the crew of the *Republica de Colombia* evacuated to the *Transhawaii* by climbing down lines from the port side of the Colombian ship onto the bow of the *Transhawaii*. The master, first officer and boatswain departed the *Republica de Colombia* in a lifeboat and were eventually taken aboard the *Transhawaii*.

At about 5:51 p.m., the master of the *Transhawaii*, who up until then had been very much afraid of fire and explosion, attempted unsuccessfully to back his ship free. The four injured crew members of the *Republica de Colombia* were removed from the *Transhawaii* by Coast Guard helicopters between 6:25 and 8:45 p.m. the day of the collision. No one from the *Transhawaii* was injured except the helmsman who had been on duty at the time of the collision. He suffered cracked ribs. He was neither removed from his ship nor subsequently hospitalized.

The two ships remained locked together until the morning following the collision, when a rising sea and the assistance of the tug *Cape Henry* enabled the two vessels to come apart. The master and several other crewmembers of the *Republica de Colombia* then returned to that ship and rode the vessel under tow into Newport News, Va. The *Transhawaii* made an uneventful trip to Baltimore, where permanent repairs were made.

The owners of the *Republica de Colombia* engaged a hydraulics firm as technical advisors to attempt to determine the cause of the bridge power failure. Although this firm expended much effort it was unable to fix the cause of the power failure. The Coast Guard investigating officer concluded that the principal cause of this collision was an engineering failure on the bridge of the *Republica de Colombia,* which caused the rudder to jam in the full-left position. Neither the cause of nor the responsibility for this engineering casualty could be determined. The investigating officer found fault with the conduct with the *Republica de Colombia's* first officer, in that he:

a. Having become aware of a serious engineering casualty on the bridge, delayed an excessive period of time before notifying anyone, or requesting assistance;

b. Attempted for too long a period to singlehandedly restore steering;

c. Failed to sound an appropriate signal to attract attention which conceivably could have alerted the *Transhawaii* at an earlier time so that the collision might have been minimized or avoided;

d. Failed to back down in a timely fashion, which conceivably could have prevented or minimized the collision.

The investigating officer also concluded that had the *Republica de Colombia* had the services of a helmsman available in the pilothouse, the results of the casualty may have been different. The first officer would have had another knowledgeable person to assist him in his attempt to restore steering. Thus, an emergency signal might have been sounded earlier, and a change in the setting of the engine order telegraph might have been made at an earlier time. Either of these actions might have avoided the collision or at least lessened its results.

The Commandant of the Coast Guard stated, "In the absence of * * * any persons specifically assigned the duty of lookout, the function of maintaining a proper lookout is the responsibility of the mate on watch. In the instant case and under the existing conditions aboard the SS *Transhawaii* prior to the collision, the duty of maintaining a proper lookout was clearly that of the mate on watch. The action of taking a visual bearing and in so doing not being able to see the actions of another vessel which is navigating in the immediate vicinity is deemed to constitute evidence of negligence * * *"

This casualty, in which one life was lost and five persons injured, serves to emphasize the need for constant vigilance while navigating at sea. Brief moments of inattention—even when the circumstances appear manifestly safe—can result in tragic consequences. ⚓

THE VESSELS INVOLVED

The SS *Transhawaii* is a C–4 freight ship which has been converted for container service. Her bridge is very near the bow, and no containers are carried between the bridge and the bow. She is about 611 feet in length and draws approximately 39.4 feet of water. Her home port is New York City. She was properly Coast Guard inspected at the time of this casualty.

The *Republica de Colombia* is a freight vessel of 165.98 meters in length drawing 12.90 meters of water. She is home ported at Cartegena, Colombia, and is of Colombian Registry.

THE COAST GUARD ROLE UNDER THE PORTS AND WATERWAYS SAFETY ACT[1]

THE PORTS AND Waterways Safety Act became law in October 1972. It has two major parts. Title I gives the U.S. Coast Guard new authority in the areas of ports and waterways safety and protection of the marine environment. Title II requires that the Coast Guard take a new approach to the standards for tank vessels because of their potential deleterious effect on the environment. Both titles of this Act include severe penalties—any violation of the Act or of regulations promulgated under its authority subjects the violator to a civil penalty up to $10,000. A person who knowingly and willfully violates the Act is subject to criminal fines of up to $50,000 and imprisonment up to 5 years.

This legislation is a reflection of the deep public concern for the protection of the environment. It is a tough law and it is meant to be. President Nixon and the Congress have made it clear that our waters must be protected by strict enforcement measures. That is the job that must be accomplished.

Tankers are not the sole source of pollution and are probably not even the major source. It is easy for the public relations people to compile statistics that minimize the amount of oil discharged into the oceans by commercial vessels. But even conservative estimates indicate that commercial vessels discharge about 2½ million tons into the oceans every year. To be sure, that is just a small percentage of the total volume transported. But picture that 2½ million tons another way. Think of 150 T–2 tankers in a line—it would stretch about 15 miles even if they were moored bow to stern. If you could recover the oil spilled from commercial vessels you could fill all of those 150 tankers with the recovered product.

It seems reasonable to expect that the total volume of petroleum products shipped in world commerce will nearly double in the next 8 to 10 years. That poses problems because, while the pollution potential is doubling, we must materially reduce the volume discharged into our waters. The Ports and Waterways Safety Act can help assure that we reach that objective.

Under Title I of the Act, the Coast Guard will be issuing regulations pertaining to vessel movements and facilities engaged in the transfer of oil in bulk.

There is nothing new about the concept of vessel traffic systems. For many years the maritime industry has been accustomed to various forms of movement controls. There have been sealanes, signals, and even speed limits in some areas. Regulations under Title I aim toward more modern, more efficient systems where they are justified by congested conditions or the nature of the cargoes handled.

In January 1970, a harbor advisory radar system was established in San Francisco. With the experience gained from this system, operation of a more advanced system was begun there in August of last year. This system combines two radar stations with radio communications between ships and shore.

The Puget Sound vessel traffic system was established last September. It involves a combination of radio communications and manual plotting at a Coast Guard control center. This system has been inaugurated on a voluntary basis but the Coast Guard is drafting regulations that will require compliance with reporting procedures and the traffic separation scheme. Limited radar surveillance of the more congested areas is being considered for the future.

Another traffic system is being developed for the Houston ship channel. Planning is just about complete and a system is expected to be operational there late in 1974. This will likely be a combination of radar, low-light level television and communications system.

Other ports are being studied and where circumstances justify, the Coast Guard will recommend an appropriate vessel traffic system. Each area presents its own unique problems, but in all areas no decisions are made without a full consultation with shipping interests and local authorities. The objective is always the same—to keep traffic moving safely and efficiently.

As indicated in the President's recent message on the energy crisis, it is anticipated that our greater needs for imports will require the use of supertankers and suitable deep water facilities.

[1] Excerpted from a speech by Admiral C. R. Bender, Commandant, U.S. Coast Guard, delivered before the American Petroleum Institute Conference, May 7, 1973.

The Coast Guard anticipates being involved in the development and operation of the deep water facilities in the areas of our traditional roles such as aids to navigation, port safety and law enforcement, merchant marine safety, environmental protection, and marine traffic management.

These roles are well defined by existing law and although some modification of the statutes may be necessary to extend the authority of the Coast Guard to deep water facilities, the actual functions of the Coast Guard will not be greatly altered by development of these facilities alone.

When the Coast Guard was transferred to the Department of Transportation in 1967, it was recognized that the additional emphasis on safety alone would not he consistent with the needs of the Department or the times. Other factors found to be of major concern in the regulation of the marine industry were environment protection, facilitation, and efficiency. Therefore, Title II of the Ports and Waterways Safety Act requires little, if any, change in what the Coast Guard is doing. It does, however, require a change in *how* the Coast Guard is doing it.

Title II of the Ports and Waterways Safety Act is a major revision of the Tank Vessel Act, which is the basic authority for the regulation of U.S.-flag tank vessels in United States waters. It previously addressed itself only to the hazards of life and property created by vessels carrying bulk flammable and combustible liquid cargoes. The Act now applies to all vessels carrying bulk liquid cargoes which are categorized as flammable, combustible, oil, or hazardous substances which will he designated under the Federal Water Pollution Control Act. Regulations implementing this portion of the Act will be written from the standpoint of both vessel safety *and* protection of the marine environment.

More specifically, Title II *requires* the U.S. Coast Guard to begin, as soon as possible, the publication of proposed rules and regulations setting forth minimum standards of design, construction, alteration, and repair of vessels for the purpose of protecting the marine environment. These rules and regulations are expected to include possible standards to improve vessel maneuvering and stopping ability; reduce the possibility of collision, grounding, or other accidents which may result in cargo loss; and to reduce damage to the marine environment from normal vessel operations such as ballasting and deballasting, and cargo handling.

The legislative history of Title II dwells on the need for double-bottoms and segregated ballast capacity for tankships and certain barges (ocean and coastwise.) In the Federal Register of January 26, 1973, the Coast Guard published an advance notice of proposed rulemaking (CGD 72–245P) suggesting certain construction standards for all foreign tankships entering our waters and for domestic tank ships. If implemented as indicated, this standard would become effective for vessels constructed after January 1, 1974. Many comments in response to the advance notice were received by the Coast Guard.

These construction standards for tankers, proposed under the authority of the Ports and Waterways Safety Act, have also been submitted to the subcommittees of the Intergovernmental Maritime Consultative Organization (IMCO) in preparation for an October 1973 international marine pollution convention.

In Title II of the Act Congress recognized the advantages of seeking multilateral agreement by requiring that proposed U.S. regulations be submitted to "appropriate international forums" such as the 1973 conference. If the principles forwarded for consideration are not earlier adopted internationally, then the Coast Guard is required to effect them unilaterally not later than January 1, 1976. To comment at this time on either possibility would be pure conjecture. Hopefully the Convention will meet the principles of the Act; however, there is precedent for unilateral action. Examples are the requirement for passenger vessel fire-prevention construction standards (special fire safety measures for passenger vessels. SOLAS '60, approved by Assembly Res. A108—not yet in force internationally) and the requirement for all vessels in our waters to comply with U.S. regulations (46 CFR, Subchapter O) when carrying cargoes considered to be of particular or unusual hazard.

The IMCO assembly in October 1971 adopted amendments to the 1954 Oil Pollution Convention which concern tank arrangements and limit the allowable cargo outflow which might be discharged into the sea as a result of collision or grounding. These amendments have been incorporated into draft legislation to amend the 1961 Oil Pollution Act.

It is expected that the work of the October conference on Marine Pollution, under the auspices of IMCO, will ultimately replace the 1954 Oil Pollution Convention.

The IMCO assembly agreed by Resolution (A.237) that "* * * the (1973) Conference should have as its main objectives the achievement by 1975, if possible, hut certainly by the end of the decade, of the complete elimination of the willful and intentional pollution of the sea by oil and noxious substances other than oil, and the minimization of accidental spills * * *". The recent preparatory meeting (February 1973) and the various subcommittee sessions which preceded it over the past few years, have concluded that these objectives could best be met by eliminating *harmful* discharges, (i.e., limiting significant operational discharges), rather than eliminating discharges *per se*. The fifth and final draft document for the conference is cast in these terms. Total agreement on what may constitute "harmful" discharges has not yet been reached.

The draft articles of this forthcoming convention contain detailed discharge notification and enforcement provisions applicable to all of the various annexes. Each of the draft annexes deals with a specific problem. The

annexes presently cover oil in its broad definition (including both persistent varieties); noxious substances other than oil (designated and categorized by their degree of relative harmfulness); harmful substances carried in bulk, in packages, cargo containers and portable tanks; and sewage and garbage. The annexes will contain requirements for cargo handling systems and design features of new vessels. There are provisions for segregated hallast, the limiting of operational discharges, delineation of special no discharge areas (Mediterranean and Baltic Seas), and requirements for shore reception facilities. The Convention will incorporate the principle of oil outflow limitation, the bulk chemical code for tankers, and other provisions which the technical committees of IMCO have developed over the past few years.

The U.S. position at IMCO, consonant with our domestic legislation and administration policies, favors a strong, uniform, comprehensive, and enforceable convention. It *is* significant that many of the substantive prevention and enforcement measures have received some degree of acceptance internationally. The raw material for a convention which would meet the U.S. objectives, and the requirements of the Ports and Waterways Safety Act in particular, is present in the draft document.

It is the Coast Guard's express desire to avoid hasty or unilateral action on the part of the United States which could be harmful to U.S. commerce. Lacking international agreement, however, unilateral action prohibiting the entry of certain vessels into U.S. waters, on a formula yet to be determined, appears to be a possible solution. But oil movement projections show a large and increasing dependence upon foreign product import in the near future. It is very expedient to say that vessels not incorporating our unilateral antipollution requirements will be denied entry, but such prohibition may be inconsistent with our demand for oil.

The Coast Guard is also concerned that our national approach, unless properly implemented, may create an incentive for tanker owners to prolong the use of their older and environmentally less desirable tonnage in U.S. trade in order to avoid new vessel requirements. Such an approach might result in a competitive disadvantage to the U.S. tanker fleet which is only now undergoing expansion, as opposed to foreign tanker fleets which have been substantially augmented in recent years with vessels not meeting the contemplated standards. These issues must be resolved in an equitable manner and one that will also assure protection for the marine environment. Final resolution is dependent, in part, on the outcome of international negotiations. It is obvious that we are deeply involved domestically and internationally in getting just such a resolution. Ultimately, a major policy decision will have to be made on whether the results of the 1973 marine pollution conference will satisfy the intent of Title II of the Ports and Waterways Safety Act of 1972. That decision, which may reshape the world's tanker fleet and the oil transportation industry is imminent. This decision affects not only the marine industry but our entire national economy. Such a major decision will be made only after the most thorough and serious consideration of all of the forces, arguments, and realities which may militate in favor of any ultimate decisions.

The Importance of Complete Emergency Systems Evaluations

SHIPBOARD EMERGENCY systems may depend on other ship's systems for their proper operation. For example, fire protection systems may require external power sources, piping systems, or control networks. Failure of these "support" systems can reduce the fire protection system's efficiency or even render it useless. A recent fire onboard a U.S. Naval vessel illustrates this clearly.

In October 1972, the research vessel USNS *Silas Bent* was standing at anchor in the Pacific when an explosion and fire occurred in a space housing a gas turbine. The fire reportedly was caused by a leak in the pressure regulating diaphragm on the turbine generator fuel boost pump. The leaking diesel fuel sprayed onto the lagging about the turbine exhaust lines which in turn ignited, and caused the combustible mixture within the space to explode.

At the time of the fire, the vessel had been operating with the emergency standby generator out of service.

At the outbreak of the fire, the ship's crew attempted to use the installed total flooding CO^2 system. Because of a failure in the control linkage, the remote release would not activate the system. The system could have been operated from the CO^2 storage room; but the ship's crew were not totally familiar with the system and could not activate it. Additional efforts were made to gain control of the fire using the portable extinguishers located throughout the machinery space. These were without success.

They attempted to control the fire using water spray. However, the power drive for the fire pumps was not operable. The fire pumps are powered by electric motors, and because of the fire, no electric current was available aboard the vessel. Normally the emergency standby generator would have been put into operation, but it had been out of service for some time. When the fire occurred, the turbine generator was being operated in parallel with the No. 1 diesel

generator. The fire caused the turbine generator to shut down, which in turn caused an excessive load to be placed upon the diesel generator which tripped off the line shutting both generators down.

The electrical distribution panel had been so arranged as to prevent the inadvertent simultaneous operation of the main generator with the auxiliary generator. Because of this arrangement, the auxiliary generator could not be used to operate the fire pumps, so the electrical distribution panel was rewired and the No. 1 diesel generator restarted and switched onto the line. The fire pumps were started, and control of the fire was gained using water.

Two systems failures are evident in this incident. Not only did the mechanical system fail, the people failed as well. When a fire protection or other emergency system is designed, it is intended to be highly dependable under expected operating conditions. Unfortunately, the unexpected is often encountered during emergencies. The crew who operate the system must therefore have a basic understanding of how the system works so that improvised modes of operation come readily to their minds under emergency conditions. Should an emergency system fail, existing alternate systems should be tried. Should the alternate systems fail, resort must be had to improvised methods of averting disaster. In the casualty described above, the carbon dioxide system did not operate because the remote release mechanism failed. The alternate method of releasing the agent existed, but was not known by the crew. Instructions which would have explained the existence and operation of this alternative were not posted on the ship. The fire pumps could not be operated because a generator was not available to supply current. A standby source of current should have been maintained while the emergency generator was out of service. ⚓

Signal pistol fails upon firing

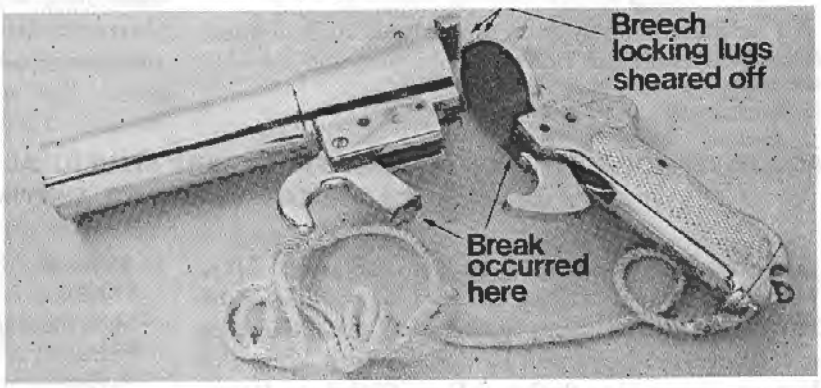
One of our ship's Masters reported the following personal incident of a Very pistol failure!

> "I test fired the Very pistols successfully in lifeboats 2, 3 and 4. When I fired the rockets, the pistol was directed downward into the sea at about a 45° angle. I also made certain that there was no traffic in the area to which the signals might be visible. When I fired the pistol from the No. 1 boat, I felt a very heavy recoil and my hand and arm were pressed back and up. The pistol blew apart, the barrel section hurled past and landed behind me while the butt end remained in my grasp.
>
> "The pistols and the cartridges were less than two years old and appeared in good condition. The equipment was checked before firing."

As luck would have it no injury resulted from this failure. We sent the pistol (photo) for analysis to determine the cause of failure.

We are passing along the following precautions that must be taken when firing these signal pistols:

1. Make sure the screw holding the receiver, barrel and chamber together is tight and there is no lateral movement in the connection.
2. Inspect the breach locking lugs for fatigue cracks.
3. Make sure that the barrel is clear and not obstructed.
4. Do not use cartridges that are outdated (three years service life) or show visible signs of swelling or are hard to fit into the breach.
5. Make sure that the breach is completely closed and locked before firing.



TITLE 46, Code of Federal Regulations, subpart 160.28 contains the specifications for signal pistols for merchant vessels. Each approved pistol must be tested with a proof load and stamped with the letters *P.T. Only those pistols marked with* P.T. *are acceptable for use on certificated vessels.*

The signal pistol which failed was manufactured by Signal Pyrotechnic Company and bore serial No. 16112, but did not have the required *P.T.* mark. Coast Guard records show that Pyrotechnic Signal Company is no longer in business. The last proof tested and accepted pistol of that company bore serial No. 16095. It is possible that other, non-tested pistols have found their way onto certificated vessels. Verification of the proof test markings and the serial number is the only assurance that the pistol has been inspected, tested, and passed by the Coast Guard.

The accompanying item, published courtesy of the *Safety Bulletin* of the Chevron Shipping Company, gives more details of the pistol failure mentioned above. A sixth precaution—that of verifying that the pistol bears the *P.T.* mark—should be added to the list.

NAVIGATION AND VESSEL INSPECTION CIRCULAR 2–72

March 3, 1972

Subject: Coast Guard Approval of Hull Structural Plans

PURPOSE

Regulations contained in 46 CFR 31.10–1(c) (Tank Vessels), 71.65–1(b) (Passenger Vessels), 91.55–1(b) (Cargo Vessels) and 189.55–1(b) (Oceanographic Vessels) provide for the Coast Guard to accept as satisfactory hull structural plans for classed vessels approved by the American Bureau of Shipping, except when the law or Coast Guard regulations contain requirements which are not covered by the Bureau. The attached "Procedures for Submission and Review of Hull Structural Plans for Vessels Classed by the American Bureau of Shipping" is intended to: (1) clarify the plan submittal procedures set forth in 46 CFR 71.65–15(a)(4) for Passenger Vessels, 91.55–15(a)(4) for Cargo Vessels and 189.55–15(a)(4) for Oceanographic Vessels; (2) indicate that similar procedures may be used for Tank Vessels and (3) encourage the use of these procedures by naval architects and shipbuilders.

DISCUSSION

To facilitate industry and reduce duplication of effort between the American Bureau of Shipping and the U.S. Coast Guard in reviewing hull structural plans of Coast Guard certificated U.S.-flag vessels classed by the ABS, substantial improvement can be made by merely modifying current practice without the necessity for changing existing regulations. The regulations require that the structural design of certificated vessels comply with the standards of the American Bureau of Shipping and that plans indicating such compliance be approved by the Coast Guard. The practice generally followed by shipbuilders is to submit the hull structural plans simultaneously to both the Coast Guard and the American Bureau. This has burdened the shipbuilder with the task of maintaining records of submittals and approval actions by two agencies. In a few particularly troublesome instances the shipbuilder has found himself having to resolve differences in actions on the same plans as made by each agency. By utilizing the procedures noted above and as described in the attached note, the builder will be able to correspond only with the American Bureau in respect to hull structural plans for new construction or major conversion. The only requirements which will be made concerning these plans will be related to laws or Coast Guard regulations which are not covered by the Rules of the American Bureau of Shipping.

PROCEDURES FOR SUBMISSION AND REVIEW OF HULL STRUCTURAL PLANS FOR VESSELS CLASSED BY THE AMERICAN BUREAU OF SHIPPING

The regulations contained in 46 CFR 31.10–1(c), 71.65–1(b), 91.55–1(b), and 189.55–1(b) provide for the Coast Guard to accept as satisfactory hull structural plans for classed vessels approved by the American Bureau of Shipping, except when the law or Coast Guard regulations contain requirements which are not covered by the Bureau. The regulations 46 CFR 71.65–15(a)(4), 91.55–15(a), and 189.55–15(a)(4), provide that in the case of classed vessels, upon specific request of the submitter, the American Bureau of Shipping will arrange to forward the necessary plans to the Coast Guard indicating its action thereon. In the case of hull structural plans for new construction or major conversion, they can then be approved by the Coast Guard without the detailed review that would otherwise be necessary to determine that they comply with the Bureau's structural standards. The procedure permitted by the above cited regulations may also be used for Tank Vessels and is amplified in the following notes:

1. *Definition of hull structural plans:*
   - *Midship Section
   - Shell Plating and Framing
   - *Structural Profile
   - *Watertight and Oiltight Bulkheads
   - Structural Deck Plans for Strength Decks
   - Inner Bottom Plating and Framing
   - Pillars and Girders
   - Stem, Stern Frame and Rudder
   - Ground Tackle
   - Details of Watertight Doors and Operating Gear
   - Hatch Coamings and Covers in Weather and Watertight Decks
   - Superstructure
   - Deck Houses
   - Foundations for Main Machinery and Boilers
   - Masts and Kingposts
   - **Still Water Bending Moment Curves
   - **Weight Curves for SWBM
   - **Lightship Weight Curve
   - Hull Penetrations for Overboard Discharges, etc.

2. *Action by Submitter:*

(a) Request ABS in writing to forward ABS approved hull structural plans to the Coast Guard. Send copy of letter to cognizant branch mmt office (See 46 CFR 91.55–15(a)(3) for address).

(b) Submit hull structural plans, as defined above, to ABS only. Provide two (2) additional prints of each plan with the submission so that the necessary copies will be available for distribution to the Coast Guard.

(c) Initial submission must include those plans marked with * in paragraph (1). Additionally, if the hull section modulus is *not* based on Case II, Table 6.2 in Section 6 of the ABS Rules for Building and Classing Steel Vessels, the initial submission must include those plans marked ** in paragraph (1).

(d) Plans on the list in paragraph (1) which are not included in the initial submittal must be submitted and approved prior to start of the work which is detailed on the particular plan.

3. *Action by the American Bureau of Shipping:*

(a) After completing review of the plans and if they are approved, forward the two extra prints of each drawing bearing the ABS appoval stamp to the cognizant mmt banch along with one copy of the ABS approval letter.

(b) If the approval is conditional upon annotations which ABS has added to the plan, at least one of the two prints sent to the Coast Guard shall be similarly marked-up.

4. *Action by the Coast Guard:*

Within 10 working days of receipt of the plans from the ABS, the cognizant mmt branch will process the plans as follows:

(a) Review the plan to determine that it does not conflict with Coast Guard regulations in areas other than hull structural—for example, use of required materials for structural fire protection, angle of stairways, width of doorway, etc.

(b) Insofar as the process-time commitment permits, spot check the plan to verify compliance with the ABS standards.

(c) Stamp plan with Coast Guard approval as required by regulations.

(d) Send letter recording Coast Guard approval to submitter. There will be no approval comments except as described in paragraph 5(a).

(e) Send one copy of the plan (with ABS notations, if any), copy of ABS approval letter, and copy of CG approval letter to the cognizant OCMI.

(f) In the event of a disparity on the plan, as described in paragraph 5(b), the 10-day process time may have to be exceeded. In such instances the submitter will be immediately advised, in writing, of the delay and the reason therefor.

5. *Joint Action by CG/ABS:*

(a) In the event that an area of conflict with a Coast Guard regulation is uncovered in carrying out the provisions of paragraph 4(a), no action will be required of the ABS and joint CG/ABS approval of the structure will be indicated. However, the required CG change will be clearly marked on the plan and documented in the letter issued in accordance with paragraph 4(d). The original plan may be revised and resubmitted to ABS or, at the option of the submitter the matter may be resolved on another plan; for example, an arrangement plan or a structural fire protection plan.

(b) In the event that an area of noncompliance with an ABS structural standard is uncovered in carrying out the provisions paragraph 4(b), the matter will generally be resolved by direct liaison between the Coast Guard mmt branch and the ABS without involving the builder. See paragraph 4(f).

6. *Action by the Officer in Charge, Marine Inspection:*

(a) There will be no change in the present inspection procedure.

(b) If in using the CG/ABS approved hull structural plans discrepancies are encountered which would come within the purview of paragraphs 4(a) or 4(h), the matter shall be reported to the cognizant mmt branch so that requirements for revision may be made in a manner consistent with paragraphs 5(a) and 5(b).

NAVIGATION AND VESSEL INSPECTION CIRCULAR 4–73

April 18, 1973

Subject: American Bureau of Shipping approval of machinery and electrical plans

Reference: (a) NVC 2–72

PURPOSE

This circular further distributes information on new ABS plan approval procedures intended to facilitate industry and reduce duplication of effort between ABS and the Coast Guard.

DISCUSSION

Reference (a) outlines procedures to simplify the review of hull structural plans of Coast Guard certificated U.S.-flag vessels classed by ABS. The attached letter has been distributed to the marine industry by ABS and de-

scribes similar procedures applicable to boilers, pressure vessels, electrical systems, fire extinguishing systems, pumps and piping systems, but with initial plan submission made to the Coast Guard.

AMERICAN BUREAU OF SHIPPING LETTER REY/voc T-18-7 T-8 OF APRIL 6, 1973

Subject: Optional Procedure for Submittal of Machinery and Electrical Plans—ABS Classed Vessels of U.S.A. Registry

Gentlemen:

Since the early part of 1971, the U.S. Coast Guard and the American Bureau of Shipping have been engaged in a joint study directed at reducing duplication in the approval of plans for the construction of vessels which are both ABS classed and Coast Guard inspected. The first recommendations developed in the study were directed towards elimination of redundant review by the Coast Guard of hull structural plans which had been reviewed and approved by the ABS. The recommendations made were favorably considered by the Coast Guard and the Bureau and were promulgated in Navigation and Vessel Circular No. 2–72. The procedures described in that circular, which are presently in use in the shipbuilding industry, enable the plan submitter to deal primarily with ABS in the matter of obtaining approval of hull structural plans.

Further study has indicated that a similar situation exists with respect to certain machinery and electrical plans wherein ABS plan review duplicates an action which is taken by the Coast Guard. It is the intent of this document to set forth procedures which will enable the submitter to deal primarily with the Coast Guard in the matter of obtaining approval of these plans. In particular they are the plans which are required by the following sections of the American Bureau of Shipping "Rules for Building and Classing Steel Vessels."

Section 32 Boilers and Pressure Containers
Section 35 Electrical Equipment
Section 36 Pumps and Piping Systems
Section 39 Fire Extinguishing Systems

Title 46 U.S. Code of Federal Regulations, Parts 52, 53, and 54 prescribe standards for the design and construction of boilers and pressure containers which must be complied with on all U.S.-flag vessels subject to Coast Guard inspection. The design standards set forth in Section 32 of the ABS Rules parallel the Federal regulations to the extent that compliance with the latter will establish, in general, compliance with the ABS Rules. A similar relationship exists between 46 CFR Parts 56 and 58 as compared with Section 36 relating to pumps and piping systems. 46 CFR Subchapter J provides more detailed regulations regarding electrical installations than does Section 35 and the various Federal regulations pertaining to firefighting arrangements generally exceed the requirements of Section 39. Consequently compliance with the Federal electrical and firefighting standards will generally satisfy the ABS requirements for class.

Certain other machinery and electrical plans will have to be submitted to the Bureau for approval as before. These plans do not involve duplication because submittal to the Coast Guard is not required. Plans, which for the most part pertain to the design and construction of equipment rather than systems, are required by the following Sections of the Rules:

Section 33 Engines and Turbines
Section 34 Internal Combustion Engines
Section 35.3.1 Electric Generators and
Section 35.3.2 Electric Motors
Section 37 Propellers

Note: Plans covered by Section 41 (Shipboard Automatic and Remote Control Systems) and Section 42 (Refrigerating Machinery and Insulating of Cargo Spaces) must be submitted to both the ABS and USCG to the extent presently required by their respective Rules and Regulations. This constitutes no change in present practice.

In consequence of the above American Bureau of Shipping is prepared to recognize, in general, the prior approval by the USCG of the plans required to be submitted by Section 32, 35 (except as noted in the previous paragraph), 36, and 39 of the "Rules for Building and Classing Steel Vessels." Recognition of Coast Guard approval of a plan will not indicate ABS acceptance of any piece of equipment listed on the plan unless such equipment has satisfied applicable design, plan approval and testing requirements as may be set forth in other sections of the Rules.

To utilize this option the submitter should request the Coast Guard, in writing with a copy to ABS, to forward Coast Guard approved machinery and/or electrical plans to ABS upon completion of review. Partial submittals with regard to a single section of the Rules is not contemplated. However, utilizing the procedure for machinery plans does not make its use mandatory for the electrical plans or vice versa. The request should be made to the Coast Guard mmt branch office which is handling the Coast Guard plan review for the ship (See 46 CFR 91.55–15(a)(3) for addresses). Plan submittals should then be made to the Coast Guard only, providing in addition to the three prints required by the Coast Guard, three additional prints (total six) for distribution to ABS. Submit four additional prints (total seven) where the construction is to be carried out at a plant other than that of the shipbuilder.

The Coast Guard, when it has completed its review and has approved the plan, will forward the additional prints bearing the Coast Guard approval stamp and a

copy of the approval letter to the Bureau. If the approval is conditional upon notations which the Coast Guard has added to the plan, at least one of the prints sent to the Bureau shall be similarly annotated. Plans which do not have approval will not be forwarded to the Bureau.

The Bureau will process the plans within 10 working days of receipt of the plans from the USCG, reserving the right to review them, particularly with respect to areas where ABS Rules are more inclusive than USCG regulations. Within this time period the Bureau will return to the submitter one print of each plan with an ABS approval stamp together with any special stamping such as that indicating what material requires testing by Bureau surveyors. In the event that an area of noncompliance with an ABS rule or requirement is uncovered, the matter will generally be resolved by direct liaison between the Coast Guard mmt branch office and ABS before returning the plans to the submitter.

One copy each of USCG/ABS approved plans will be sent to the ABS surveyor at the shipyard, and where necessary, to ABS surveyors at manufacturing plants. There will be no change in inspection procedures or in the utilization of approved plans by the Bureau surveyors.

If you have any questions regarding the above optional procedure, please do not hesitate to contact this office.

Very truly yours,

AMERICAN BUREAU
OF SHIPPING,
s/K. D. MORLAND,
Vice President.

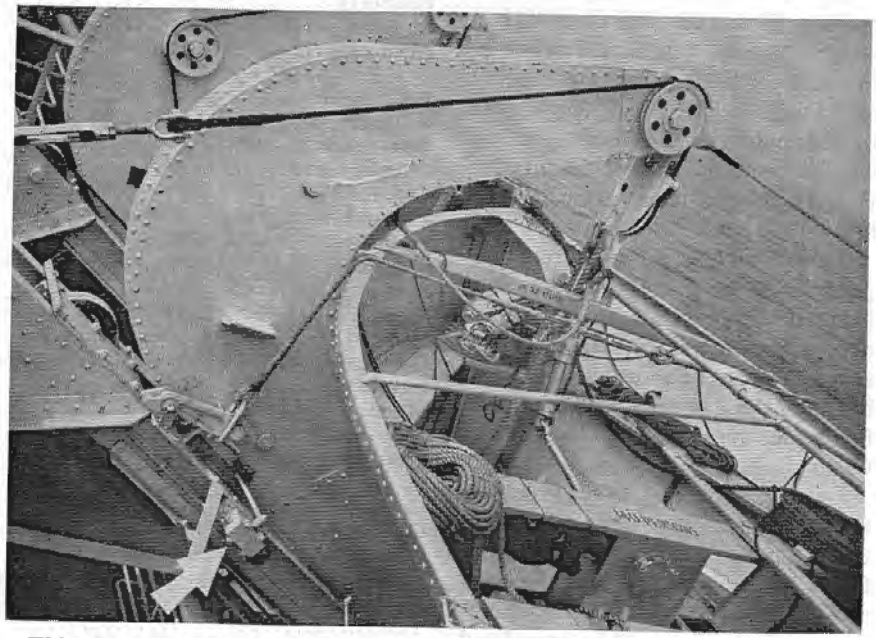
Limit Switches and Gravity Lifeboat Davits

The Coast Guard publication, "Manual for Lifeboatmen, Able Seamen, and Qualified Members of Engine Department" (CG–175) gives the following instructions for hoisting lifeboats under gravity davits:

> On boats handled with gravity davits, the boat is hoisted to a position where the tricing lines can be made fast. It is next lowered to the embarkation deck where men in boat can get out. It is then hove up to the stowed position, using the hand cranks for last 12 inches or more. In the stowed position, men can get back in to pass gripes, replace ridgepole and cover, etc.

In a recent report of a casualty concerning the failure of a wire-rope fall on a gravity lifeboat davit, the investigating officer stated that, "While securing port lifeboat, utilizing a gravity davit system, the limit switches apparently failed to operate properly, causing the boat to be hauled up too far, resulting in the after lifeboat fall parting."

In reality, the Coast Guard recommended hoisting procedure quoted above is telling shipboard personnel not to trust the limit switches installed on the trackways of gravity davits. The crew is strongly advised to hand crank the boat for the last 12 inches of its travel up the trackways and thus avoid any mishaps that could occur from inoperative limit switches. During lnng periods at sea, these switches frequently become waterlogged and short circuited; their failure to operate can occur when least expected. The replacement of the lifeboat which followed the above casualty could have been avoided if the boat had been hand cranked for its last 12 inches of movement up the trackways.



This photograph shows a lifeboat in the stowed position in a gravity davit. The arrow points to a limit switch. Hand cranking the boat up the last 12 inches of trackway when hoisting to the stowed position can avoid the drastic results that could follow the failure of the limit switch.

Towboat Operator Examinations Are Coming

ED. NOTE: *The substance of the following article applies to the examinations to be given to applicants for towboat operator licenses who have not had sufficient present or past experience operating towboats, and thus will not be licensed under the somewhat different requirements of the "Grandfather clause."*

The Towing Vessel Operator Licensing Act (46 U.S.C. 405(b)) became law on July 7, 1972. Implementing regulations became effective on March 2, 1973, and, as required by the legislation, licensed operators will be required aboard all affected vessels 6 months later (after September 1, 1973).

This 6-month period, from the publication of the regulations until licensed operators are required aboard towing vessels, will, of necessity, be devoted almost exclusively to licensing those persons who are qualified under the so-called "Grandfather Clause."

Development of complete examinations for use with persons other than those qualified under these "Grandfather" provisions is going forward and distribution of these examinations to field offices will be completed by September 1, 1973. These examinations will cover the broad general geographical areas specified in the regulations; i.e., Western Rivers, Inland Waters, 200 miles offshore, Oceans, and Great Lakes. Table I indicates those Coast Guard Marine Inspection Offices at which these in-

TABLE I—DISTRIBUTION OF TOWBOAT OPERATOR EXAMINATIONS

MIO	Inland	200 miles offshore	Oceans	Great Lakes	Western rivers
Boston, Mass.	X	X	X		
Portland, Maine	X	X	X		
Providence, R.I.					X
Cincinnati					X
Dubuque					X
Huntington					X
Louisville					X
Memphis	X	X			X
Nashville					X
Paducah					X
Pittsburgh					X
St. Louis	X				X
Albany	X	X		X	
New York	X	X	X	X	
Philadelphia	X	X	X	X	
Baltimore	X	X	X	X	X
Portsmouth	X	X	X		
Wilmington	X	X			
Charleston, S.C.	X	X			
Jacksonville	X	X	X		
Miami	X	X	X		
San Juan, P.R.	X	X	X		
Savannah	X	X			
Tampa	X	X	X		
Corpus Christi	X	X			
Galveston					
Houston	X	X	X		X
Mobile	X	X	X		X
New Orleans	X	X	X		X
Port Arthur	X	X	X		X
Buffalo	X			X	
Chicago	X			X	X
Cleveland	X			X	X
Detroit					
Duluth				X	
St. Ignace				X	
Toledo	X			X	X
L.A./Long Beach	X	X	X		
San Diego	X	X	X		
San Francisco	X	X	X		
Portland, Oreg.	X	X	X		
Seattle	X	X	X		
Guam					
Honolulu	X	X	X		
Anchorage	X	X	X		
Juneau	X	X	X		

dividual examinations will be available. The examinations will be in the multiple choice format and will take only 1 day to complete with the exception of the Oceans examination. Because of the celestial navigation required for this route, approximately 1½ days will be required to complete this examination.

The new examinations for Operators of Uninspected Towing Vessels will make liberal use of the "open book" type of questions, particularly in the area of Rules and Regulations. A candidate for the license will therefore not have to memorize a great deal of information which he may never really need in his day-to-day operations. Instead, he will be required to demonstrate his ability to use those publications which the prudent mariner should have readily available as a reference in determining the correct actions to take under varying circumstances. Table II lists publications which the candidate should be aware of and able to use depending upon the route for which he is being examined.

In addition to Government publications, the following commercially available books have been used extensively, where applicable, in preparing the examinations. This list cannot be regarded as complete and failure to list any specific reference book is not intended to slight its value. Material in the examination has been drawn from other sources as well as the references cited.

(1) "Tugs, Towboats, and Towing" by Edward M. Brady; available from Cornell Maritime Press

(2) "Piloting, Seamanship, and Small Boat Handling" by Charles F. Chapman and printed by American Book-Stratford Press, Inc., New York

(3) "First Aid Textbook" by the American National Red Cross published by Doubleday and Co., Inc., Garden City, New York

TABLE II—PUBLICATIONS WHICH MAY BE USED IN THE EXAMINATIONS

	Inland	200 miles offshore	Oceans	Great Lakes	Western rivers
1. CG–123, Rules and Regulations for Tank Vessels	×	×	×	×	×
2. CG–176, Load Line Regulations		×	×	×	
3. CG–191, Licensing and Certificating	×	×	×	×	×
4. CG–200, Investigation Regulations	×	×	×	×	×
5. CG–227, Laws Governing Marine Inspection	×	×	×	×	×
6. CG–258, Rules and Regulations for Uninspected Vessels	×	×	×	×	×
7. CG–439, Bridge-to-Bridge Radiotelephone	×	×	×	×	×
8. CG–421, Part 1, MERSAR		×	×		
9. 1971 Tide Tables, East Coast, North and South America	×	×	×		
10. 1971 Tidal Current Tables, Atlantic Coast, North America	×	×	×		
11. 1973 Light List, Vol. 1	×	×	×		
12. Light List, Vol. 5					×
13. Light List, Vol. 4				×	
14. 1972 Coast Pilot 3	×	×	×		
15. 1972 Great Lake Pilot				×	
16. H.O. Pub. 1–N–A (Apr. 1, 1972) (Chart Catalog)		×	×		
17. 1971 Nautical Almanac			×		
18. H.O. 229, Vol. 2 or H.O. 214, Vol. 3			×		
19. Navigation Map of the Mississippi River; Cairo, Ill. to Gulf of Mexico					×
20. Pollution Control for Tankermen	×	×	×	×	×
21. Pollution Regulations (F.R. Dec. 21, 1972)	×	×	×	×	×
22. Cargo information cards	×	×	×	×	×

Table III contains the breakdown, arrangement, and content of the examination.

As with any new licensing program, experience will undoubtedly dictate certain changes to examination content, scheduling, etc. However, the information provided here should prove beneficial to those preparing for the required examinations during the initial stages of the program. In the limited time available, every effort will be made to meet with industry review panels composed of persons presently in charge of towing vessels to insure that the questions asked do in fact represent the knowledge required of the operator of a modern towing vessel. At least one representative examination for each of the major routes provided for in the regulations will have been reviewed by such a panel before an examination for that route is put into use. Plans now call for the publication of sample questions in next month's issue of the *Proceedings*.

TABLE III—EXAMINATION CONTENT AND SCHEDULING

	Inland	200 miles offshore	Oceans	Great Lakes	Western rivers
AM First Day—Closed Book					
I. General:					
a. Deck:					
1. Seamanship	×	×	×	×	.....
2. Boatmanship					×
3. Firefighting and lifesaving	×	×	×	×	×
b. Navigation:					
1. Instruments and accessories	×	×	×	×	×
2. Navigational aids	×	×	×	×	×
3. Nautical terminology and definitions	×	×	×	×	×
4. Winds and Weather	×	×	×	×	×
c. Rules of the road	×	×	×	×	×
PM First Day—Open Book					
II. Safety:					
a. Rules and Regs	×	×	×	×	×
b. Lifesaving and firefighting equip	×	×	×	×	×
c. Pollution prevention and control	×	×	×	×	×
d. First-Aid	×	×	×	×	×
e. Ship's business and sanitation	×	×	×	×	×
f. Radio communications	×	×	×	×	×
III. Navigation problems:					
a. Chart navigation:					
1. Use of appropriate Government publications, simple ETA	×	×	×	×	×
2. Dead reckoning	×	×	×	×	.....
3. Plotting courses and fixes	×	×	×	×	.....
4. Distance off	×	×	×	×	.....
5. Tides and currents	×	×	×	.....	.....
6. Set and drift	×	×	×	×	.....
b. Magnetic compass	×	×	×	×	.....
c. Electronic navigation:					
1. Fathometer	×	×	×	×	×
2. RDF	.....	×	×	.....	.....
3. Radar	×	×	×	×	×
4. Loran	.....	×	×	.....	.....
AM Second Day					
IV. Navigation—Celestial:					
a. May include any or all of the following:					
1. Latitude by Polaris	.....	.....	×	.....	.....
2. Latitude by meridian altitude of sun	.....	.....	×	.....	.....
3. Line of position by sun	.....	.....	×	.....	.....
4. Compass error by the sun, azimuth or amplitude	.....	.....	×	.....	.....

COAST GUARD RULEMAKING

(Status as of 1 June 1973)

	Notice of proposed rulemaking	Public hearing	Deadline for comments	Awaiting final action	Withdrawn	Published as rule	Effective date
1972 PUBLIC HEARING							
Tailshaft inspection and drawing (67–71, 4–71)	3–1–72	3–27–72	4–3–72	X			
Stability-wind heel criteria for cargo and miscellaneous vessels (43–71)	3–1–72	3–27–72	4–3–72	X			
Definition of international voyage (12–70)	3–1–72	3–27–72	4–3–72	X			
Portable foam firefighting equipment—tank vessels (17–71)	3–1–72	3–27–72	4–3–72	X			
ANCHORAGE REGULATIONS							
Casco Bay, Maine	6–16–72		7–19–72	X			
Henderson Harbor, N.Y	6–28–72		8–1–72	X			
St. John's River, Fla. (CGFR 71–162)	12–22–71		1–31–72	X			
San Juan Harbor, P.R. (CGFR 72–12)	2–1–72		3–4–72	X			
Willington River, Ga. (CGFR 71–153)	11–25–71		12–27–71	X			
San Diego Harbor (CGD 72–228)	12–5–72		1–8–73	X			
Hampton Roads, VA (CGD 72–232)	12–5–72		1–9–73	X			
Juan De Fuca, Wash. (CGD 72–233)	12–5–72		1–9–73	X			
Hampton Roads, VA (CGD 72–239)	12–12–72		1–11–73			5–16–73	6–15–73
Chester River, Md. (CGD 73–10)	1–19–73		2–27–73	X			
Milwaukee Harbor, WI (CGD 73–48)	3–19–73		4–16–73	X			
Barbers Point, Oahu, HI (CGD 73–59)	3–30–73		4–20–73	X			
Sodus Bay, NY (CGD 73–84)	4–27–73		5–29–73	X			
BOATING SAFETY (GENERAL)							
Numbering and casualty reporting (CGD 72–54) corrected; F.R. of 11–17–72	4–19–72	5–17–72	5–31–72			10–7–72	7–1–73
Personal Flotation Devices (CGD 72–172, 120, 163)	10–6–72	11–20–72				3–28–73	10–1–73
Personal Flotatiou Devices, supplementary (CGD 72–120)	1–5–73		1–30–73			3–28–73	10–1–73
Termination of unique vessels (CGD 73–40)	3–14–73	5–8–73	5–14–73	X			
Hazardous bar areas (CGD 73–41)	3–14–73	4–17 & 19–73	5–1–73	X			
BRIDGE REGULATIONS							
Bear Creek, Md. (CGFR 72–17)	2–2–72		3–7–72	X			
Chattahoochee River (CGFR 71–166)	12–29–71	1–26–72 Florida	1–27–72	X			
Idaho State Memorial Bridge, Clearwater River, Lewiston, Idaho (CGFR 71–169)	12–29–71	2–1–72	2–1–72	X			
Interstate I–90 at Lake Washington (CGFR 71–168)	12–21–71	1–27–72 Washington	1–27–72	X			
Raritan R., N.J. (CGD 72–219)	11–8–72	12–14–72	12–29–72	X			
Nansemond R., Va. (CGD 72–244)	11–11–72		12–15–72	X			
John Day R., Blind Slough, Clatskanie R., Oregon (CGD 72–231)	11–28–72		1–2–73	X			
Nanticoke, Del. (CGFR 71–142)	11–24–71		12–24–71	X			
Ogden Slip, Chicago, Ill. (CGFR 72–16)	2–2–72		3–7–72	X			
Sacramento River, Cal. (CGFR 71–165)	12–29–71		2–7–72	X			
Union Pacific RR Co., Columbia River (CGFR 71–167)	12–29–71	2–23–72 Washington	1–27–72	X			
Ohio River at Huntington	6–10–72	7–13–72	7–27–72	X			
Ortega River, Fla	6–21–72		7–25–72	X			
Clear Creek, Tex. (CGD 72–165P)	8–26–72		10–3–72	X			
New River, Fla. (CGD 72–170P)	8–30–72		10–3–72	X			
Pompano Beach, Fla. (CGD 72–158P)	8–22–72		9–26–72	X			

Coast Guard Rulemaking—Continued

	Notice of proposed rulemaking	Public hearing	Deadline for comments	Awaiting final action	Withdrawn	Published as rule	Effective date
St. Lucie River, Fla. (CGD 72–168P)	8–26–72	.....	10–3–72	X	.....	.....	.....
West Palm Beach, Fla. (CGD 72–167P)	8–26–72	.....	10–3–72	X	.....	.....	.....
Back Bay of Biloxi, Miss. (CG 72–173R)	.....	.....	.....	.....	.....	9–7–72 Extended 4–2–73	10–2–72 through 10–19–73
Great Canal, Satellite Beach, Brevard County, Fla. (CGD 72–175PH)	9–13–72	10–30–72	11–13–72	X	.....	.....	.....
AIWW, Mile 342, Fla.; Drawbridge Operations (CGD 72–190P)	9–30–72	.....	11–1–72	X	.....	.....	.....
Barnegat Bay, N.J. (CGD 72–211)	10–31–72	.....	12–5–72	X	.....	.....	.....
Ewing Narrows, Harpswell, Me. (CGD 72–205)	10–17–72	11–21–72	12–6–72	X	.....	.....	.....
Richardson Bay, Ca. (CGD 72–30)	.....	.....	.....	.....	.....	12–2–72	2–14–73 through 10–6–73
Doctors Pass, Naples, Fla. (CGD 72–242)	12–16–72	1–25–73	2–15–73	X	.....	.....	.....
AIWW Vero Beach, FL (CGD 72–155)	3–2–73	.....	4–3–73	.....	.....	5–11–73	6–11–73
Menominee River, WI (CGD 73–12)	1–26–73	.....	3–6–73	X	.....	.....	.....
Spa Creek, MD (CGD 73–13)	1–26–73	.....	3–6–73	X	.....	.....	.....
Long Island Inland Waterway (CGD 73–23)	2–12–73	.....	3–30–73	X	.....	.....	.....
Shaws Cove, CT (CGD 73–72)	4–18–73 corrected 5–1–73	.....	5–18–73	X	.....	.....	.....
Durham Ck., SC (CGD 73–85)	11–17–70	.....	12–18–70	.....	.....	5–1–73	6–1–73
Columbia and Snake R's, WA (CGD 73–95)	5–8–73	.....	6–8–73	.....	.....	.....	.....
Halifax R. FL (CGD 73–52)	3–14–73	.....	4–17–73	.....	.....	5–29–73	7–2–73
Whitcomb Bayou, FL (CGD 73–51)	3–14–73	.....	4–17–73	X	.....	.....	.....
Coos Bay, OR (CGD 73–108)	.....	.....	.....	.....	.....	5–23–73	10–1–73 through 10–31–73
Isthmus Slough, OR (CGD 73–104)	.....	.....	.....	.....	.....	5–23–73	7–16–73 through 10–31–73
Scuppernong R., NC (CGD 73–111)	5–29–73	.....	7–3–73	.....	.....	.....	.....
HAZARDOUS MATERIALS							
Compressed Gas Cylinders (CGD 72–115PH)	8–31–72	9–28–72	10–2–72	X	.....	.....	.....
Dichlorobutene, Corrected, F.R. 9–20–72, Hazardous Cargoes (CGD 72–162PH)	8–30–72	10–24–72	10–31–72	X	.....	.....	.....
Certification of Cargo Containers for Transport under Customs Seal (CGD 72–139)	11–17–72	.....	12–19–72	X	.....	.....	.....
Metal Borings, Shavings, Turnings & Cuttings (CGD 72–229)	12–5–72	1–11–73	3–1–73	X	.....	.....	.....
Exemption to Etiologic Agents Requirements (CGD 72–226)	12–13–72	1–23–73	1–30–73	.....	.....	3–29–73	6–30–73
Shipment of DOD material sold to shipper (CGD 73–42)	3–22–73	4–17–73	4–24–73	X	.....	.....	.....
Miscellaneous Dangerous Cargoes (CGD 72–182)	11–11–72	12–12–72	12–19–72	X	.....	.....	.....
MARINE ENVIRONMENT AND SYSTEMS (GENERAL)							
Oil pollution prevention (CGFR 71–160, 161)	12–24–71	2–15–72	4–21–72	X	.....	12–21–72	7–1–74
MERCHANT MARINE SAFETY (GENERAL)							
Buoyant devices, special purpose water safety (CGFR 72–5)	1–29–72	.....	3–15–72	.....	.....	3–28–73	4–30–73
Fire extinguishers, marine type portable (CGFR 72–36)	3–9–72	4–18–72	4–24–72	.....	.....	3–14–73	6–18–73
Incombustible materials (CGFR 72–47)	3–9–72	4–18–72	4–24–72	.....	.....	3–14–73	6–18–73
Oceanographic vessels, fire main systems (CGFR 72–20)	2–4–72	.....	3–19–72	X	.....	.....	.....
Washroom and toilet facilities (CGFR 72–4)	1–15–72	.....	3–20–72	X	.....	.....	.....

	Notice of proposed rulemaking	Public hearing	Deadline for comments	Awaiting final action	Withdrawn	Published as rule	Effective date
Water lights, floating electric (CGFR 72–48)	3–9–72	4–18–72	4–24–72	X			
Great Lakes Maritime Academy, List as a Nautical School-Ship (CGD 72–92P)	8–9–72		9–15–72	X			
Ship's Maneuvering Characteristics Data (CGD 72–132PH)	8–22–72	9–28–72	10–13–72	X			
Unmanned Barges; hull construction (CGD 72–130)	10–31–72	12–19–72	12–29–72	X			
Marine Engineering Systems and Components (CGD 72–206)	11–17–72	12–12–72	12–20–72	X			
Remote Valve Controls (CGD 72–57)	11–17–72		12–19–72			5–1–73	8–1–73
Update of Examination Requirements for Second and Third Mate (CGD 72–151)	11–16–72		1–1–73			5–8–73	7–6–73
Towboat operator licensing (CGD 72–132)	8–11–72	9–13, 20, 26, & 27–72	1–15–73			3–2–73	9–1–73
Certain Bulk Dangerous Cargoes; Transverse stability requirements (CGD 72–130)	10–31–72	12–19–72	12–30–73			5–1–73	8–1–73
Construction requirements for tank ships (CGD 72–245)	Adv. Notice 1–26–73		3–15–73	X			
Great Lakes load lines (CGD 73–49)	3–23–73		4–15–73			5–10–73	4–14–73
Wiring methods and materials for hazardous locations (CGD 73–6)	2–14–73		3–16–73	X			
Oily ballast discharge requirements (CGD 72–179)	2–15–73		3–19–73		5–15–73		
Emergency Position Indicating Radio Beacons (CGD 73–24)	3–5–73	4–18–73	4–30–73	X			
Firemen's outfits on manned tank barges (CGD 73–11)	4–26–73	On request	5–28–73	X			
Recodification of certain procedures applicable to the public and to Merchant Marine Officers and Seamen (CGD 73–64)						5–11–73 Corrected 5–24–73	5–14–73

NOTE: This table which will be continued in future issues of the Proceedings is designed to provide the maritime public with better information on the status of changes to the Code of Federal Regulations made under authority granted the Coast Guard. Only those proposals which have appeared in the Federal Register as Notices of Proposed Rulemaking, and as rules will be recorded. Proposed changes which have not been placed formally before the public will not be included.

AMENDMENTS TO REGULATIONS

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of Transportation

[CGD 73–64R]

SUBCHAPTER A—PROCEDURES APPLICABLE TO THE PUBLIC

SUBCHAPTER B—MERCHANT MARINE OFFICERS AND SEAMEN

MERCHANT MARINE PERSONNEL

Recodification

The purpose of these amendments to chapter I of title 46 of the Code of Federal Regulations is to eliminate duplicate requirements in subchapters A and B.

Most requirements in part 3 are duplicated in parts 10, 12, 14, 15, and 16. The remaining requirements in part 3 restate the law or duplicate the Department of Transportation's implementation of the Freedom of Information Act. This amendment revokes part 3 and adds the requirements of part 3 that are not duplicated to part 14.

The following is a list of sections in part 3 and the section of the law or regulation which they duplicate or the section in part 14 to which they are transferred by this amendment.

Section	*Is located in—*
3.01–1	46 CFR 10.02–5, 10.02–9, 10.02–23, 12.02–9, 12.02–23.
3.01–75	46 CFR 10.02–33, 12.02–25.
3.10–1	46 CFR 14.15–1.
3.10–5	46 CFR 14.15–5.
3.10–10	46 CFR 14.15–10.
3.10–15	5 U.S.C. 552, 49 CFR subpart F of part 7.

Section	Is located in—
3.10–20	33 CFR 1.25–40.
3.10–25	5 U.S.C. 552, 49 CFR subpart F of part 7.
3.10–30	33 CFR 1.25–40.
3.10–35	46 CFR 14.15–15.
3.13–1	46 U.S.C. 564, 569, 646.
3.13–10	46 CFR 14.05–1.
3.13–15	46 U.S.C. 577.
3.13–30	46 CFR part 15.
3.13–35	46 U.S.C. 201, 202, 203, 701, 702 and 85.
3.13–40	46 CFR 14.10–1, 14.10–5.
3.13–45	46 CFR 14.05–20.
3.13–50	46 CFR subpart 14.10.
3.15–1	Obsolete.
3.15–5	46 U.S.C. 651.
3.19–1	46 CFR 16.15.
3.19–5	46 CFR 16.20.

* * * * *

Since these amendments are editorial changes and impose no additional burden on any person, public rulemaking procedures are unnecessary, and they may be made effective in less than 30 days.

Effective date.—These amendments shall become effective on May 14, 1973.

Dated May 4, 1973.

T. R. SARGENT,
Vice Admiral, U.S. Coast Guard, Acting Commandant.

(The complete text of these amendments was published in the Federal Register of May 11, 1973, as corrected by the Federal Register of May 24, 1973.)

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of Transportation

SUBCHAPTER B—MERCHANT MARINE OFFICERS AND SEAMEN

[CGD 72–151R]

PART 10—LICENSING OF OFFICERS AND MOTORBOAT OPERATORS AND REGISTRATION OF STAFF OFFICERS

Additional Examination Subjects

This amendment adds a number of examination subjects to those presently contained in the regulations and is based on a notice of proposed rulemaking published in the November 16, 1972 issue of the Federal Register (37 FR 24366). Interested persons were given the opportunity to submit written views, data, arguments, objections, or comments to U.S. Coast Guard (GCMC/82), room 8234, 400 Seventh Street SW., Washington, D.C. 20590. All such communications received within 45 days after November 16, 1972, were fully considered before this final action was taken.

Four comments on the proposal were received. Two of these comments did not oppose the new subjects that were proposed to be included in the examinations, but were addressed to a discussion of what material should be included under those subjects and the procedures for grading. The third comment expressed concern as to the effect of the proposal upon limited operations on inland waters. The proposed changes will have no effect on personnel for such operations as the examinations in question apply only to unlimited deck and engineer officers. The last comment, reflecting the view of an organization which represents marine engineers, objected to the addition of the subject of damage control to the examination for deck officers. The objection was based not on a concern for safety but on the supposition that the proposed regulation would affect collective bargaining agreements. The authority of the Coast Guard is for the promotion of the safety of life and property and protection of the environment on the high seas and on waters subject to the jurisdiction of the United States. With the increased size and speed of today's ships, the hazardous commodities carried in large quantities, and the reduced crew size which accompanies automation, the Coast Guard has determined, consistent with its authority, to require that personnel qualifications keep pace with modern situations. All officers, both deck and engineer, must be knowledgeable in the subject of damage control so they may contribute to the safety of the crew, ship, and the environment.

This modification in examination content is the first step in a long range project by the Coast Guard to modernize its licensing and certification program. This program started a few years ago with a study, by an outside testing firm, of the overall testing program administered by the Coast Guard. This study resulted in certain criticsms and recommendations for improvements, among which were (1) revise examinations to eliminate obsolete material and to include that knowledge necessary in today's operations; and (2) convert to multiple choice format to insure objectivity and to reduce the time required to complete the examination.

In carrying out these recommendations, the Coast Guard has solicited and received advice and assistance from all segments of the industry, i.e. management, labor, training institutions, and Government agencies.

The new examinations for 3d and 2d mates and engineers are now in the final stages of preparation. When introduced, they will simplify administration and grading and reduce the time required to complete the examination by more than 50 percent.

Prior to the introduction of the new examinations, more specific information will be made available to the public concerning the type and format of questions to be used, scheduling, offices where exams will be administered, etc. This information will be contained in modified versions of CG–101 (Specimen Examination for Merchant Marine Deck Officer) and CG–182 (Specimen Examination for Merchant Marine Engineer Licenses).

The new examinations will not be introduced until the specimen examination booklets have been available to the public for at least 60 days. This will ensure that all interested persons are fully apprised of examination content and format.

The notice of proposed rulemaking included the subject of pollution prevention in examinations for third and second mates and engineers. Subsequently, the pollution prevention regulations, applicable to vessels and oil transfer facilities, were published in the December 21, 1972, issue of the

Federal Register (37 FR 28250) and these regulations in the document beginning on page 28261 added this additional subject to all license examinations. Consequently, the subject of pollution prevention has been deleted from this amendment. In addition, only minor editorial changes have been made to the proposal which is hereby adopted.

In consideration of the foregoing, part 10 of title 46, Code of Federal Regulations, is amended as follows:

1. In table 10.05–45(b), column headed "Third Mate, Ocean," by adding footnote 4 in lines 8 and 33; adding an X and footnote 4 in lines 9 and 23; in the column headed "Second Mate, Ocean," by adding an X and footnote 5 in line 10, line 16, and line 23, and adding footnote 5 in line 33; adding footnote 4 to read: "Effective July 1, 1973, applicants for licenses as third mate of ocean steam or motor vessels are also tested in the following: Parallel sailing, mercator sailing, basic use of trim tables, ship's stability, ship's construction, and damage control"; and footnote 5 to read: "Effective July 1, 1973, applicants for licenses as second mate of ocean steam or motor vessels are also tested in the following: Great circle sailing, basic magnetism, deviation and compass compensation, basic ship's stability, ship's construction, damage control, and basic use of trim and stability tables."

2. In table 10.10–4(b), by adding footnote 3 preceding X on lines 4, 53, and 76, in the four columns headed "Assistant Engineer", "Steam", and "Motor"; by adding footnote 3 preceding X on line 61 in the two columns headed "Assistant Engineer", "Steam", and "Motor", "Over 2,000 hp"; and adding footnote 3 to read "Effective July 1, 1973, applicants for licenses as third and second assistant engineer of steam and motor vessels are also tested in the following: Air conditioning, ventilation, sanitary or sewage disposal and piping systems, hydraulics, engineering drawings and tables, and basic electronics"; and footnote 4 to read: "Effective July 1, 1973, applicants for licenses as third and second assistant engineer of motor vessels are also tested on waste heat boilers."

(46 USC 224, 224a(2), 228, 229, 391a (3); 49 USC 1655(b); 49 CFR 1.46(b).)

Effective date.—This amendment is effective on July 6, 1973.

Dated April 27, 1973.

C. R. BENDER,
Admiral, U.S. Coast Guard
Commandant.

(Federal Register of May 8, 1973.)

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of Transportation

[CGD 73–49R]

GREAT LAKES LOAD LINES

Establishment of Load Lines; Calculation and Assignment of Freeboards, etc.

The purpose of these amendments to the regulations governing Great Lakes loadlines is to adopt new provisions for the calculations of freeboards and additional conditions of assignment of freeboards and loadlines.

In the March 23, 1973, issue of the Federal Register (38 FR 7678), the Coast Guard proposed regulations to adopt new provisions for the calculations of freeboards including new conditions of assignment.

Written and oral comments were received from respondents in both United States and Canada and included the shipowners, shipbuilders, classification societies, and governmental representatives from the Board of Steamship Inspection and the Coast Guard.

All commenters were in favor of the new regulations but many changes were suggested for clarification or to improve administration. There were also several substantive suggestions for changes in requirements.

The following is a discussion on comments received for substantive changes to the proposal and an explanation of the changes that were made by the Coast Guard.

In part 42 a number of changes were made to implement the new part 45. In § 42.03–5, references for Great Lakes voyages were placed into a separate paragraph and require that vessels 79 feet or more on such voyages would be subject to the new regulations in part 45. In § 42.03–3 a new exception procedure was introduced and explained. In § 42.05–3, "existing vessel" has been further defined to explain that the new regulations do not specifically refer to an "existing" vessel but that all vessels prior to the new regulations will be considered existing vessels unless they can comply with subpart D in the new part 45 to be considered new vessels. In § 42.05–40(c), Victoria Bridge, Montreal, Canada, is the dividing line between fresh water and salt water in the St. Lawrence River which has been used by the Canadian authorities for many years. The duration of the loadline certificate and the amount of time that it may be extended has been inserted in § 42.07–5. The surveys by the American Bureau of Shipping or other approved assigning authority have been clarified for Great Lakes vessels in § 42.09–15 (c) and the requirements on stability and strength have been noted in § 44.05–25(a).

In part 44, it was especially necessary to modify the present wording such that the new calculations for freeboard would not be used on the ocean routes. Special service, although it is used within 20 miles of land along our coasts, may be subject to ocean-sea conditions and the residual seaways from ocean storms which affects the shipping along our coasts. The new freeboard table and the calculations for the Great Lakes are based on studies which have shown that the wave conditions on the Great Lakes may approach ocean conditions of moderate but not full height. Therefore while special service loadlines are continued, the

older regulations of part 45 for calculation of freeboards will be used where Great Lakes regulations are indicated in part 44.

In the new part 45, the following changes have been made:

Section 45.3 Paragraph (h), Freeboard Deck—definition of.—The definition of freeboard deck in part 45 is similar to the definition in the International Load Line Convention, 1966, on which these new regulations are modeled. A suggestion was made that the assigning authority should also designate the lower deck as the freeboard deck. This suggestion was not adopted because the Coast Guard wants a record of those vessels which utilize this special definition. This can best be done by submitting a request to the Commandant when such a designation is desired.

A general request was made that the several places where the Commandant is mentioned be modified by adding the words "assigning authority". All of these sections were reviewed and in several cases it appeared proper to add a reference to the assigning authority. The other sections where this has not been adopted are felt to be information which the Commandant should be particularly advised on or they were sections in which both the Commandant and the classification society were already mentioned.

Paragraph (l), Length of Superstructure—definition of.—It was suggested that this definition should include the phrase "which extend to the sides of the vessel". This change has been adopted since it clarifies the definition.

Paragraph (p), Exposed position—definition of.—It was suggested that the alternate definition of "exposed positions" which is based on the Convention wording for superstructures was superfluous. The comment was accepted and paragraph (p) (2) was deleted.

Paragraph (r), Steel—definition of.—Many comments were made on this definition. It was pointed out that the several parameters in the proposals were not the only ones which would occasionally be used nor would all of them be used at the same time on every occasion. A change to the definition was made based on these comments to reflect that the parameters are some of the items with which equivalency is judged.

Section 45.5. A typographical error in the winter loadlines in paragraph (d) was corrected from March 15 to 31.

Section 45.11. This section was changed to three paragraphs instead of two for readers convenience and understanding.

Section 45.15. A number of comments were received that suggested that the last sentence in paragraph (b) should show to whom the Commandant will communicate details of a special exemption. The intent was that this would be an exchange of information between the United States and Canada in continuation of the spirit of the cooperation which has existed since the regulations were inaugurated. The suggestion was approved and the change has been made.

Section 45.31. Section 45.31 and figure 1 pertains to the deck line. The Administrations has proposed a change from the 15 inches which is currently used on the Great Lakes to 12 inches in order to be consistent with international practice. In accordance with the suggestions received that 15 inches be continued, the requirement has been modified by adding the words "at least" to precede the words "12 inches long".

It was suggested that the Joint Technical Committee's recommendation to use the inner intersection line on the hull plating be used. The administrations considered this suggestion but came to the conclusion that it would be better to retain the existing practice which is to use the outer intersection line since this practice is also in effect in the Internatonal Convention and a minor difference would be introduced into the regulations for no real purpose.

Sections 45.35 and 45.37. A suggestion was made that the vessel need not have all of its loadlines marked in the interests of simplifying the complicated seasonal marking as in figure 2. This suggestion was discussed between the two administrations of Canada and the United States. Canadian practice has been to place seasonal marks for all seasons at the applicable freeboard even when they coincide. The Coast Guard feels that this approach has the advantage of letting the observer know in a precise manner whether the vessel is on its proper marks for the season of the year without having to stop the ship, go to the bridge, and look at the certificate. A comment was made that many of the vessels which have reason to have a single seasonal loadline for all seasons by reason of structural limitations or draft limitations should not be required to have all seasonal letters painted on the ship and that only the line itself should be required. However the administrations feel that just the line itself would not suffice. In order to show what seasons are applicable and what are not applicable, all seasons must be marked.

Section 45.51. A suggestion pointed out that the use of the phrase "main deck", while usually denoting the weather deck on the oceans, has a traditionally different application on the Great Lakes. The suggestion has been approved and the requirement has been changed by inserting the words "freeboard" in place of the word "main".

Section 45.53. A number of suggestions were made concerning this section. One suggestion was to add the unit of length in the formulas to clarify the formulas, both for seasonal freeboards and when a scantling or subdivision draft is in effect. The suggestion has been approved.

It was suggested that the word "geometric" be introduced in the text concerning summer freeboard. Although the word is understandable

technically, the suggestion was not approved in order to avoid extra definitions in the regulations.

Section 45.55. A suggestion was made to reverse the order of the formulas so that they would be more coherent. Also the L/D limitations in the Joint Technical Committee recommendation were inadvertently omitted in the proposal. Accordingly, the suggestions were approved and the proposed paragraph (a) is now paragraph (b), the proposed paragraphs (b) and (c) are now paragraph (a), and paragraph (c) contains the Joint Technical Committee's recommendation for L/D limitation.

Section 45.57. One comment pointed out that the use of the word "Commandant" might be modified by allowing the approved assigning authority to handle a modification of deck line position. This comment was accepted. Also, another comment pointed out that we had not picked up the recommendation of the Joint Technical Committee that no freeboard of less than 2 inches may be assigned. This omission was corrected.

Table 4. Several typographical errors were corrected.

Section 45.65. It was suggested that paragraph (d) be rewritten to conform with the International Load Line Convention, 1966. The suggestion was approved and wording very similar to the Convention was inserted. Also, a comment requested the deletion of the explanatory sentence on the parabolic formula without deleting the formula itself. This suggestion was also approved.

Section 45.69. The bow height calculation has been modified to apply only to manned vessels in order to agree with the concept of its use in the International Load Line Convention, 1966.

Sections 45.71, 45.73, and 45 75. There were a number of typographical errors pointed out and a suggestion for adding the units of length. In §§ 45.73 and 45.75, the word "more" has been changed to "less" in accordance with the original Joint Technical Committee recommendation.

Section 45.77. It was pointed out that the addition for a vessel which does not have calculated immersion information from the Joint Technical Committee Report was omitted. Accordingly, the omission was corrected.

Sections 45.103 and 45.105. It was suggested that the word "unacceptable" be used in place of the word "excessive" since an acceptable standard is defined in the interim strength standard for the Great Lakes. This suggestion was approved.

Section 45.115. Two suggestions concerning paragraph (a) were adopted—

(1) Deckhouses on the freeboard deck should be required to have guardrails; and

(2) Paragraph (c) should be reworded to refer to paragraph (a) so that not only the open rails would be described but also the bulwarks which should be in place along the unmentioned half of the trunk length would be covered. These suggestions were approved.

Section 45.127. Comments pointed out that paragraph (a)(3) was not understandable. Upon review, it was determined that an error in editing had occurred. This paragraph has been corrected and shortened.

In paragraph (b)(2), the words "or more" were inserted after "Hs" for clarification.

Section 45.133. Several comments were received regarding the requirement of proper installation. The comments stated that improper installation would be obvious, something which an inspector would require to be corrected immediately. Also a request was received to avoid defining the thickness in terms of "corrosion or fatigue." Accordingly, both suggestions were accepted and the same general term that was used for superstructures has been used in this section. Additionally, it was pointed out that the height of the air pipes was as accurate as in the Joint Technical Committee proposal, and this has been changed.

Section 45.139. A paragraph has been added further defining the requirements on side scuttles to require deadlights in accordance with the recommendation made by the Joint Technical Committee.

Section 45.145. This change corrects a printing error that occurred in the proposed rulemaking. The positions of the formulas have been corrected.

Section 45.147. Paragraph (c) was added in accordance with the Joint Technical Committee's recommendation that when the safety of the ship is not impaired, the height of coamings might be reduced.

Section 45.153. There were comments on the use of the term "fatigue resistance" in paragraph (a). However, the term has been retained and the words "to the hull" have been inserted for clarification. The words "approved by the Commandant" have been deleted to eliminate inference that the Commandant will approve every through-hull fitting. Instead the regulations now serve as an engineering guidance for the designer and builder and requires that hull pipes through hull fittings must be equivalent in strength to the hull.

Section 45.157. It was necessary to clarify the first sentence so that the reader may determine whether 24 inches or 0.5B would be used. The second sentence has been re-edited to call for thickness not less than extra heavy pipe.

Joint review. In addition to the development of the original proposal by the Joint Technical Committee established by the United States and Canada, the comments and recommendations made on the proposed rulemaking have been subject to review by both the Board of Steamship Inspection of Canada and the Coast Guard. Both Agencies have commented to each other and have compared their regulations for similar intent. This is a continuing effort. While the Canadian and United

States regulations differ in official format, both sets of regulations conform to substantive requirements. It is the intent of the Coast Guard and the Board of Steamship Inspection of Canada to maintain each country's Great Lakes loadline regulations to be as similar as possible in accordance with the agreement set up by the exchange of notes in 1938 through 1940 by the Secretary of State of the United States and his counterpart, the Minister of the Exterior for Canada.

* * * * *

Effective date.—These amendments shall become effective on April 14, 1973.

Dated May 3, 1973.

T. R. SARGENT,
Vice Admiral, U.S. Coast Guard, Acting Commandant.

(The complete text of these amendments was published in the Federal Register of May 10, 1973.)

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of Transportation

[CGD 72-208]

PART 1—ORGANIZATION, GENERAL COURSE AND METHODS GOVERNING MARINE SAFETY FUNCTIONS

PART 136—MARINE INVESTIGATION REGULATIONS

PART 137—SUSPENSION AND REVOCATION PROCEEDINGS

Change of Nomenclature of "Hearing Examiner"

The purpose of these amendments to the regulations concerning suspension and revocation proceedings is to reflect the change of nomenclature from "Hearing Examiner" to "Administrative Law Judge".

In Federal Register Doc. 72-14069, appearing on page 16787 of the August 19, 1972, issue of the Federal Register, the Civil Service Commission amended part 930 of title 5 of the Code of Federal Regulations by changing the nomenclature of "Hearing Examiner" to "Administrative Law Judge." The amendments in this document conform to the change in 5 CFR part 930 by making the same change wherever such nomenclature of similar nomenclature appears in chapter I of title 46, Code of Federal Regulations.

Since the amendments in this document relate to agency management, they are excepted by 5 U.S.C. 553(a) from the notice of proposed rulemaking procedures and from the requirement of an effective date of not less than 30 days after publication in the Federal Register.

In consideration of the foregoing, chapter I of title 46, Code of Federal Regulations, is amended as follows:

1. By amending parts 1, 136, and 137 by striking the words "hearing examiner", "field examiner", and "examiner" wherever they appear and inserting "administrative law judge" in place thereof.

(46 U.S.C. 375, 416, 14 U.S.C. 633; 49 U.S.C. 1655(b)(1); 49 CFR 1.46(b).)

Effective date.—These amendments shall become effective on April 30, 1973.

Dated April 16, 1973.

T. R. SARGENT,
Vice Admiral, U.S. Coast Guard Acting Commandant.

(Federal Register of April 24, 1973.)

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of Transportation

SUBCHAPTER H—PASSENGER VESSELS

[CGD 72-187R]

PART 70—GENERAL PROVISIONS

PART 80—DISCLOSURE OF SAFETY STANDARDS AND COUNTRY OF REGISTRY

Notification of Safety Standards

The purpose of these amendments to the passenger vessel regulations is to eliminate requirements for disclosure of construction details on passenger vessels that meet prescribed safety standards. These amendments are made in conformity with the act of December 24, 1969 (83 Stat. 427; 46 U.S.C. 362).

A notice of proposed rulemaking appeared in the October 31, 1972 issue of the Federal Register (37 FR 23191) proposing these amendments. One comment was received on the proposal. The commenter, representing a trade association, supported the substantive requirements but made the following suggestions:

a. Since the "country of registry" requirement is not directly related to "safety standards," it should be referred to in §§ 70.05-1, 10.05-3, and added to the heading of part 80, to assist those persons interested in locating the regulations concerned with notification of vessel registry.

b. The emphasis on the notification of safety standards instead of the country of registry should be reconsidered. Since all vessels seeking clearance to transport passengers from U.S. ports must comply with international safety standards, the detailed provisions relating to noncomplying vessels have no application to those serving U.S. trades, and a submitted rearrangement of the proposed regulations, with requirements for promotional literature or advertising preceding other requirements, should be adopted.

c. Delete the proposed §§ 80.25(a)(3)(i) and 80.30(b)(3)(i) since vessels that comply with all Coast Guard and international safety standards are not required to give notification of such standards.

The proposed heading of part 80 was incomplete since it failed to state the essential subjects of the regulations. Accordingly, the suggestion to add the word "country of registry" to the heading and to the references in §§ 70.05-1 and 70.05-3 is hereby adopted.

The second suggestion was not adopted. Despite the fact that, as a

result of the act of December 24, 1969, the requirement for the notification of safety standards might have no practical application, it is incumbent on the Coast Guard to implement all the requirements of the act. The suggested change concerns style and not substance. The style of the proposed regulations conforms to accepted drafting principles and to the requirements for publication in the Federal Register. Since the suggested changes did not follow these standards, they were not accepted.

The third suggestion was to eliminate the statement, "This vessel complies with all Coast Guard and international safety standards" from §§ 80.25(a) and 80.30(a). The reason given for the suggestion is that vessels complying with such rules and standards are exempt from notification and the inclusion of the statement only tends to confuse the reader. The comment was accepted and the statement has been deleted from the regulations.

In consideration of the foregoing, the amendment is adopted with the changes as stated and is set forth below.

Effective date: These regulations shall become effective on May 11, 1973.

Dated March 30, 1973.

C. R. BENDER,
Admiral, U.S. Coast Guard,
Commandant.

(Federal Register of April 10, 1973.)

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of Transportation

SUBCHAPTER F

[CGD 72-57R]

PART 56—PIPING SYSTEMS AND APPURTENANCES

Requirements for Remote Valve Controls

This amendment promulgates changes to the regulations to clarify the Coast Guard's design requirements for remote valve controls. The existing regulations have been misinterpreted as a requirement to equip reach rods with indicators when they are used to operate valves located in cargo tanks. This amendment makes clear that no indicators are required on either valves located in cargo tanks or at either end of reach rods. Power actuated remote valve controls are, however, required to have indicators.

A notice of proposed rulemaking (CCD 72-57P) with respect to these regulation changes was published in November 17, 1972 issue of the Federal Register (37 FR 24439).

The Coast Guard invited interested persons to submit comments on these amendments by December 19, 1972. No comments were received.

In consideration of the foregoing, part 56 of chapter I of title 46 of the Code of Federal Regulations is amended as follows:

§ 56.20-9 [Amended]

1. By amending § 56.20-9(a) by striking the words "as provided for in subparagraph 56.50-1(g)(2)," and inserting in their place the words "where valves are located in tanks."

2. By revising § 56.50-1(g)(2) to read as follows:

§ 56.50-1 General (replaces 122.6 through 122.10).

* * * * *

(g) * * *

(2)(i) Remote valve controls that are not readily identifiable as to service must be fitted with nameplates.

(ii) Remote valve controls must be accessible under service conditions.

(iii) Remote valve controls, except reach rods, must be fitted with an indicator that shows whether the valve is open or closed.

(iv) Valve reach rods must be adequately protected.

(v) Solid reach rods must be used in tanks containing liquids, except that tank barges having plug cocks inside cargo tanks may have reach rods of extra-heavy pipe with the annular space between the lubricant tube and the pipe wall sealed with a nonsoluble to prevent penetration of the cargo.

* * * * *

(46 U.S.C. 363, 366, 367, 375, 390b, 391, 391a, 392, 395, 404, 409, 411, 416, 489, 526p, 1333, 49 U.S.C. 1655(b)(1), 49 CFR 1.46(b), 49 CFR 1.46(o)(4) (37 FR 21943).)

Effective date.—This amendment is effective on August 1, 1973.

Dated April 25, 1973.

C. R. BENDER,
Admiral, U.S. Coast Guard,
Commandant.

(Federal Register of May 1, 1973.)

READERS INVITED TO SUBMIT MATERIAL FOR FUTURE ISSUES

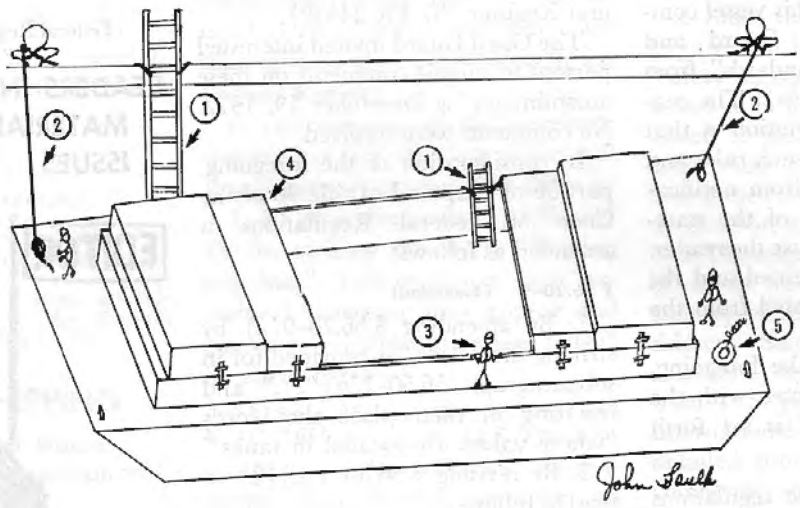
ALL READERS are invited to submit comments, safety suggestions, cartoons, articles, or similar material for publication in future issues of this publication. Submissions should concern the promotion of maritime safety and will be selected and edited at the editor's discretion. Credit for published material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

Articles or requests for further information should be directed to:

Editor
Marine Safety Council Proceedings
U.S. Coast Guard Headquarters
(GCMC/82)
400 Seventh St. SW
Washington, D.C. 20590

Safety as Others See It

SAFETY IN NUMBERS



WHEN WORKING BARGES, CHECK THESE FIVE AND STAY ALIVE

1. LADDERS
   a. Properly Secured
   b. Condition
   c. Proper Length
   d. If Jacobs Ladder, Double Rung or Flat Thread.
2. MOORING LINES
   a. Tension Released when Loading
   b. Slack Taken Up When Discharging
3. LIFEJACKETS
   a. Condition
   b. Properly Worn
4. SLIDING COVERS
   a. Secured in Open Position
   b. All Men Clear While Opening
5. LIFERING
   a. Readily Accessable
   b. 90 Feet of Line Attached

Submitted by John Faulk
Strachan Shipping Company

—Courtesy National Safety Council

MERCHANT MARINE SAFETY PUBLICATIONS

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

The Federal Register will be furnished by mail to subscribers, free of postage, for $2.50 per month or $25 per year, payable in advance. The charge for individual copies is 20 cents for each issue, or 20 cents for each group of pages as actually bound. Remit check or money order, made payable to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Regulations for Dangerous Cargoes, 46 CFR 146 and 147 (Subchapter N), dated October 1, 1972 are now available from the Superintendent of Documents price: $5.75

CG No.	TITLE OF PUBLICATION
101	Specimen Examination for Merchant Marine Deck Officers (7–1–63).
108	Rules and Regulations for Military Explosives and Hazardous Munitions (4–1–72). F.R. 7–21–72, 12–1–72.
115	Marine Engineering Regulations (7–1–70) FR. 12–30–70, 3–25–72, 7–18–72, 8–19–72, 5–1–73.
123	Rules and Regulations for Tank Vessels (5–1–69) F.R. 10–29–69, 2–25–70, 6–17–70, 10–31–70, 12–30–70, 3–8–72, 3–9–72, 6–14–72, 7–18–72, 10–4–72, 10–14–72, 12–21–72.
129	Proceedings of the Marine Safety Council (Monthly).
169	Rules of the Road—International—Inland (8–1–72). F.R. 9–12–72.
172	Rules of the Road—Great Lakes (7–1–72). F.R. 10–6–72, 11–4–72, 1–16–73, 1–29–73, 5–8–73.
174	A Manual for the Safe Handling of Inflammable and Combustible Liquids (3–2–64).
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184	Rules of the Road—Western Rivers (8–1–72). F.R. 9–12–72, 5–10–73.
190	Equipment List (8–1–72). F.R. 8–9–72, 8–11–72, 8–21–72, 9–14–72, 10–19–72, 11–8–72, 12–5–72, 1–15–73, 2–6–73, 2–26–73, 3–27–73, 4–3–73, 4–26–73.
191	Rules and Regulations for Licensing and Certification of Merchant Marine Personnel (6–1–72). F.R. 12–21–72, 3–2–73, 3–5–73, 5–8–73, 5–11–73, 5–24–73.
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257	Rules and Regulations for Cargo and Miscellaneous Vessels (8–1–69). F.R. 10–29–69, 2–25–70, 4–22–70, 4–30–70, 6–17–70, 10–31–70, 12–30–70, 9–30–71, 3–9–72, 7–18–72, 10–4–72, 10–14–72, 12–21–72.
258	Rules and Regulations for Uninspected Vessels (5–1–70). F.R. 1–8–73, 3–28–73.
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323	Rules and Regulations for Small Passenger Vessels (Under 100 Gross Tons) (12–1–71). F.R. 3–8–72, 3–25–72, 6–24–72, 7–18–72, 9–13–72, 12–8–72, 12–21–72, 1–8–73, 3–5–73.
329	Fire Fighting Manual for Tank Vessels (7–1–68).
439	Bridge-to-Bridge Radiotelephone Communications (12–1–72).

CHANGES PUBLISHED DURING APRIL AND MAY 1973

The following have been modified by Federal Registers:

CG–190, Federal Registers of April 3 and 26, 1973.

CG–256, Federal Register of April 10, 1973.

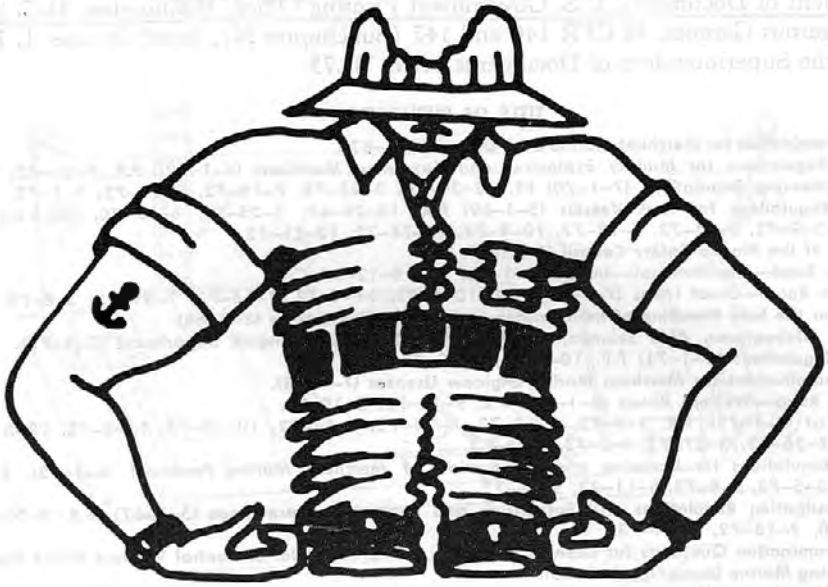
CG–200, Federal Register of April 24, 1973.

CG–115, Federal Register of May 1, 1973.

CG–172, and 184, Federal Register of May 8, 1973.

GC–176, Federal Register of May 10, 1973.

CG–191, Federal Registers of May 8, 11, and 24.



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Jon L. MacCartney USCG 7100
Master