

PROCEEDINGS

OF THE MERCHANT MARINE COUNCIL

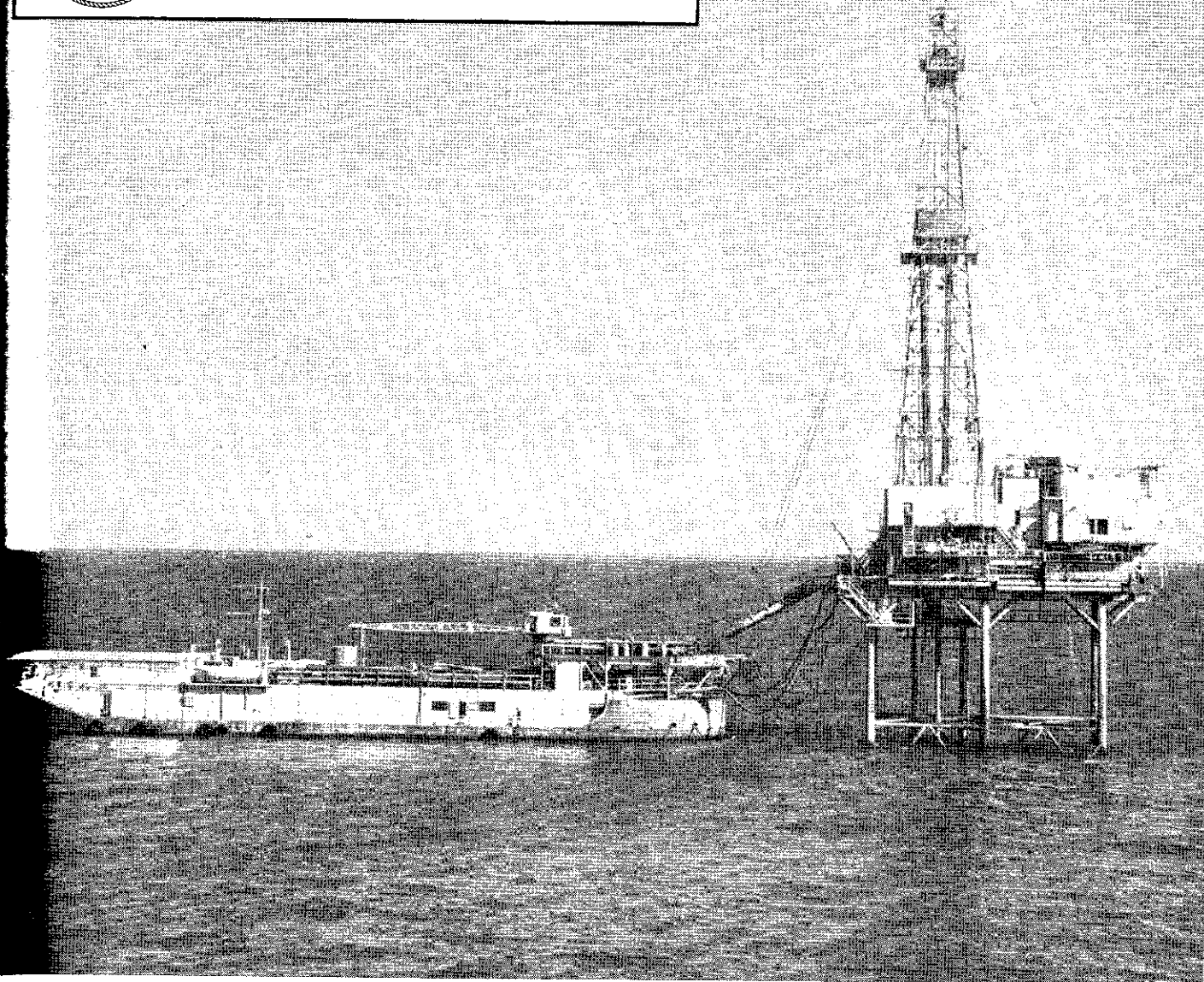


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Features

STEEL ISLANDS IN THE GULF

A CHARTED COURSE FOR MARITIME SAFETY

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OF THE MERCHANT MARINE COUNCIL

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The Merchant Marine Council of
The United States Coast Guard

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FRONT COVER

Off-shore drilling operation in the Gulf of Mexico. Photograph
courtesy Gulf Oil Corp.

BACK COVER

Proposed platform to replace Buzzard's Bay Lightship.

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AMVER

CREW OF MARINE MERCHANT RESCUED

The 6500-ton freighter *Marine Merchant*, nearing the end of her passage from the Gulf of Mexico to Portland, Maine, was about 40 miles southeast of Portland Lightship. The weather was bad, with gale winds and a heavy sea running. Just before midnight on the 13th of April the freighter suddenly split nearly in two without any warning. An emergency radio call for help was sent out, and the Coast Guard's SAR Center was immediately notified.

AMVER NOTIFIED

The tanker *Esso Raleigh*, waiting outside Boston Harbor for a pilot, asked if her assistance was needed. The AMVER Center in New York was contacted and a "surface picture" of marine traffic in the distressed vessel's vicinity showed the tanker *Esso Raleigh* slightly to the south of the *Marine Merchant*. Additionally, the freighter *Daru* was in the vicinity of the Portland Lightship, and two other vessels—the SS *Mirjak* and the SS *Gypsum Queen*—were found to be approximately 80 miles to the south and east of the *Merchant's* location.

RESCUE ACTIVITIES COORDINATED

The *Esso Raleigh* was notified of the situation and she promptly proceeded to the assistance of the *Marine Merchant*. The M/V *Daru*, being aware of the distress, also proceeded. The Boston SAR Coordinator directed the Coast Guard Cutters *Acushnet*,

Cactus, and *Laurel* to the scene, as well as aircraft from the Coast Guard Air Station at Salem, Mass.

SUCCESSFUL RESCUE EFFECTED

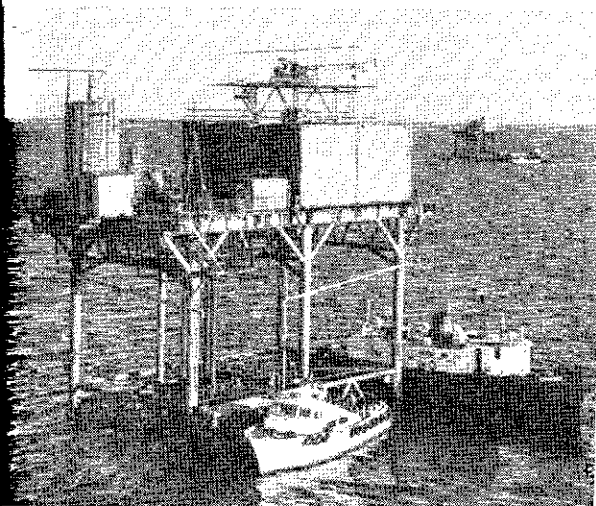
Early in the morning of the 14th the *Marine Merchant's* crew was forced to take to the lifeboats. The *Raleigh* and the *Daru*, arriving on the scene shortly thereafter, quickly located the lifeboats and maneuvered into the position for rescue. The *Esso Raleigh* picked up 26 members of the crew and the M/V *Daru* rescued 9. The Coast Guard units were recalled except for the Cutter *Acushnet*, which stood by the broken hulk of the *Marine Merchant* until, about 3 hours later, the vessel sank. No lives were lost and no one was injured. This is indeed a tribute to the prompt and well-executed rescue efforts of the *Raleigh* and *Daru*. Incidentally, these ships are regular participants in the AMVER system.

IMPORTANCE OF AMVER

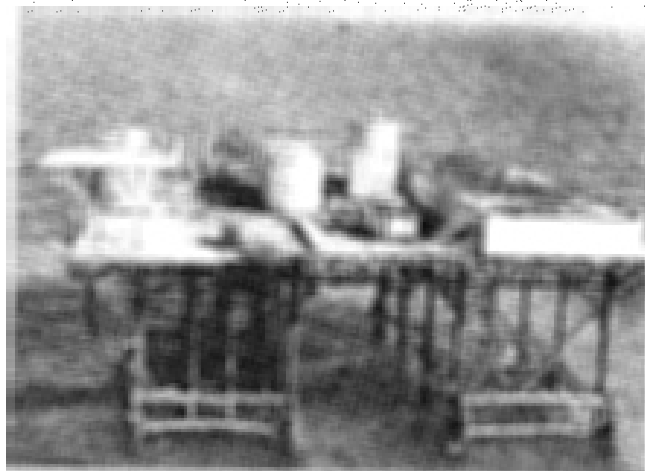
Once again the great importance of having the AMVER system in operation has been demonstrated. Continuous improvement in efficient coordination of rescue efforts is a prime objective of the AMVER system, so that when assistance is readily available, vessels farther away from the distress scene may be quickly informed of the situation and thus continue their voyage without unnecessary delay, if their help is not required.

STEEL ISLANDS IN THE GULF

By LTJG K. F. Franke, USCG



PERSONNEL transportation to the rigs: crewboats and helicopters.



Photographs courtesy of Gulf Oil Corp.
AN unmanned storage platform.

THE LAST decade various oil corporations armed with geologists, geophysicists, and petroleum technicians have explored, drilled and "brought in" hundreds of wells in the waters of the Gulf of Mexico. As these drill-sites are often located as far as 50 miles offshore, huge steel platforms constructed for use over the well heads to support the drilling equipment and oil handling machinery.

The Coast Guard is interested in these structures for two primary reasons: First, being located in navigable waters, the oil rigs must be equipped with navigational aids to warn passing vessels of their presence, and second, as thousands of men work on them throughout the Gulf area, personnel safety and the hazards of such structures must be recognized and controlled.

The 8th Coast Guard District has set up a program of inspection for offshore installations to promote safety of life and navigation. Regulations for these rigs are contained in CG-320, "Rules and Regulations for Artificial Islands and Fixed Structures on the Outer Continental Shelf." The provisions were established under the Authority of the Outer Continental Shelf Lands Act (43 USC 1331) in order to promote a minimum standard for offshore platform installations. Within CG-320 may be found requirements with regard to manned and unmanned platforms for living appliances, firefighting and emergency equipment, and navigational aids.

To get some idea of what a Marine Inspector does when visiting a rig, let's discuss a typical trip, beginning at Leeville, La. Here are found field offices for several of the oil industry corporations with Gulf platform operations. We have previously made arrangements for the inspection trip and are met on arrival by a petroleum company representative. Our objective is to visit rig GU-SS-154D. This designation identifies Gulf Oil Corporation Ships Shoal Rig "D" on oil lease Block 154. This platform is located about 55 miles from Leeville and some 30 miles offshore. The inspection party leaves Leeville by way of helicopter and is soon over the Gulf on a SW heading. Below may be seen dozens of platforms ranging from small 10 feet x 10 feet "one well" rigs to a huge mile long structure just off Grand Isle, La. The water below is teeming with activity as oil barges, seagoing derricks, crewboats and tugs move from rig to rig. Also several other "choppers" are seen darting about transferring personnel and supplies.

Our helicopter lands on GU-SS-154D on a special copter deck on the main platform. This rig is designated by the Coast Guard as a fixed, manned platform. This means that regulations for a fixed structure, continuously occupied by oilmen, would apply.

In company with the field representative and the man in charge of the rig, the Inspector checks all life-saving, firefighting and emergency

equipment on the rig, as well as means of escape and emergency station assignments for the men manning the structure.

Firefighting gear and means of escape from the rig are of primary importance. The oilmen are continuously working with pressures exceeding 10,000 psi and in situations where a well might "blow off" several million cubic feet of highly inflammable gas in a matter of seconds. As an added safety feature the industry has provided a remote-operated "shut-in" device which, when actuated, will close off the well piping should an emergency arise.

Boat landings are examined for accessibility, illumination, and personnel guard railings, as well as ladders to and from the rigs' various levels. In addition GU-SS-154-D, being a Class "A" structure, is required to have a fog horn audible for 2 miles and navigation lights on each corner showing a flashing white light visible for 5 miles.

When the inspection of the platform and equipment within the scope of Coast Guard regulation is completed, the petroleum company official will generally request recommendations for the elimination of any hazards which the Inspector has noted. This request for safety recommendations is not at all uncommon in the Gulf area oil industry. These people are extremely safety conscious and,

Continued on page 141

A CHARTED COURSE FOR MARITIME SAFETY

By Paul A. Reyff
U.S. Department of Labor

THE MARITIME SAFETY Service Program of the U.S. Department of Labor has now been in operation for about a year. Authorized by Public Law 85-742 in August 1958, the Department developed regulations known officially as the "Safety and Health Regulations for Longshoring and Ship Repair." These new regulations operate in a complex area of interacting jurisdictions and responsibilities. In any given case, as many agencies and organizations as the Department of Labor, the Coast Guard, the State Department, the government of a foreign nation, a longshoremen's union, a stevedoring firm, a shipowner, and a private certificating authority may simultaneously be involved. It is to the credit of all such responsible bodies that after a busy initial period of operation the safety program has proceeded unwaveringly on a well-charted course.

PURPOSE

The purpose of this article is to outline that course; to explain the *modus operandi* of the Department of Labor in promulgating and administering its regulations; and to delineate the complementary authorities of the various agencies involved.

The Department of Labor has been interested in maritime safety in an official capacity since 1950, when the Bureau of Employees' Compensation Commission was transferred into the Department. Under Section 41 of the Longshoremen's and Harbor Workers' Compensation Act, the Commission and later the Secretary of Labor, assisted employers of longshoremen and ship repairmen by inspecting operations, investigating accidents, recommending safe practices. The voluntary adoption of safety codes was also urged by the Department of Labor. Even though limited to the part-time activities of one or two men on each coast, Department of Labor personnel were able to establish safety training programs for management and labor in a significant number of ports.

INJURY-FREQUENCY RATES

The nationwide injury-frequency rates in ship repairing and especially longshoring continued at an extremely high level in comparison with other industries. It became imperative to grant regulatory authority to the government to enforce safety measures. This was accomplished in an Act of the 85th Congress, Public Law 85-742 referred to above, which amended



SECTION 9.53(a)(6) of the Safety & Health Regulations for Longshoring prohibits the use of temporary seats for winch drivers which create a hazard to the winchmen. This photo shows a broken, teetering board being used as a seat by a winchman who must straddle the hatch coaming to enjoy this "comfort."

section 41 of the Compensation Act so as to "provide a system of safety rules, regulations, and safety inspection and training" for the employments covered under the original act. The key section of this amendment was the statement that every employer under the act is required to maintain a safe working place and to follow the regulations of the Secretary of Labor concerning what he deems "reasonably necessary to protect the life, health, and safety" of his employees. A system of reporting and inspection was also authorized, and the authority of the District Courts was placed behind the regulations of the Department.

SEPARATE AGENCIES INVOLVED

With this clear mandate, the Department of Labor nevertheless had to recognize the complexities of tradition and authority in the maritime field. Unlike many foreign countries

in which a single government agency has control over foreign vessels arriving in their ports, over the stevedores, over the employees, and over the piers on which they work, the United States has conferred these authorities to separate agencies and in some cases has not conferred them at all. In the United States, the Coast Guard has authority over U.S. vessels; and all vessels, domestic and foreign, carrying explosives or other dangerous articles on board. (The amendment to section 41 specifically states that the Secretary of Labor shall not regulate matters within the scope of Title 52, U.S.C.) Furthermore, control over the docks rests with individual States, except insofar as port security regulations of the Coast Guard apply both to the vessel and the docks. The Department of Labor's jurisdiction in stevedoring applies only to the employer of long-

foremen in connection with the operations on the vessel. These varying lines of authority were carefully considered by the Department in drawing up regulations to provide safe working places for these maritime employees.¹

In the second place, the Department recognized the international, national, and industrial standards already in use. Safety standards could not be set so high as to be out of line with generally accepted practices, nor could they involve the design and construction of vessels.

INTERNATIONAL STANDARDS

In the field of dock workers, there were fortunately available certain internationally acceptable standards. These were embodied in the 1932 International Labor Organization Convention for Safety in Dock Work, which was particularly concerned with standards for the testing of cargo gear. The ILO Code of Practice, Safety and Health in Dock Work, published in 1958, has been generally accepted by the major maritime nations of the world, even though it is in the form of recommendations rather than a ratified convention. In addition to gear testing, these recommendations cover many phases of stevedoring practices and conditions and a standardized form for gear certification. All these were carefully considered by the Department in drawing up its own standards in its own jurisdiction, taking into consideration also the Coast Guard's recognition of several independent cargo certification organizations.

REGULATIONS DRAFTED

With these existing authorities and precedents in mind, the first step in developing regulations "reasonably necessary to protect the life, health, and safety" of employees covered under the Act was to prepare preliminary drafts of regulations in the most important areas of the Department's jurisdiction. Two urgent problem areas were selected because of the large percentage of workers involved in the past record of injuries: Long-

shoring and ship repairing. All available codes and standards pertinent to these industries were studied in preparing the drafts. These were then circulated to employers, unions, trade associations, the U.S. Coast Guard, the U.S. Navy, and the Maritime Administration for informal comments. After a study of these comments, a second draft was prepared as the basis of public hearings. Liaison was continuously maintained with the Coast Guard to avoid any possible conflict or overlapping of jurisdictions. In the end, more than a thousand pages of transcript and exhibits were reviewed before the final draft of the regulations was prepared. The regulations thus received the benefit of extensive criticism and comment from every possible affected party.

The regulations pertaining to ship repairing became Part 8 of Subtitle A of Title 29, Code of Federal Regulations, and those pertaining to longshoring became Part 9.

The topics covered under ship repairing are as follows:

Explosive and Dangerous Atmospheres
Surface Preparation and Preservation
Welding, Cutting, and Heating
Scaffolds, Ladders, and other working surfaces
General Working Conditions
Gear and Equipment for Rigging and Materials Handling
Tools and Related Equipment
Personal Protective Equipment

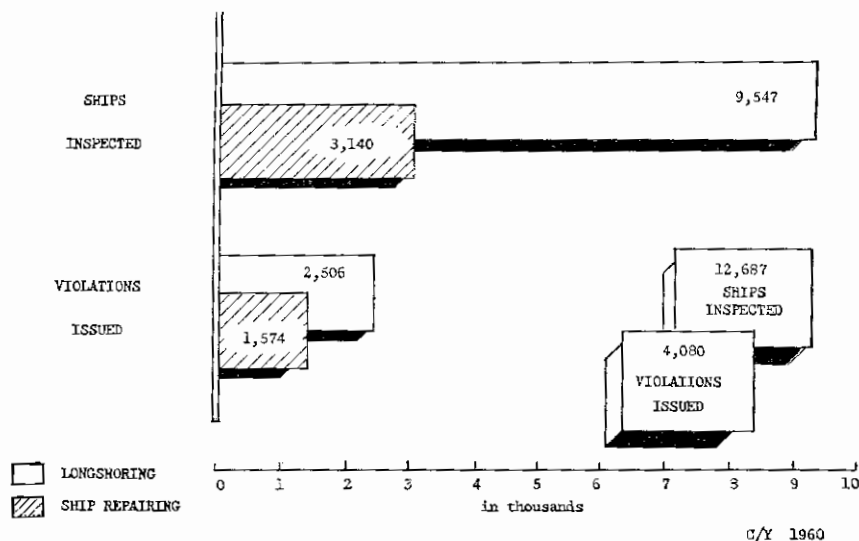
COOPERATION STRESSED

From the very nature of ship repairing, in which conditions are largely under the control of the employer, there has been no visible source of conflict with international regulations. Where the Coast Guard has standards already established, such as for the gas-freeing of vessels before hot work, the Department of Labor has adopted those standards. New coatings and cargoes may make future changes to these standards desirable. For this reason, the Coast Guard and the Department are working closely together to avoid inconsistencies in the application of similar regulations in their separate jurisdictions.

EXAMPLE

As an example of the procedure followed in each case, consider an item of personal protective equipment—life saving equipment. The regulation, 8.84, requires that buoyant working vests be worn when working over or near water. The Department of Labor stipulates that these be "U.S. Coast Guard approved." In conference with ship repairing firms, the Department supported the Coast Guard standards for buoyancy and construction. This was a typical case of the interaction and cooperation between the Coast Guard and the Department of Labor, each holding to the authority of its own field and making the most of the specialization of the other.

MARITIME SAFETY VIOLATIONS & INSPECTIONS FOR 1960



THE ABOVE GRAPH shows the number of inspections and violations recorded in the stevedoring and ship repairing fields for the calendar year 1960. This work is accomplished through the safety consultants at the U.S. Department of Labor under the authority of Public Law 85-742.

¹ Federal maritime jurisdiction extends to navigable waters including drydocks, whether influenced by tide or not (Cf. The *U.S. v. Fraser*, 8 Wall 15). In the case of Longshoremen's and Harbor Workers' Compensation Act, and the Safety and Health Regulations promulgated under Public Law 85-742, this jurisdiction applies to seafarers engaged in work on the navigable waters of the United States, if the employer is an employer who is engaged in maritime employment, in whole or in part, on navigable waters of the United States. *Penn. R.R. Co. v. O'Rourke*, 344 U.S.

Under longshoring, the topics covered are:

- Gangways and gear certification
- Means of Access
- Working surfaces
- Opening and Closing Hatches
- Ship's Cargo Handling Gear
- Cargo Handling Gear and Equipment other than ship's gear
- Handling Cargo
- General Working Conditions
- Personal Protective Equipment

STEVEDORING AREA IS COMPLEX

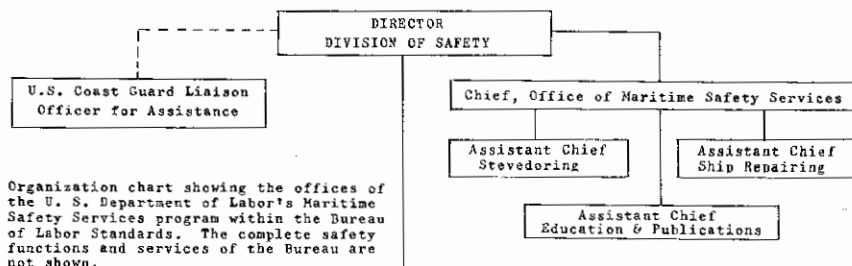
It is in the stevedoring field that the greatest source of possible conflict between national and international regulations can occur. Stevedoring aboard ship involves work in an environment and with equipment provided for the most part, not by the employer of the longshoremen, but by the customer of the employer, the ship.

A foreign flag vessel must meet gear certification requirements before the stevedore can use the ship's gear. The Department recognizes gear certification of organizations accredited by foreign governments in line with the accepted procedure of ILO 32. The



ABOUT THE AUTHOR

PAUL A. REYFF has written extensively in the field of the maritime industry. He is a former licensed officer in the U.S. Merchant Marine and he served 3 years as a commissioned officer in the U.S. Navy. Mr. Reyff is presently a consultant with the U.S. Department of Labor in Washington, D.C. As Assistant Chief, Office of Maritime Safety Services in the Bureau of Labor Standards, he heads the education and publications program for stevedoring and ship repairing. Mr. Reyff was formerly head of the radar training branch, Maritime Administration, U.S. Department of Commerce in San Francisco. He graduated from the California Maritime Academy in 1952. As a consultant on maritime matters, he has been employed on the staff of the Civil & Industrial Research Corporation in San Francisco. Mr. Reyff recently completed a study on the legal consequences of the proposed new Rules of the Road; and he is the author of "A Study of Civil Defense".



NORTH ATLANTIC AREA	SOUTH ATLANTIC AREA	GREAT LAKES AREA	GULF AREA	PACIFIC AREA
*New York Boston Philadelphia	*Baltimore Savannah Jacksonville Norfolk	*Chicago Cleveland	*New Orleans Houston Galveston Mobile	*San Francisco Long Beach Seattle Portland

* Area Headquarter's Office

Department has therefore made a study of the various forms of acceptable certificates, and distributed this information to stevedores through its field offices. United States vessels holding valid certificates of inspection issued by the U.S. Coast Guard are deemed to meet these requirements.

Both the Coast Guard and the Department of Labor recognize the general acceptability of ILO 32 standards for cargo gear. An amendment to the Longshoring Regulations was filed on October 7, 1960 to require that the issuing of certificates to non U.S.C.G. inspected vessels be done only by those acceptable to the national authority in each foreign country and to the Bureau of Labor Standards of the Department of Labor, in the United States. Standards of acceptability for U.S. certificating agencies have been drafted by the Department for consideration and comment by the industry.

SAFETY IN CARGO HANDLING STRESSED

The safety drive in cargo handling gear has been a critical test case of the approach of the Department of Labor. The Bureau of Labor Standards allowed a half-year period in which foreign-flag vessels could bring their gear certification into compliance with ILO 32 standards. In spite of this lenient time period, the first few months of enforcement resulted in delays of more than 150 ships because of failure to meet the announced standards, namely, to be certificated according to ILO 32. Gradually, the number of violations dwindled from as many as 10 a week to 2 or 3. Although injury rates have not yet reflected the positive action taken in this one field, the industrywide acknowledgment of a single standard is in itself a notable achievement which

is bound to show better results each year.

The keynote of this campaign, as with the entire maritime safety effort, has been cooperation. Though this word is much overworked, nothing else can describe the willingness of all parties to "give and take" for the benefit of maritime safety as a whole. In the first place, the Coast Guard freely gave of its experience and ability in helping to establish gear standards. Then, stevedoring firms carefully observed the regulations by refusing to work ships without the required gear certificates. Longshoremen and their unions joined in this drive conscientiously—avoiding misuse of their new "privileges." The State Department acted as the contact with the governments of foreign countries to notify the appropriate authorities of violations and to speed the inspection and certification process.

APPROACH REASONABLE

The Department of Labor has tried to take a reasonable approach to the administration of these regulations so as not to work a hardship on ship operators, stevedores, or workers. Although the Bureau of Labor Standards feels that accrediting of testing organizations must be under strict Federal control in this field, temporary approvals to such firms have been granted pending development of formal regulations to avoid excessive work stoppages. The Department has accepted certifications granted by foreign nations where these have been essentially in conformance with the International standards.

A recent development by the Department is a plan whereby the employer of longshoremen can determine

The status of cargo gear certificates on foreign vessels. The plan calls for a voluntary statement by the ship's officers indicating the latest gear certificates and register notations, or their equivalent, which are aboard. If this statement indicates that the provisions of section 9.12(a) of the Safety and Health Regulations for Longshoring are met the employer will be presumed to be in compliance with this section and may use the ship's gear without checking the actual certificates themselves. The register and certificates shall, however, be available for inspection by the Bureau of Labor Standards or other authorized individuals.

MANY AREAS INVOLVED

Thus far, the maritime safety program has become involved in at least a dozen specific areas of longshoring and ship repair. In addition to gear certification, the following technical and operational problems have been dealt with or are under study in some detail: Gas-free certification, first aid facilities, life vests, sand blasting and blasting, mechanically powered vehicles, guard-rail heights, guarding and grounding of temporary lights, marine railway jurisdiction, shore steam supply vessels, materials and backrails on scaffolds. In each of these fields, it has been the intention of the Department to proceed similarly to the approach to gear certification. Wherever applicable, the standards of the American Standards Association have been or will be referred to; and the democratic procedure of the ASA in eliciting suggestions and proposals from all quarters will be used, as it was used for the basic codes of the cargo gear safety regulations.

NEW AMENDMENTS PROPOSED

On the immediate agenda of the Department are such problems as dredging, harbor construction and development, conversion and ship building and ship breaking. At the present time, several new amendments to the Safety and Health Regulations have already been circulated for consideration by the industry. Among the proposals for changes in regulations affecting ship repairing and longshoring are requirements for the accreditation of persons or firms to certify cargo gear, as mentioned above, and an amendment concerning mechanically powered vehicles aboard ship. The Department will shortly enter a new field of maritime safety—in addition to longshoring and ship repair—namely, ship breaking (disposing of old ships for scrap), and a

new set of Safety and Health Regulations are being considered for early adoption in this area. A second draft of these amendments and new regulations is being prepared as the basis for public hearings, to be held in the future.

FIELD OFFICES ESTABLISHED

All this activity has naturally demanded major organizational changes within the Department of Labor itself. Field offices were established in 17 ports to help promote the safety program with labor and management, and to administer the regulations in their areas. In setting up these offices, consideration was given to the volume of traffic and repair work, the injury rate of the port (more than 1 percent of the national total), and the ability of staff consultants to reach any part of their territory within 24 hours. An important function of these offices has been the reporting and correcting of hazardous situations and accidents. The practical advice and experience gained in these activities has been valuable for the entire system.

ACCIDENT STATISTICS REQUIRED

Statistics on accidents resulting in death or disabling injury are required to be reported to the Bureau of Labor Statistics for analysis. Thus far, the statistics have only served to indicate the enormous problem of safety in longshoring and ship repair, together with the wide variations from port to port and coast to coast. For example, the Houston and Galveston areas have shown injury-frequency rates four and five times higher than the rest of the Nation in longshoring, while Portland, Oreg., reported a ship repair injury rate more than 15 times higher than Baltimore's.

The reporting of injuries and compiling of statistics have always been emphasized by the Department, though often ignored by many firms. It is now required on a quarterly and annual basis for employments under the act. Accident reports are not intended primarily to direct the course of further regulations or restrictions. A certain minimum of regulations are necessary, but safety cannot be entirely a matter of regulation. At some point, training, self-discipline, and alertness must take over. Accident reports and statistics indicate the direction that training and the other phases of the program must take.

The Department of Labor, by adopting regulations and by providing safety training, thus provides a necessary element in the comprehensive maritime safety program.

LAW AND YET NOT LAW

Editor's Note.—The following article from a recent issue of *Fairplay* magazine shows the increasing tendency of European courts to be guided by the important amendments contained in Solas 1960 with regard to the use of radar when navigating at sea in restricted visibility, although as the article points out, the provisions of the Solas 1960 collision regulations and the Radar Annex have not yet become "law."

Both the British Ministry of Transport and the U.S. Coast Guard have announced revisions to their deck officer license examinations to reflect the Solas 1960 recommendations. (The Coast Guard announcement was contained in Navigation and Vessel Inspection Circular No. 3-61, which was reprinted in the June issue of the *PROCEEDINGS*.)

Shortly after the conclusion of the 1960 Safety Conference, which revised not only the 1948 Safety Convention itself but also the Collision Regulations, we expressed the view that it would be prudent for navigators to adopt at once the important amendments to the latter regarding radar and to follow the advice on the use of the information it affords given in the annex to the rules. We felt that it would not be long before the courts would begin to treat these as being "the ordinary practice of seamen." A report of a recent collision inquiry by the Hamburg Marine Court fortifies our view. The collision was in the North Sea between the German tanker *Caperata* (18,233 tons gross) and the Finnish steamer *Rigel* (1,664 tons gross). The *Caperata's* master was found to blame as having acted in gross contradiction to the internationally recognized principles of navigation in fog after radar observation. The Court held that he should have taken early and energetic action to avoid getting close to a vessel shown by his radar to be ahead; failing that, and if shortening of the distance between the vessels could not be prevented, his ship should have been stopped in good time and maneuvered carefully until danger of collision had passed. It was felt he should have reduced speed when the other ship was observed on the 4-mile range scale. It is clearly more than a coincidence that an addition to Rule 16 of the Collision Regulations reads as follows: "A power-driven vessel which detects the presence of another vessel forward of her beam before hearing her fog signal or sighting her visually may take early and substantial action to avoid a close quarters situation but, if this cannot be avoided, she shall, so far as the circumstances of the case admit, stop her engines in proper time to avoid collision and then navigate with caution until danger of collision is over."

WHAT IMCO IS, AND OUR PART IN IT

IN THE PAST, industries and occupations grew up and existed on a completely local basis. In some cases national rules or customs were established, but it was not until recent years that any great amount of international control has been exerted. One notable exception to this is the maritime industry. By its very nature, it has always crossed borders, and has had to learn to live with the other fellow.

International maritime agreements were first motivated by the protection of the owner's equity and the state's interest in taxation. Later, much later, the thought of safety of crew and passengers was introduced. International Conferences for Safety of Life at Sea were held in 1914, 1929, 1948, and the latest one was in 1960.

INITIAL STANDARDS WERE MINIMUM

The earlier Safety of Life at Sea Conferences were successful in providing certain minimum standards of safety, but lacked a method of keeping them up to date. In each case, after a few years, it would be realized that they were living with antiquated or insufficient rules, and a new conference would finally be called. It became obvious that there must be an established method of considering new ideas and keeping the rules current. In 1948 a separate international conference was held in Geneva to set up machinery for this purpose.

IMCO ESTABLISHED

The outcome of the Geneva Conference was the establishment of the Intergovernmental Maritime Consultative Organization or, as it is better known, IMCO. Although the conference was held in 1948, it was not until 1958 that sufficient countries ratified the conference to bring it into being. At present, 46 nations are members of IMCO.

OBJECTIVE

The prime aims of IMCO are as follows:

a. The first objective is to facilitate cooperation among governments in technical matters of all kinds affecting shipping. Its aim is to achieve the highest practicable standards of maritime safety and efficient navigation. It has a special responsibility for the safety of life at sea. It will also provide for the wide exchange of information between nations on all technical maritime subjects.

b. Another purpose is to discourage discriminatory, unfair, and restrictive practices affecting ships in international trade, so as to promote

the freest possible availability of shipping services to meet the needs of the world for overseas transport.

c. It also advises other international bodies on shipping matters, including agencies of the United Nations, and will coordinate its activities with other United Nations agencies.

ORGANIZATION

IMCO is composed of four bodies:

a. The ASSEMBLY, consisting of delegates from all member States, which meets every second year. It elects the members to be represented on the IMCO Council and the Maritime Safety Committee, chooses the Secretary General, approves financial and staff regulations, determines the policies of the agency, decides upon the work program, and votes the budget to which all member States contribute on an agreed scale of assessment.

b. The COUNCIL, consisting of 16 members, generally meets at least once a year. Between sessions of the Assembly it performs all the functions of the Organization. It supervises the work program, and prepares the budget for consideration by the Assembly. The members of the Council are chosen every second year to represent nations which have a major interest in providing international shipping services and those with the largest interest in international sea-borne trade.

c. The MARITIME SAFETY COMMITTEE is the third important body within the Organization. It consists of 14 members, elected from the countries having an important interest in maritime safety of which not less than 8 must be the largest ship-owning nations. Members are elected for a term of 4 years. It has the duty of considering any matter within the scope of the Organization. It is concerned with aids to navigation, construction and equipment of ships, manning from a safety standpoint, rules for the prevention of collisions, handling of dangerous cargoes, maritime safety procedures and requirements, hydrographic information, log books and navigational records, marine casualty investigation, salvage and rescue, and any other matters directly affecting maritime safety. It also provides machinery for dealing with kindred matters which may be referred to it, and for maintaining close relationship with other intergovernmental bodies concerned with transport and communications.

d. The SECRETARIAT serving the Organization is composed of a

small number of international civil servants. It works in London, and is responsible for the running of the Organization.

Although still in its infancy, IMCO has already taken on some important projects. The 1960 International Conference on Safety of Life at Sea was one of its first tasks. Forty-five nations met for one month to draft the new Convention. The Convention is now being studied by the various nations. After it has been officially ratified by a sufficient number of nations it will replace the 1948 Convention which is presently in effect.

ADDITIONAL PROJECTS

Another project that has been undertaken by IMCO is to make a study of tonnage measurement. For years tonnage measurement had been a subject which everyone had grumbled about, but nothing constructive was ever done about it. Now a group of experts under the direction of the Maritime Safety Committee has already completed some preliminary studies. It is hoped that this group of experts will develop a system of tonnage measurement which will be simpler than the present systems, will be more equitable to all parties concerned, and at the same time will not penalize safety in ship design.

Other projects that are being undertaken by IMCO are:

a. Revision of the International Code of Signals.

b. Subdivision and Stability studies for passenger and cargo vessels, and including fishing vessels.

c. The Carriage of Dangerous Goods.

d. Coordination of Safety at Sea and in the Air.

e. Preparation for an International Conference on Pollution of the Sea by Oil.

As time goes on, more and more subjects will be studied by IMCO all aiming at a better, safer maritime industry.

In addition to being a member of the IMCO Assembly, the United States is also a member of the Council and the Maritime Safety Committee. This means that we are represented at all IMCO Meetings.

U.S. ROLE IN IMCO

Of great interest to us all is the role of the United States in IMCO. What does it do, and how does it do it? Another interesting question would be—who makes the decisions for the United States?

Inasmuch as IMCO is an international body, all U.S. contact is through

the Department of State. The Department of State refers IMCO matters to its Shipping Division which acts as the coordinating group. To be assured that any action taken is in the best interest of all concerned in the United States, the Shipping Coordinating Committee was created. The membership of this committee includes all Government organizations having an interest in shipping matters. Various industry groups are represented as advisers to the committee.

SOLAS SUBCOMMITTEE ESTABLISHED

To simplify procedures and expedite answers, standing subcommittees or working groups have been established. One working group under the Bureau of Customs is studying Tonnage Measurement, and a group under the Maritime Administration handles Economic Measures. One other such group is the SOLAS Subcommittee under the direction of the Commandant of the Coast Guard as Chairman. This subcommittee handles all technical matters relating to Safety of Life at Sea which stem from or pertain to IMCO. This subcommittee has permanent membership as follows:

Government

Department of State.
Department of Commerce.
Department of the Navy.
Bureau of Customs.
Federal Communications Commission.
United States Coast Guard.

Industry

AFL-CIO.
American Bureau of Shipping.
American Merchant Marine Institute.
American Petroleum Institute.
Committee of American Steamship Lines.
Pacific American Steamship Association.
Pacific American Tankship Association.
Shipbuilder's Council of America.

If a particular problem should be of interest to some Government or industry group not included as a regular member of the subcommittee, that group is invited to participate in studying the problem.

The SOLAS Subcommittee is new. So far there has been only one formal meeting. Accordingly, it is not possible to present a lengthy record of achievements, but rather we can only say what it is hoped will be done and how it is expected to be accomplished. Basically, the subcommittee is a working group. All members have agreed to contribute their time and efforts to produce a rapid accurate appraisal of any problem. In order to operate efficiently, the subcommittee uses as little formality as possible. The proposed working arrangement for the SOLAS Subcommittee is as follows:

a. If a problem or question is referred by the Department of State to IMCO it is immediately referred to the Shipping Division which in turn forwards it to the Shipping Coordinating Committee.

If the matter is a technical one, relating to Safety of Life at Sea, it is automatically referred to the Commandant of the Coast Guard as the Chairman of the SOLAS Subcommittee, without the necessity of a formal meeting of the Shipping Coordinating Committee.

b. Upon receipt of the assignment, the members of the SOLAS Subcommittee are immediately advised of the problem by the Chairman, and a date for the meeting is set. The various members reply indicating if the problem is of direct concern to their group and stating whether or not they desire to be represented at the meeting.

c. A preliminary draft solution to the problem is prepared by the Chairman, possibly with the assistance of one of the other members having prime concern in the matter. This is forwarded to the members to be used as a working document at the forthcoming meeting.

d. At the meeting, the members present discuss the subject and decide upon a final recommended solution which will then be forwarded to the Shipping Coordinating Committee.

Another type of problem handled by the SOLAS Subcommittee will be to make long range studies of technical matters. In these cases working groups of Government and industry experts will be formed to make recommendations to the subcommittee. As an example of such matters, recommendations of the 1960 Safety of Life at Sea Conference call for studies to be made by IMCO relating to Subdivision and Stability and the Carriage of Dangerous Goods. These problems have already been referred by IMCO to the United States and the SOLAS Subcommittee has been asked for recommendations on the matter. Two separate working groups consisting of Government and industry experts are being formed to establish the U.S. position in these matters.

GOVERNMENT AND INDUSTRY COOPERATE

It will be seen from the foregoing that the solution of international problems is considered to be of prime importance by the United States. A great deal of time and money is being spent by both Government and industry to cooperate in making the U.S. position in such matters a strong one, and one which will give the greatest benefit to all and be instrumental in maintaining a safe, efficient Merchant Marine.



STEEL ISLAND

Continued from page 135

normally, far exceed Coast Guard regulations for minimum safety requirements, an example of which is a very elaborate but quite functional search and rescue program set up on an inter-company basis throughout the Gulf. This program features a continuous SAR system with small craft, tugs, mobile firefighting apparatus, medical aid, helicopters and conventional aircraft available on a 24-hour basis should the need arise.

There have been serious casualties in this new marine field of endeavor. However the personnel of the oil industry and the Coast Guard by working together for the promotion of safety, minimize the hazards involved. An example of the excellent spirit of cooperation that exists among "all hands" is the National Offshore Advisory Panel which was formed in 1960. This panel consists of members of the oil industry who have been selected for their wide experience in offshore oil production activities, and exists for the purpose of advising and making recommendations to the Commandant for the promotion of safety in this industry.



MARITIME SIDELIGHTS

To meet a shortage, the Panama Canal recently began calling for shipmasters to train for the job of pilot. While there is no immediate emergency, the authorized total of 130 pilots has fallen to 110. This situation will be aggravated by the approaching retirement of several senior pilots who are nearing the mandatory retirement age of 62. A pilot must be 25 to 35, have a high school education, and hold a Coast Guard issued license as master of steam or motor vessels. He must have served a year as chief mate of an oceangoing vessel of at least 1,000 gross tons. It takes approximately 18 months of training and probation before the applicant becomes fully qualified to take the big ships through the canal.

✂ ✂ ✂

"Grain is now the undisputed key to the future prosperity of tramp shipping in both the Eastern and Western Hemispheres," according to a report made available by W. G. Weston, Ltd., a concern of British shipping analysts, as published in the *New York Times*.

✂ ✂ ✂

A United Nations maritime agency has approved a United States proposal to start work on a program to simplify ships' documentation.

Maritime specialists estimate dollar savings in the millions for shipping and governments participating in the program.

More than 300 documents relating to shipping, of which 185 are regularly required by this country, were catalogued last year by a Federal study. Efforts have been under way for several years to simplify the paperwork.

✂ ✂ ✂

David A. Wright, President of National Marine Services, Inc., announced recently plans for construction of five combination barges. Each of the proposed barges will have two separate cargo containers for the transportation of different types of liquid cargoes. Present plans call for employment of these barges on the Mississippi River System and the Intracoastal Waterway.

SS DEL ALBA



Capt. Ivan R. Williams (right), master of Delta Line's *SS Del Alba*, receives the shipping company's 1960 safety award plaque on behalf of the ship's crew from Harry X. Kelly, executive committee chairman of Delta Line. The *Del Alba*'s record of no lost time accidents during the year won first place in Delta Line's annual fleet safety program.

The Joint International Labor Organization/World Health Organization Committee on the Health of Seafarers recently concluded its third session which was held in Geneva, and recommended establishment of an international program to provide guaranteed medical advice to ships at sea.

The Committee also felt that general medical examinations are an essential part of any health service for mariners. It was the consensus of the Committee that the examination should be carried out in two parts: Pre-registration examination and pre-entry examination prior to the seaman actually reporting on board the ship for duty. The Committee also emphasized the need for the seaman to be given a detailed report of his medical care when he is discharged from the hospital. It was recommended that whenever possible names of any drugs used should be in conformity with the International Pharmacopia.

The Maritime Administration announced recently that it has relaxed its controls covering sales of privately owned pleasure craft to Canadian citizens. Effective April 12, 1961, the new regulation, covered by amendment No. 1 to General Order No. 58, 3d Revision, grants all of the approvals required by section 37 of the Shipping Act, 1961, as amended, with respect to any undocumented pleasure craft of 65 feet overall length and under, and/or 500 horsepower or less if sold to any citizen of Canada, domiciled in Canada, who imports the craft for registry or license under Canadian law.

Previously, sale of such craft was limited to vessels of less than 40 feet in overall length and less than 50 horsepower, which limitations continue in effect in regard to all other nationals. Permission for sale of American-owned ships does not apply to Communist Bloc countries or to Cuba or their nationals.

✂ ✂ ✂

The Coast Pilots—eight in all—are a series of nautical books published by the U.S. Coast & Geodetic Survey. These books contain a wide variety of information necessary for navigation of U.S. coastal and intracoastal waterways. These books were written only after a thorough field inspection by Survey personnel.

The forerunner of the modern Coast Pilot series was the "American Coast Pilot" which was written by Edmund March Blunt and privately published in 1796. In 1867 Blunt's Coast Pilot was sold to the U.S. Coast Survey.

U.S. Coast Pilot No. 1, Atlantic Coast, Eastport to Cape Cod, sixth edition, is now available to the mariner. This edition has been streamlined and brought up to date.

U.S. Coast Pilot No. 2, Atlantic Coast, Cape Cod to Sandy Hook, sixth edition, has been published and is available to the public.

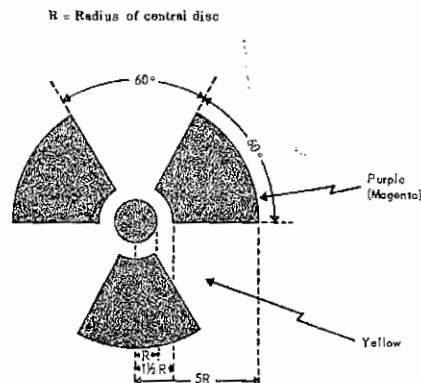
A 1961 edition of small-craft, Chart No. 140, for the benefit of yachtsmen in the Fort Pierce-Miami area has just been issued. This chart contains many modern and up to date features, including a list of tidal ranges, rules of the road, whistle signals, and a revised tide table for the year.

ASA APPROVES SPECIFICATIONS FOR RADIATION SYMBOL

AN AMERICAN STANDARD radiation symbol has recently been approved by the American Standards Association. The new standard, identified as N2.1-1960, contains detailed specifications for design of a symbol indicating the presence of ionizing radiation to "identify objects, devices, materials or combinations of materials which emit ionizing radiation."

This is the first of what will undoubtedly be a comprehensive series of standards covering all aspects of nuclear standardization. Represented on the drafting subcommittee were: U.S. Atomic Energy Commission, National Bureau of Standards, Health Physics Society, and the American Society of Mechanical Engineers. Sponsor of the new symbol is the Atomic Industrial Forum, Inc.

The standard specifies that the symbol shall be designed and proportioned as illustrated in the accompanying figure.



For purpose of the new standard, ionizing radiation includes gamma

and X-rays, alpha and beta particles, high-speed electrons, neutrons, protons, and other nuclear particles; but does not include sound and radio waves, nor visible, infrared, or ultraviolet light. The standard does not specify the radiation levels at which the symbol is to be used.

The four parts of the symbol (the three blades and the center disk) are to be in a reddish purple (magenta) color located in a yellow background. Both colors are similar to those established in ASA Safety Color Code, Z 53.1. Size of the symbol is to be consistent with the size of the equipment or material to which it is attached, provided the proportions shown in the figure are maintained. In any case, it must be possible to read the symbol at a safe distance.

Precautionary information is not to be superimposed on the symbol.

RADAR AND ITS USES

The use of radar, the posting of a lookout, and speed in fog were discussed in a collision case before the United States District Court (1960—*American Maritime Cases*—2392). The case concerned was that of the *Otco New York v. F. A. Verdon*, which vessels were in collision in the New Green Harbour Channel. The master of the *F. A. Verdon* was on watch, with a deckhand at the wheel, and a second mate, who was not officially on watch but was assisting with the radar. The master was navigating the vessel by radar and no lookout was posted in the bow. The other vessel was also equipped with radar, and the evidence showed that the master of this vessel was confused by it; conditions of poor visibility and fog existed.

As regards the *F. A. Verdon*, the court commented that there could be no doubt that this vessel violated the regulations by reason of her failure to have a lookout, and it was not just a question of not having a bow lookout as it seems that no lookout was posted anywhere. The master was conning the vessel and operating the radar, the mate helping out generally, also observing the radar, and the helmsman naturally being fully occupied with the steering of the vessel. The Court commented that none

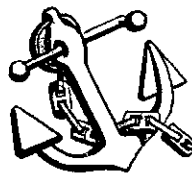
of these were so free of other duties as to qualify as a free and single-minded lookout and, it was pointed out, a lookout should have no other duties as it is not safe to depend on the pilot or others on the bridge who are charged with important duties and responsibilities.

It was submitted that the absence of a lookout was, in the particular circumstances of this case, immaterial because the absence of a lookout was not the cause of the collision, but the Court declined to accept this view, remarking that, if visibility was better from the bridge than from the bow (which could not be proved), that fact might have excused the posting of a lookout on the bow, but in this case there was no lookout on the bridge either, reliance being placed on the radar. The Court drew attention to the fact that in any event visibility was reported by the *F. A. Verdon* as being down to less than 100 feet, whereas the wheelhouse of the vessel was some 160 feet from the bow. The master commented that when there is foggy weather the only thing you can see is the radar but, the Court commented, radar is an aid to, and not a substitution for, prudent seamanship. Moreover, the Court added, the radar was on the one mile

range and there was no time to make successive plots in order to establish courses; also there was no evidence to establish that a visual lookout was useless to avoid collision.

THE FOG FACTOR

As regards the *Otco New York*, it was held that this vessel was guilty of a contributing fault. It seems that she delayed her departure from her berth because of dense fog, but sailed when visibility increased to some 1,000 yards but, as she entered the channel, the fog had closed in again. The master agreed that he could have returned to his berth, and the Court laid stress upon the fact that the master did not attempt at any time to get a weather report. Surely, the Court commented, good seamanship called at least for an attempt to obtain weather information in what was at best an equivocal situation; failure to do so was held to be negligence. Further faults of this vessel consisted, amongst other things, of her speed, which was estimated at some five knots, and it was ruled that, in the prevailing circumstances, such speed did not constitute good navigation. Both vessels were held to blame for the collision.



nautical queries

Q. What are the causes and means of preventing corrosion on the water side of boilers?

A. Corrosion on the water side of boilers may occur in the following ways: by acid attack, by galvanic action, and by oxidation. Combinations of these processes also are possible. The best protection against acid attack and galvanic action is to insure that the boiler water is always maintained between its prescribed limits of alkalinity, usually between pH 10 to 12, taking care not to exceed the upper limit. Oxidation is best controlled by preventing the introduction of air to the feed water and removing the dissolved gases by heating and the use of deaerators. Every precaution should be taken to keep the feed water as pure as possible. The boiler water should be regularly tested and treated chemically to neutralize acid-forming salts and remove traces of oxygen that may escape the deaerator.

Q. Which is the most serious of the common scale-forming salts normally present in feed water? What chemicals are used to prevent the formation of this scale?

A. Calcium sulphate is usually the most serious of the scale-forming salts. Scale is prevented from forming by adding to the water one or more highly soluble chemicals, such as sodium carbonate or the sodium phosphates, which will react with the scale-forming calcium sulphate and form a harmless sludge which may be blown out of the boiler.

Q. Describe a hydraulic constant-speed governor frequently used to control generator turbines.

A. The control mechanism usually consists of a weighed centrifugal governor which mechanically operates a pilot valve controlling the flow of oil to the operating cylinder. The spring-loaded operating cylinder in turn controls the amount of opening or closing of the turbine nozzle valves. The oil pump and governor are mounted on the low-speed gear shaft of the turbine reduction gear. With an increase in turbine speed the governor weights move outward and draw the pilot valve downward; with a reduction in turbine speed the weights move in and push the pilot valve upward. The position of the pilot valve with respect to the pilot-valve bushing determines the flow of oil to the

operating cylinder and therefore, the position of the operating valves that admit steam to the turbine.

Q. What is cavitation? How does the suction head and suction temperature on a centrifugal pump affect cavitation?

A. Cavitation is the formation of vapor pockets about the impeller inlet when the vapor pressure of the fluid is reached. These cavities disturb the flow stream and then collapse as they are carried into regions of higher pressure, producing noise, vibration, and rapid erosion of the surrounding metal surfaces. The lower the suction head and the higher the suction temperature, the greater the occurrence of cavitation.

Q. What are the advantages of the double-suction-type impellers in comparison with single-suction types designed for use in centrifugal pumps?

A. The use of the double-suction-type impeller eliminates hydraulic end thrust and increases the volumetric capacity of a pump with the same throat size as the single-suction impeller.

Q. Outline the correct procedure to secure a turbine installation.

A. (1) Start auxiliary condensate system and transfer auxiliary exhaust and makeup feed to the auxiliary condenser.

(2) Use hand tripping device to shut steam off main turbine, then close throttle and bulkhead stops.

(3) Secure the main air ejector and the main condensate pump.

(4) Shut off gland seal steam and open turbine drains.

(5) Rotate main turbine with turning engine until cool, then secure turning engine and the main lubricating oil pumps.

(6) When main condenser has cooled off secure main circulating pump.

Q. Name three methods of determining the quantity of steam consumed by a turbine.

A. The quantity of steam consumed by the turbine is generally determined by one of the following methods:

(1) By measuring the condensate.

(2) By measuring the feed water.

(3) By a steamflow meter.

The first method—that of weighing the condensate—will, generally, result in greater accuracy than will any of the other methods. Consequently, where practicable, it should be used.

Q. Give reasons for the use of reduction gears with turbines rather than direct drive.

A. In order to preserve the steam speed-blade speed ratio, turbines should operate at high speeds. Propellers are efficient only at low speeds due to churning, eddies, and cavitation. With direct drive, the turbine shaft is joined directly to the propeller shaft through a flexible coupling. The rotor must turn very slowly, making the same revolutions per minute as the propeller. In order that the blade peripheral speed be high enough to preserve a reasonable steam speed-blade speed ratio, the corresponding turbine diameter must be enormous. To accommodate the high speed of the turbine to the low speed of the propeller, mechanical reducing gears are employed. Since direct drive has no outstanding advantage over the geared turbine but does have many disadvantages such as weight, space, and low economy, it has become obsolete.

Q. Why are many small valves used in a pump instead of a few large ones?

A. Small valves have less lift and therefore can open and close quicker and are subjected to less wear from pounding on their seats; there is less friction, and the shorter studs or spindles are less likely to become broken from shocks or unequal distribution of pressure. A number of valves are not likely to be seated at the same time and less shock is thereby imparted to the valve deck than when a large valve comes down on its seat; and small valves are cheaper to construct and repair, and the valve seats are easier to replace than those of larger valves.

Q. Given a 6-inch diameter nut, pitched four threads to the inch, how would you mark the nut so that each graduation would represent 0.010 inch?

A. Since one turn of the nut represents 0.250 inch along the bolt, graduate the nut into 0.250/0.010 or 25 equidistant markings around the top surface of the nut.

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 4-61

May 18, 1961

Subject: Condenser Water Boxes, Examination of

PURPOSE

To call attention to a recent casualty to a water box of main condenser.

DISCUSSION

Upon investigation of a vessel casualty which resulted in the sinking of a T-2 tank ship, it was determined that the outlet water box of the main condenser had ruptured. This rupture resulted in a hole (18" to 24" in diameter) which allowed a stream of water approximately 20" in diameter to flow unrestricted into the engine room (approximately 20,000 GPM). Attempts to close the overboard and sea valves (24" gate valves), which required 10 men to make 40-50 turns on each valve to close, were unsuccessful due to rapid flooding and approximately five minutes after casualty the engine room was abandoned with these valves only partially closed.

RECENTLY EXAMINED

The condenser water boxes had been opened and examined by ship's personnel only 6 weeks before this casualty. Eight months before this casualty they had been painted with apexior. The last biennial inspection on this vessel was made 16 months before the casualty. All of these inspections had noted no defects and their condition was considered good.

SIMILAR CASUALTY

Within a few months of this casualty another vessel, T-2 tank ship was boarded and inspected by a marine inspector on complaint of a defective condenser water box. The main condenser water box was found to be pinholed and had two brass plate patches, plus a 20" x 18" x 6" cement patch attached to it.

BOXES ARE 17 YEARS OLD

Both of these vessels were built 16 to 17 years ago and from available records have not had the water boxes re-

placed since they were commissioned. Considering the age of these installations and the potential danger resulting from such a casualty, it appears essential that the water boxes of all main condensers on vessels be given close examination at frequent intervals by ship's force personnel and Coast Guard marine inspectors.

RECOMMENDED PRACTICE

All condenser heads (water boxes, inlet and outlet) should be thoroughly examined on every occasion when opened for renewal or inspection of zincs or mild-steel plates. Particular attention should be paid to general wastage, localized pinholes, or grooving which may be a potential source of cracking. Any condenser water box with patches or temporary repairs should be scheduled for the earliest possible replacement.

INDUSTRY ACTION

It is recommended that ship operators, shipboard personnel, shipyards, and others concerned make every effort to carry out the recommended practice.

COAST GUARD ACTION

At inspections for certification and also at mid-period reinspections of cargo ships and tank ships, the Coast Guard inspector shall determine whether the water boxes of condensers are in a safe condition by an external examination of these water boxes for patches, temporary repairs, or other obviously poor conditions. In addition, the Coast Guard inspector shall determine from operating personnel the extent of inspections they have made and the conditions they have found. In those cases where conditions warrant, the Coast Guard inspector shall also make an internal examination or other tests of condenser water boxes in order to satisfy himself that they are in good condition or require repairs to be put in good condition.

AMENDMENTS TO REGULATIONS

TITLE 46—SHIPPING

Chapter 1—Coast Guard, Department of the Treasury

CHAPTER O—REGULATIONS APPLICABLE TO CERTAIN VESSELS DURING EMERGENCY
[CGFR 61-19]

PART 154—WAIVERS OF NAVIGATION AND VESSEL INSPECTION LAWS AND REGULATIONS¹

"M. V. Four Winds"

Pursuant to the request of the Assistant Secretary of Defense, Installations and Logistics, in a letter dated April 22, 1961, made under the provisions of section 1 of the act of December 27, 1950 (64 Stat. 1120; 46

¹This is also codified as 33 CFR Part 19.

[EDITOR'S NOTE.—The following regulations have been promulgated or amended since the last issue of the PROCEEDINGS. A complete text of the regulations may be found in the Federal Register indicated at the end of each article. Copies of the Federal Registers containing the material referred to may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.]

U.S.C. note prec. 1), and a delegation of authority from the Secretary of Defense, the navigation and vessel inspection laws are waived to the extent and in the manner described in § 154.75 until July 1, 1962.

(Federal Register Document No. 61-4392 filed May 11, 1961 and printed May 5, 1961.)

TITLE 46—SHIPPING

Chapter 1—Coast Guard, Department of the Treasury

SUBCHAPTER N—EXPLOSIVES OR OTHER DANGEROUS ARTICLES OR SUBSTANCES AND COMBUSTIBLE LIQUIDS ON BOARD VESSELS
[CGFR 61-11]

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

Miscellaneous Amendments Respecting Dangerous Cargoes

Pursuant to the notice of proposed rule making published in the Federal

Register on February 15, 1961 (26 F.R. 1278-1286) and Merchant Marine Council Public Hearing Agenda dated March 27, 1961 (CG-249), the Merchant Marine Council held a Public Hearing on March 27, 1961, for the purpose of receiving comments, views and data. The proposals considered were identified as Items I through XII, inclusive, and Item III contained proposed requirements regarding dangerous cargoes (26 F.R. 1280).

This document is the second of a series covering the regulations and actions considered at the March 27, 1961, Public Hearing and annual session of the Merchant Marine Council. The first document, CGFR 61-10, is a notice of proposed rule making dealing with modified proposals regarding shipboard cargo gear and power-operated industrial trucks considered as Items I and II at the Public Hearing. This document contains the final actions taken with respect to the proposed changes in Item III regarding the transportation or stowage of dangerous cargoes on board vessels (26 F.R. 1280). On the basis of information received changes were made in 46 CFR 146.07-1(a), 146.24-55(a), 146.25-200, and 146.27-30.

SUBCHAPTER P—MANNING OF VESSELS

[CGFR 61-14]

PART 157—MANNING REQUIREMENTS

Minimum Manning Standards for Certain Special Service Vessels and Officers for Uninspected Vessels

Pursuant to the notice of proposed rule making published in the Federal Register on February 15, 1961 (26 F.R. 1278-1286), and Merchant Marine Council Public Hearing Agenda dated March 27, 1961 (CG-249), the Merchant Marine Council held a Public Hearing on March 27, 1961, for the purpose of receiving comments, views and data. The proposals considered were identified as Items I through XII, and Item XI contained proposals regarding manning of vessels (26 F.R. 1286). This document is the fifth of a series covering the regulations and actions considered at this Public Hearing and annual session of the Merchant Marine Council.

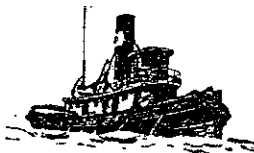
This document contains the actions taken with respect to Item XI dealing with (1) pilot house watch for tank vessels and cargo vessels, (2) minimum manning standards for certain special service vessels, and (3) officers for uninspected vessels. The proposals with respect to minimum man-

ning standards for certain special service vessels are accepted as set forth in the Agenda.

Many comments were received with respect to the proposals regarding the pilot house watch for tank vessels and cargo vessels. It is the master's responsibility to have a proper watch on board a vessel while underway and since the responsibility is fixed by law no detailed regulation is considered necessary. The master's responsibility in this respect includes all aspects of safe navigation of his vessel and the proposal covered only one of many of these responsibilities. An adequate bridge watch is necessary at all times and only one person, however qualified, on the bridge of larger vessels does not meet the requirements of law. The determination of what is adequate does not lend itself to specific statement without qualification as to existing circumstances in each particular case. Therefore, the Commandant accepted the Merchant Marine Council's recommendations to withdraw the proposals regarding the pilot house watch for tank vessels and cargo vessels. In the enforcement of navigation laws the Coast Guard considers the lack of an adequate bridge watch to be prima facie evidence of violation of law.

Many comments were received with respect to the proposal regarding officers for uninspected vessels as required under R.S. 4438a, as amended (46 U.S.C. 224a), and the Officers' Competency Certificates Convention, 1936. The minimum manning standard for uninspected vessels is adequately covered in the law itself. Therefore, the proposal in the Agenda was modified to reflect the interpretation placed thereon by the Coast Guard in its enforcement. No minimum manning standard is required by this interpretation, but if a vessel engages on a voyage of such length and character that the licensed master and licensed engineer manifestly and physically cannot be in charge of the watch continuously, the failure to have on board two licensed deck officers (one a master) and two licensed engineers (one the chief engineer) on the vessel's return shall be considered to be prima facie evidence of a violation of R.S. 4438a, as amended.

By virtue of the authority vested in me as Commandant, United States



Coast Guard by Treasury Department Orders 120, dated July 31, 1950 (15 F.R. 6521), 167-14, dated November 26, 1954 (19 F.R. 8026), CGFR 56-28, dated July 24, 1956 (21 F.R. 5659), to promulgate regulations in accordance with the statutes cited below the following amendments are prescribed and shall be in effect on and after June 1, 1961:

[CGFR 61-13]

SUBCHAPTER T—SMALL PASSENGER VESSELS (NOT MORE THAN 65 FEET IN LENGTH)

MISCELLANEOUS AMENDMENTS TO SUBCHAPTER

Construction, Arrangement, and Machinery Installations

(Federal Register Document No. 61-4076, filed May 4, 1961 and printed May 5, 1961)

EQUIPMENT APPROVED BY THE COMMANDANT

[EDITOR'S NOTE.—Due to space limitations, it is not possible to publish the documents regarding approvals and terminations of approvals of equipment published in the Federal Register dated May 2, 1961 (CGFR 61-7). Copies of these documents may be obtained from the Superintendent of Documents, Washington 25, D.C.]

ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of ships' stores and supplies certificated from 1 May to 31 May 1961, inclusive, for use on board vessels in accordance with the provisions of Part 147 of the regulations governing "Explosives or Other Dangerous Articles on Board Vessels" are as follows:

CERTIFIED

Farrell Chemical Co., 705 Second Ave., Seattle 4, Wash., Certificate No. 189, dated 12 May 1961, FE-4 HYDROCARBON FUEL CATALYST.

AFFIDAVITS

The following affidavits were accepted during the period from 15 April 1961 to 15 May 1961:

Beckett-Harcum Co., 985 W. Locust St., Wilmington, Ohio, VALVES.

Tempera Corp., 4035 N. Interstate Ave., Portland 17, Oreg., VALVES.

Anchor Valve Co., 651 Bryant St., San Francisco 7, Calif., VALVES.

Anchor Coupling Co., Inc., 342 N. Fourth St., Libertyville, Ill., VALVES.

MARINE SAFETY PUBLICATIONS AND PAMPHLETS

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

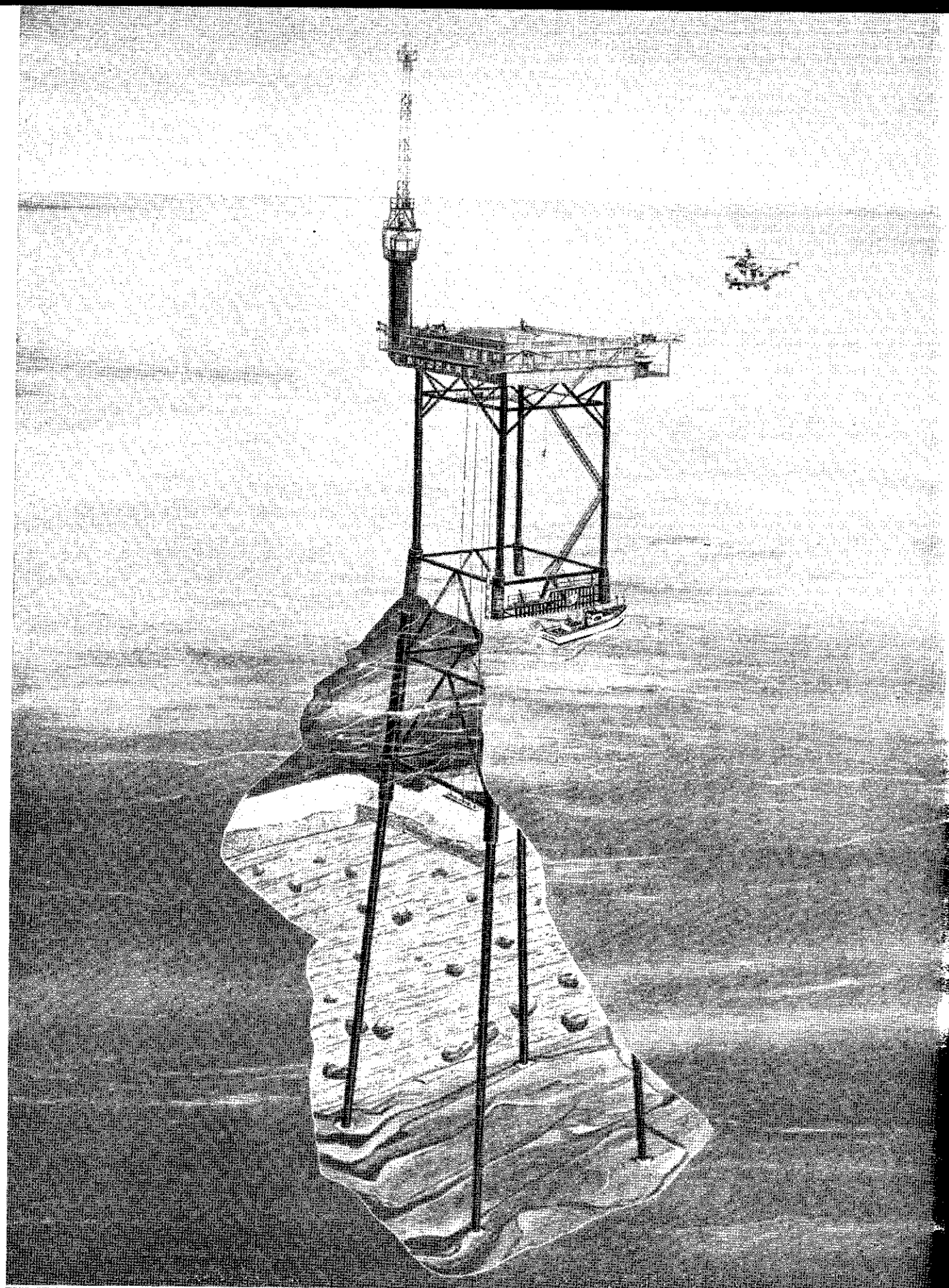
CG No.	TITLE OF PUBLICATION
101	Specimen Examinations for Merchant Marine Deck Officers (7-1-58).
108	Rules and Regulations for Military Explosives and Hazardous Munitions (8-1-58).
115	Marine Engineering Regulations and Material Specifications (2-1-61).
123	Rules and Regulations for Tank Vessels (12-1-59). F.R. 3-30-60, 10-25-60, 11-5-60, 12-8-60.
129	Proceedings of the Merchant Marine Council (Monthly).
169	Rules of the Road—International—Inland (5-1-59). F.R. 5-21-59, 6-6-59, 5-20-60, 9-21-60, 4-14-61, 4-25-61.
172	Rules of the Road—Great Lakes (5-1-59). F.R. 1-7-60, 3-17-60, 5-20-60, 9-21-60.
174	A Manual for the Safe Handling of Inflammable and Combustible Liquids (7-2-51).
175	Manual for Lifeboatman, Able Seamen, and Qualified Members of Engine Department (9-1-60).
176	Load Line Regulation (9-2-58). F.R. 9-5-59, 8-2-60, 11-17-60.
182	Specimen Examinations for Merchant Marine Engineer Licenses (12-1-59).
184	Rules of the Road—Western Rivers (5-1-59). F.R. 6-6-59, 5-20-60, 9-21-60, 10-8-60, 12-23-60, 4-14-61, 4-25-61.
190	Equipment Lists (4-1-60). F.R. 6-21-60, 8-16-60, 8-25-60, 8-31-60, 9-21-60, 9-28-60, 10-25-60, 11-17-60, 12-23-60, 12-24-60, 5-2-61.
191	Rules and Regulations for Licensing and Certifying of Merchant Marine Personnel (11-1-60). F.R. 11-30-60, 1-4-61, 4-19-61.
200	Marine Investigation Regulations and Suspension and Revocation Proceedings (7-1-58). F.R. 3-30-60, 5-6-60, 12-8-60.
220	Specimen Examination Questions for Licenses as Master, Mate, and Pilot of Central Western Rivers Vessels (4-1-57).
227	Laws Governing Marine Inspection (7-3-50).
239	Security of Vessels and Waterfront Facilities (7-1-58). F.R. 11-1-58, 12-18-58, 12-30-58, 9-19-59, 2-24-60, 3-30-60, 7-29-60, 3-18-61.
249	Merchant Marine Council Public Hearing Agenda (Annually).
256	Rules and Regulations for Passenger Vessels (3-2-59). F.R. 4-25-59, 6-18-59, 6-20-59, 7-9-59, 7-21-59, 9-5-59, 1-8-60, 5-6-60, 8-18-60, 10-25-60, 11-5-60, 11-17-60, 12-8-60, 12-24-60, 12-29-60, 4-19-61.
257	Rules and Regulations for Cargo and Miscellaneous Vessels (3-2-59). F.R. 4-25-59, 6-18-59, 6-20-59, 7-9-59, 7-21-59, 9-5-59, 5-6-60, 5-12-60, 10-25-60, 11-5-60, 11-17-60, 12-8-60, 12-24-60.
258	Rules and Regulations for Uninspected Vessels (9-1-59). F.R. 3-17-60, 11-5-60, 12-8-60, 12-29-60.
259	Electrical Engineering Regulations (12-1-60).
266	Rules and Regulations for Bulk Grain Cargoes (5-1-59).
267	Rules and Regulations for the Numbering of Undocumented Vessels and the Reporting of Boating Accidents (5-1-59). F.R. 7-11-59, 7-18-59, 7-25-59, 9-5-59, 9-17-59, 10-2-59, 10-23-59, 11-19-59, 11-21-59, 12-5-59, 12-29-59, 1-1-60, 1-30-60, 2-13-60, 3-4-60, 3-17-60, 3-18-60, 4-6-60, 4-14-60, 4-20-60, 5-6-60, 5-11-60, 6-25-60, 6-29-60, 7-14-60, 7-29-60, 10-25-60, 12-8-60, 3-16-61.
268	Rules and Regulations for Manning of Vessels (9-1-60). F.R. 5-5-61.
269	Rules and Regulations for Nautical Schools (3-1-60). F.R. 3-30-60, 8-18-60, 11-5-60.
270	Rules and Regulations for Marine Engineering Installations Contracted for Prior to July 1, 1935 (11-19-52). F.R. 12-5-53, 12-28-55, 6-20-59, 3-17-60.
290	Pleasure Craft (5-1-61).
293	Miscellaneous Electrical Equipment List (3-7-60).
320	Rules and Regulations for Artificial Islands and Fixed Structures on the Outer Continental Shelf (10-1-59). F.R. 10-25-60.
323	Rules and Regulations for Small Passenger Vessels (Not More Than 65 feet in Length) (6-1-58). F.R. 9-29-60, 4-19-61, 5-5-61.
329	Fire Fighting Manual for Tank Vessels (4-1-58).

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

CHANGES PUBLISHED DURING MAY 1961

The following have been modified by Federal Register:

CG-190 Federal Register, May 2, 1961. CG-268 and 323 Federal Register, May 5, 1961.



OFF-SHORE LIGHT STATION - U.S. COAST GUARD