PROCEEDINGS OF THE

MERCHANT MARINE COUNCIL

UNITED STATES COAST GUARD

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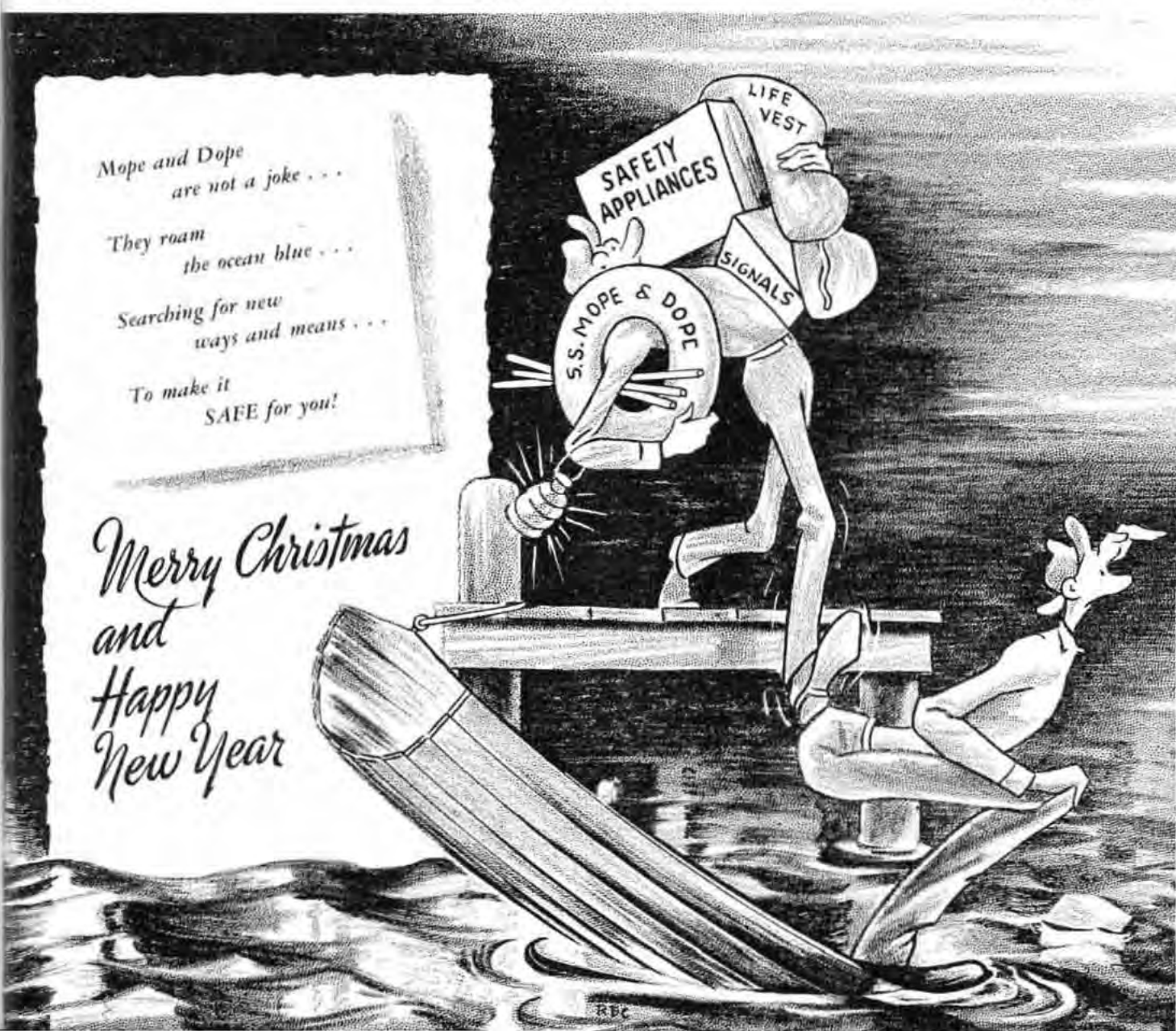

Proceedings of the

MERCHANT MARINE COUNCIL

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The
Merchant Marine Council
of the United States
Coast Guard

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The Marine Section of the National Safety Congress held its Thirty-ninth Annual Exposition at the Morrison Hotel in Chicago, Ill., on October 9, 10, and 11, 1951.

Mr. Louis B. Pate, Vice President, Seas Shipping Co., presided as Chairman; Mr. William R. MacDonald, Counsel for Hutchinson and Co., presided as Cochairman.

Courtesy is given the Marine Section of the National Safety Congress for the presentation of the following papers by Mr. Earle Smith of Waterman Steamship Corp.; Mr. Leslie H. Quackenbush of States Marine Corp.; and Mr. E. O. Perkins, Assistant General Manager, Marine Department, The Texas Co.

SAFE OPERATION OF CARGO SHIPS, ACCIDENTS TO CREW AND SAFE PRACTICES DEVELOPED

BY MR. EARLE SMITH, SAFETY DIRECTOR, WATERMAN STEAMSHIP CORP.

In order that a maximum operational efficiency may be reached at all times, there must be a properly coordinated effort to this end. Only through cooperation of all members of an organization or vessel may a properly coordinated effort be obtained. It is only natural that an individual puts his own personal interest foremost in his thinking, and he will be an efficient employee only to such an extent as we show interest in his foremost personal problems, namely, Safety, Health, and Welfare. We are now confronted with the problem of convincing the individual that we have a definite interest in him. The means of accomplishing this problem is an active, well-rounded Accident Prevention Program. An Accident Prevention Program will be a success only to the extent you demand that it succeed. Every level of supervisory force must be made to understand that accident prevention on his particular job is his personal responsibility, and freedom from accidents is expected from him.

For accident prevention to be a success there are a number of basic fundamental facts to be considered.

I. Accident prevention must become a part of operational procedure. This is accomplished in our own particular organization by—

A. Home Office Safety Committee, which consists of—

(1) Safety Director, who acts as Chairman of the Safety Committee.
(2) Deck Department Representative.
(3) Engine Department Representative.
(4) Steward Department Representative.
(5) Claim Department Representative.
(6) Stevedoring Department Representative.

Our Home Office Safety Committee meets once a week for the specific purpose of examining minutes of the various vessels safety meetings, developing safe work methods, and ways and means of a concentrated effort in regard to accident prevention.

B. Ships Safety Committee, which consists of—

(1) Captain, who acts as Chairman.
(2) All mates.
(3) All engineers.
(4) Steward.
(5) Boatswain.
(6) Union delegate.

Ships Safety Committee meets every two weeks for the specific purpose of—

1. Discussion of all accidents since last safety meeting as to (a) cause, (b) contributing cause, if any, (c) suggestions for preventing similar accidents, (d) action taken.

2. Discussion of new Safety Bulletins, Safe Practice Pamphlets, or Safety Directives received since last meeting.

3. Report of Ships Safety Inspection Committee, and action on same.

4. Discussion and report of action taken on recommendations and suggestions by Ships Safety Inspection Committee at previous meeting.

5. Recommendations by Ships Safety Committee to Home Office Safety Committee.

6. Report and discussion of action taken by Home Office Safety Committee to previous sugestions by Ships Safety Committee.

C. Ships Safety Inspection Committee, which is made up of one mate, one engineer, steward, and boatswain.

Ships Safety Inspection Committee inspects entire vessel once every two weeks and reports its findings to the next meeting of the Ships Safety Committee. Purpose of the Ships Safety Inspection Committee is to inspect entire ship, making observations as to housekeeping, unsafe practices, unsafe conditions, defective gear and equipment, unguarded gear and equipment, improper lights, unguarded or improperly covered openings, and make suggestions that might be advisable to improve safety in general.

An example of the findings of one of our Ships Safety Inspection Committees is as follows:

Excerpt minutes of July 30, 1951.

Report of Ships Safety Inspection Committee.—An inspection tour of the vessel was made Sunday July 29th and the following was noted.

1. Pieces of the rubber tile flooring in the officer's mess loose. May cause one to stumble. To be recemented.
2. Electric outlet caps, several missing, several left off. Missing caps to be replaced with chains. All outlet caps to be replaced when outlets are not in use.
3. Lower section, outboard stringpiece of the starboard gangway, approximately 5 feet from the bottom, split and splintered. To be repaired.
4. Fire hydrants Nos. 5, 6, 8, and 12 work stiffly. To be overhauled.
5. Grounded electrical outlets to be stenciled as such.
6. Galley stock pot: In order to inspect the contents, the cover is raised by hand. This procedure is hazardous by reason of possible scalding and/or burning by escaping steam when the cover is lifted. Remedy: A small pulley to be rigged on the overhead over the stock pot with a line having a hook on both ends, rove through, one end hooked to the cover, the other for hooking the cover open.
7. Remove the gaff from the mizzenmast in order to replace fittings eroded by stack gases.
8. Straighten and replace escape trunk stanchions in the holds.
9. Some deck cargo lashings are stowed in drums on the after deck port side. These may come adrift in heavy weather at inopportune times. Build a crib in the space between number five hatch and the tonnage well, adjacent to the kedge anchor, for the stowage of these lashings.
10. Hand rail at after steering station bent and adrift. To be faired and welded.
11. Hand rail of starboard after ladder to the main deck, bent and adrift. To be faired and welded.
12. Boatswain's storeroom aft requires squaring up.
13. Land all junk wire rope at San Francisco in order to clear the space now occupied by the same.
14. Topping lift cleat of starboard number three forward gear, is poorly located. Consequently, is hazardous. When the topping lift is being belayed, it is required that the man belaying, be held by another in order that both hands of the man belaying the topping lift can be used. Cleat to be relocated to a lower position to facilitate belaying.

Excerpt minutes of August 27, 1951.

Report of Ships Safety Inspection Committee

Meeting date	Item No.	Status of item
July 30	1	Accomplished.
Do	2	Do.
Do	3	On voyage repair list.
Do	4	Accomplished.
Do	5	Not accomplished at this date.
Do	6	Do.
Do	7	Accomplished.
Do	8	Not fully accomplished; trunk stanchions remain to be taken care of.
Do	9	Accomplished.
Do	10	Do.
Do	11	On voyage repair list.
Do	12	In progress.
Do	13	To be done on arrival.
Do	14	Voyage repair list.

Hazards noted:

1. Fireline guard at foremast house, starboard side, is adrift, may prove a stumbling block. To be secured.
2. Leading edge of steps to Boatswain storeroom smooth, poor footing provided. Pieces of quarter inch square stock to be welded on leading edge of steps as was done to the ladder to the storeroom flat which was proved effective.

II. Development of accident-free methods of performing work, and insistence that these approved methods be followed.

On the morning of April 16, 1951, after vessel had been secured to the dock, and starboard anchor heaved out of water, Chief Mate left Boatswain and two men on the bow to take a turn out of the anchor chain and heave the anchor home. Boatswain was taking the half turn out of the starboard anchor chain and had made line fast on the anchor and told Ordinary Seaman Robertson to lower away on the windlass. Ordinary Seaman Reynolds was working with Boatswain handling line which was on the anchor. From where Boatswain was standing on bow he could not see Robertson standing at the throttle on the after side of the windlass, as the windlass is approximately 8 feet in height in middle. In order for Robertson to see Boatswain he climbed up on windlass in order to see or hear

signal given by Boatswain. While in the act of stepping up on guard of a small gear, his left trouser leg became engaged in cogs of small gear underneath guard. His left foot was severely injured before he could shut off power.

This is a good example of an ill-advised method of performing assigned duties. Under no circumstances should man have stood on anchor windlass while it was in motion. In this particular instance guards were all examined and found sufficient and in excellent order. When heaving to, or letting go of anchor, signalman should be in such a position that windlass operator may see or hear him at all times so that in no case will it be necessary for operator to climb on windlass. Signals should be clear and distinct so windlass operator can understand them. Operator of windlass and signalman should be experienced and qualified men.

III. Provision for safe places of work, safe types of gear and equipment, together with maintenance of gear and equipment for first-class condition.

On August 2, 1951, A. B. was injured while climbing down ladder in the forepeak. A. B. had stepped off ladder onto upper grating when part of it slipped out of position allowing man to go part way through manhole under grating. Grating had not been properly placed, as it is impossible for this grating cover to move when it is in proper position.

At 12:30 P. M., August 8, 1951, Second Assistant Engineer mashed first joint of his forefinger and seriously cut first joint of index finger, while starting a portable wash-water pump. The belt between the drive shaft and pulley on the pump was slipping, and in attempting to start the pulley on the pump, Second Assistant grasped the belt with his right hand to give it a pull. The weight of his hand caused the slack in the belt (which was causing it to slip) to be taken out and the belt, therefore, commenced to turn immediately, catching his fore and index fingers between belt and pulley. Belt had been in service over a long period of time and should have been replaced with a new belt, however, no attempt should have been made to correct slipping belt while machinery was in motion.

Saloon Pantryman at 5 P. M., August 1, 1951, was burned by steam on the right wrist while opening the steam table (section where the pans are placed) for keeping food warm after taking same from the galley, prior to serving.

CAUSE.—Leaving steam valve open too long, thereby causing steam pressure to build up in the steam table.

PREVENTATIVE MEASURE TAKEN TO PREVENT SIMILAR ACCIDENT.—Two ¼-inch holes were drilled in the top section of the oval cover, which will show escaping steam as a warning that steam pressure has built up underneath the oval cover.

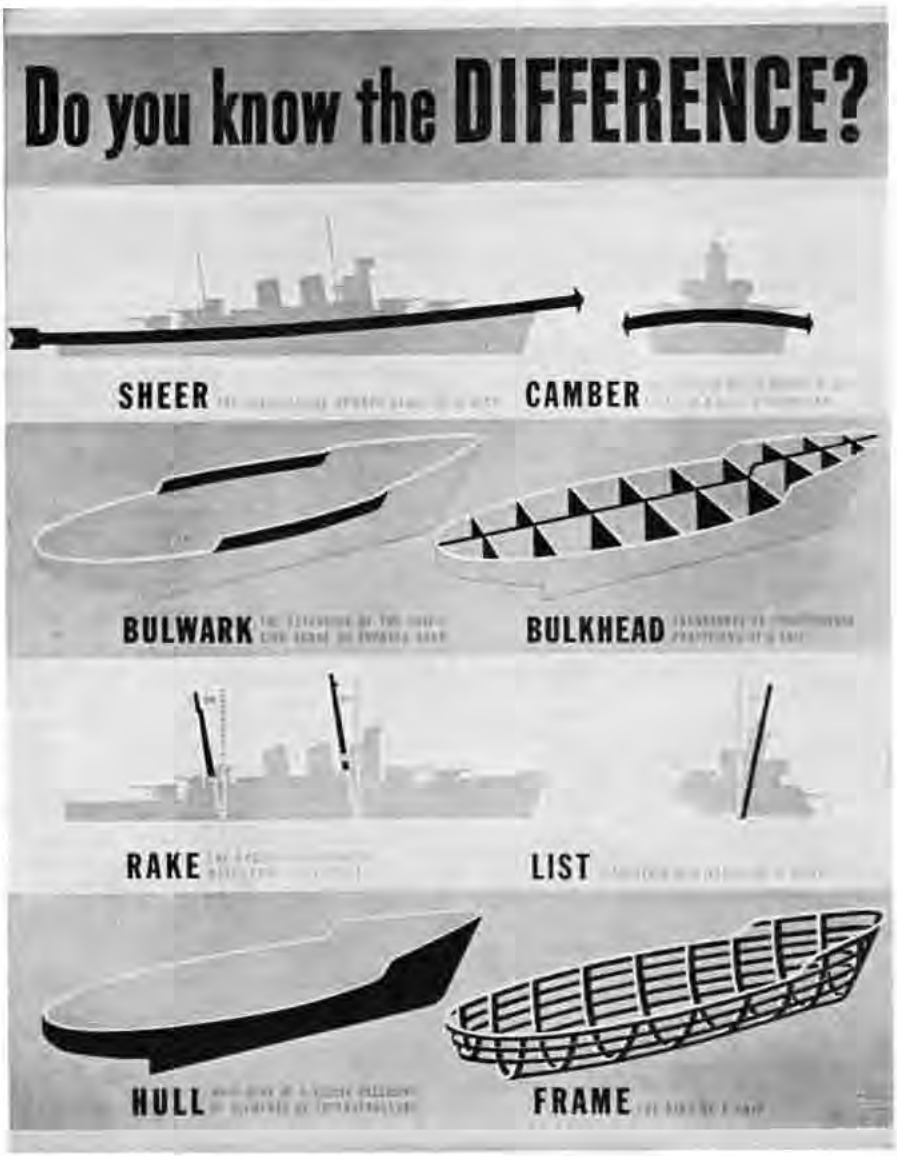
One piece of board ½ inch by 8 inches is placed fore and aft to insure that no steam builds up underneath oval cover. This board is placed underneath the edge of the oval cover, when down.

One of the most important items to our safety program is a Deck Officers' Gear Check Sheet. All vessels are required to check their gear at least once a voyage and note on Gear Check Sheet findings and date that particular item of gear was checked. You will note copy of Gear Check Sheet attached, as well as instructions for use of same.

IV. Careful investigation and study of all accidents with a view toward determining (1) cause of the accident (not alone the injury) and (2) what steps should be taken in order that same might have been avoided.

On January 8, 1951, at 8:30 P. M. while vessel was enroute from Houston to Galveston, an A. B. was injured abreast No. 1 hatch, starboard side. At the time, the man was coming off focslehead when he stumbled over runner guide lying on deck, bruising both legs.

CAUSE.—Runner guide was lying on deck in front of ladder leading from focslehead, thereby not allowing a clear passageway from focslehead to midshiphouse.



CONTRIBUTING CAUSE.—Man did not have flashlight.

SUGGESTION MADE FOR PREVENTING SIMILAR ACCIDENT.—Chief Mate to instruct all Deck Department personnel to practice better housekeeping by keeping a clear passageway fore and aft, and officers on the watch to instruct the lookout to always carry a flashlight with them when they are on the open deck going to focslehead.

ACTION TAKEN.—Above suggestion carried out.

On December 24, 1950, at approximately 5 P. M., Messman in the Port of Galveston injured himself while working in the Galley. Man was getting sugar out of sugar bin and in pulling out this bin, safety catch failed to hold and bin came all the way out hitting Messman on his right big toe, mashing same.

CAUSE.—Safety catch on sugar bin failed to work.

CONTRIBUTING CAUSE.—Upon examining bin it was noted that at one time the sugar bin had two safety catches on it, but one was broken off. At time of accident, if both of these catches had been on, man would not have been hit.

SUGGESTION MADE TO PREVENT SIMILAR ACCIDENT.—New catch to be put on this bin to replace missing one.

ACTION TAKEN.—First Assistant volunteered to make new catch for this sugar bin.

V. Education of all employees regarding the development of safe work habits, as well as insistence by supervisory force that such be carrried out at all times.

Education of all employees in regard to safe working practices and safety habits is of great importance, since it is perhaps the most difficult phase of any organized safety effort. Our accident experience is similar in one regard to all industries, in that a vast majority of all our accidents are caused primarily by an unsafe act on the part of an individual. The first step in the beginning of our education program was the use of a bulletin and hand-out as follows:

"YOUR SAFETY"

WATERMAN is interested in your SAFETY,

HEALTH and WELFARE

For this specific purpose, we have on each vessel a safety committee made up of the Master, all officers, Chief Steward, and Boatswain. This committee meets every two weeks to discuss ways and means of making all vessels safe.

Safety minutes of these meetings are recorded and sent to the Home Office Safety Committee. Your Home Office Safety Committee is made up of a representative from each of the various departments which handles the operation of all vessels.

This committee meets each week to carefully study safety minutes and suggestions from each vessel.

Safety Suggestions are welcomed, turn them in to your department head.

For the SAFETY of YOU and YOUR fellow shipmates you are urged to work and conduct yourselves safely at all times.

If you become injured, no matter how slight, you should report it immediately to your department head or Watch Officer. This is for your personal protection.

Any job or task assigned to you that you do not understand, do not be afraid to ask your department head, Watch Officer or Boatswain how to safely do it.

Your personal protection and safety is important to both you and Waterman.

MAKE SAFETY YOUR WATCHWORD

A handout is sent to each crew member every month with information as follows: Place of accident, Who gets hurt, How men get hurt (cause), How to keep from getting hurt (preventative measure).

VI. Issuance of printed material such as Marine Safe Practice Pamphlets, Safety Bulletins, Miscellaneous Safety Directives, etc.

A. MARINE SAFE PRACTICE PAMPHLETS:

The use of Marine Safe Practice Pamphlets as material for discussion by a Ships Safety Committee gives an almost inexhaustible supply of information that will be of tremendous aid to any well rounded accident prevention program. These Safe Practice Pamphlets are developed and sent to all vessels in our fleet each month, a majority of them to be used as material for discussion in safety meetings, while others contain various information in regard to gear and equipment which may be used for reference material. Subject matter of some of our Safe Practice Pamphlets is as follows: Accident Investigation, Accident and Injury Reports, Hand Tools, Eye Protection, Some Factors of Wire Rope Wear, etc.

B. SAFETY BULLETINS:

Rather than publish a safety manual for our vessels, we send to each of our vessels at regular intervals safety rules in the form of bulletins, which are discussed in detail at safety meetings, with specific instructions that they are to be adhered to in their entirety, and are then kept in ships file. Some of these rules are in regard to the following: Stagings, Switch Boards, Anchors, Hand Tools, etc.

C. MISCELLANEOUS SAFETY DIRECTIVES:

From time to time miscellaneous safety directives are sent out to all our vessels in regard to specific accidents, or specific safe work practices, that we feel might either be of interest to our vessels or might be of such importance that it should be specifically called to the attention of the Master and Ships Safety Committee. Material for these miscellaneous letters comes from a number of different sources, such as, magazine articles, various safety publications, newspaper articles, recommendations from Ships Safety Committee, etc. Subject matter of some of our safety directives is as follows: Safe Bunkering, Oxygen Deficiencies, Jacobs Ladders, etc.

VII. Interest must be aroused and continually maintained in an accident prevention program. This may be accomplished in a number of ways.

a. Safety meetings

Safety meetings are held as previously discussed.

b. Safety posters

Safety posters that have eye appeal may be used to develop definite safety consciousness among individuals. By eye appeal, we mean a poster must be of such a nature that it attracts attention. It has been our experience that comic cartoons, relative to safety, gain more attention than most types of safety posters.

c. Safety handouts

Safety handouts may be used to a decided advantage in keeping safety constantly before various members of ships personnel. Besides those handouts already mentioned, we have used several others to a decided advantage, namely, Accident Prevention Reminders for Deck Department Personnel, and Accident Prevention Reminders for Engine Department Personnel. In these handouts are listed numerous accepted safe work practices.

D. Contests among the various vessels for best accident prevention records.

Frankly, while we feel this is a definite means of stimulating interest in accident prevention, we have not yet arrived at a means of using this method in arousing their interest. Since we insist that all vessels report

all accidents, irrespective of the severity of injury, and at present cooperation in this regard has been most excellent, we are somewhat fearful as yet that a contest among the vessels might cause a failure to report numerous minor accidents.

Finally, whatever the methods used in the foundation of a well-rounded Accident Prevention Program may well be summed up in three very important factors.

1. *All supervision must be a part of or party to such a program.*—Since the supervisor is recognized as a representative of management, it is only through his interest and cooperation that the employee will feel that management has his interest at heart.

2. *All employees must have a part in said program.*—Unless the employee feels that he is a part of the program and the program is for his best interest, he will not actively engage in said program.

3. *The program must be worth while.*—No safety program will go far unless it deals with specific working conditions, hazards, safe and unsafe practice of individuals on a vessel.

CARGO SHIP OPERATION

ACCIDENTS TO CREW AND PREVENTIVE MEASURES TAKEN

BY MR. L. H. QUACKENBUSH, STATES MARINE CORPORATION

There is little doubt that, in the past, the matter of safety, where it concerns the use of equipment, operating practices and training of personnel, has not received the attention that it should have on many cargo vessels. Today, States Marine Lines, as well as many of the other operators of cargo vessels, is attaching considerable importance to the conducting of sound and thorough safety programs.

The pattern of these safety programs is similar between companies as a result of the over-all experience of their leading exponents of safety and others in the Marine field. What differences do exist are the result of and are dependent upon the individual experience of the particular company involved.

The most influential factor in any safety program is proper use of the lessons learned in the accidents which are occasioned by the activity concerned; that is, accidents to crew, vessel and cargo. This is true for two obvious reasons; first, the accident shows the need of study and analysis of the circumstances in order to avoid repetition; second, the accident, the ensuing investigation, the resultant modification of practices and other preventive measures involved provide the stimulus needed for a safety program. If we did not take advantage of the object lessons in accidents, we would have a difficult time in overcoming the inherent, prosaic nature of the subject insofar as the average person is concerned.

Consequently, we, in the States Marine Lines, attach tremendous importance to the careful investigation of accidents and to the conclusive establishment of cause and the most logical preventive measures insofar as the particular accident and any similar ones which might arise are concerned. To illustrate, in keeping with the subject I have been asked to discuss, I can do no better than to review several types of accidents with which we have been concerned in the States Marine Lines' fleet.

LIFEBOAT DAVIT CRANK ACCIDENTS

Probably, one of the most recurring types of accidents on board ships today are those which involve the crank handles on lifeboat gravity-type davits. Many schemes for minimizing the recurring nature of this type of accident have been devised. Much has been written and said about the proper operation of these gravity davits insofar as the use of the davit winches and the use of the hand crank is concerned; yet, we in States Marine are convinced that, although education and training in the proper use of this equipment is required, even if we reach the condition where all those engaged in its use and operation understand thoroughly and perfectly the proper procedures, we will still have these accidents—accidents resulting from poor judgment and human failure, such as lack of alertness and the like.

We have recently suffered two of these accidents which we think are worthy of note.

In one instance, when the Deck Gang was working one of these boats, a complaint was made to the Chief Electrician that they could not get power from the davit winch. The Deck Gang had been working the boat and davit with the hand crank. The Electrician came up to the Boat Deck and immediately noted that the Mate, who was trying to work the winch control switch, was absent-mindedly turning it the wrong way. We say "absent-mindedly" because he had operated the same switch properly many times before. The Electrician told the Mate to turn the switch the other way. This was done with neither man being alert enough to note that the crank handle was still in place. Of course, when the motor went on, the crank handle suddenly turned around and hospitalized the Electrician who was not standing clear.

Another instance, which ultimately resulted in a very large settlement for the injured party, came about during the hoisting of a boat on gravity davits after rerigging of the falls. In the course of the operation, the power failed. The Deck Gang then commenced hoisting by the hand crank. The Chief Electrician, who was standing by, suggested that power could be obtained on the davit winch through the main board in the Engine Room, in lieu of working the switch on the davit. This entailed a long chain of men for the purpose of relaying commands to the Electrician in the Engine Room. Everything went along fine until the boat was about twelve inches from the stops. The order was given to the Electrician to stop hoisting and to shut off the power. The crank was engaged to bring the boat the rest of the way in manually.

After the crank was engaged, the power came back on suddenly. We still have not been able to determine how it happened that the power came back on but the consequences, of course, are obvious. The crank handle turned around and caught one of the men, who was standing at the crank in order to operate same, in a trouser leg. It lifted him into the air and threw him over the crank onto the forward part of the Boat Deck. Needless to say, his left ankle and foot, right knee and leg were seriously injured. Additionally, he suffered head injuries.

It is particularly definitely agreed that the prudent course in this instance would have been to crank the boat all the way up by hand—time not permitting determining why the switch involved would not work. A chain of command, such as that which was used, is never particularly dependable where all the men involved are obviously not thoroughly trained in what they are doing. Nevertheless, just as in all work, it is human nature to look for the easiest and fastest way to accomplish a job and to use that way unless it is obviously suicide.

Looking into accidents of this type, we made our minds up that they were due more to the arrangement of the manual feature of the davits than human failure. Therefore, to supplement our efforts to train members of

the crew in the operation of these davits, we have moved to eliminate the old-fashioned L-shaped crank by substituting a large wheel crank for same. Wheel cranks being used are 42 inches in diameter and have proved most satisfactory to date. In addition to not having had accidents with this type of crank on gravity davits, we have noted incidents where, had we had the old-type L-shaped crank, we most certainly would have had serious personal injuries to members of the crew. As a matter of fact, we have found the operation of these davits, manually, with the wheel crank, far simpler and easier as well as safer than with the old type crank. True, recent amendment of Coast Guard requirements as to switches on gravity davits will eliminate the occurrence of power failure circumstances such as were occasioned in the latter of the foregoing accidents. Even so, we feel the use of wheel cranks to be a definite safe advantage over the old L-shaped crank as, with the new switch arrangements, accidents of this type can still occur when the power switch is suddenly turned to an "on" position when the davits are being operated manually.

GANGWAY ACCIDENTS

The Gangway is another place where we believe all steamship operators have suffered many personal injuries to crew members. A large number of such accidents are a result of the users of ships' gangways being in an intoxicated condition, but a large number of them are also the result of the arrangement of the gangway as far as its rigging is concerned and the lack of effort on the part of the Officer responsible for the rigging of the gangway to make it safe.

One of the most interesting gangway accidents that we have had involved the Officer responsible for rigging it himself, the Chief Mate of the vessel. The gangway was found after and noted before the accident to have been in good condition and of solid construction. Treads were all in good order, hand rails were taut and in the right places, lighting was described as exceptionally good. Nevertheless, the Chief Mate, a man of temperance, found it possible to fall from the top of this gangway and on to the dock below. One obvious thing was lacking—the same thing that we have found lacking in most of our gangway accidents—and that was a life net under the gangway, which, in this instance, if it had been rigged, would have saved the Chief Mate considerable suffering and, quite likely, from any injuries at all. Needless to say, today, all of our vessels are using life nets and we and our safety-minded Officers are insistent that life nets be rigged at all ports where gangways are to be used. We feel that the use of life nets has saved us numerous accidents.

STEERING ENGINE ACCIDENTS

It happened recently, on one of our vessels, that one of our reliable and diligent First Assistant Engineers, desirous of having the ship arrive in port neat, clean, and in good order in the Engine Department, assigned two men to paint out the overhead, bulkheads, and deck of the Steering Engine Room and, possibly, although always a disputed point, the steering engine itself. This has always been a disputed point as it has been vigorously denied that orders to paint the steering engine were given; nevertheless, having completed the bulkheads and the overhead of the Steering Engine Room and prior to painting the deck, the men involved undertook to paint the steering engine while the vessel was underway.

One of the men involved had his hand caught in moving parts of the engine, ripping away the flesh on the back of the hand and seriously fracturing same. The hand eventually had to be amputated.

Obviously, it was not necessary to paint the steering engine at sea and to do so was a hazardous operation. Another point which is obvious to us, having carefully studied this accident, is that it is as nearly equally unnecessary to paint in the Steering Engine Room let alone the steering engine while at sea. Definite steps to avoid a repetition have been taken by insisting that there be no painting, scrubbing or other operations in the Steering Engine Rooms of our vessels when same are underway.

HATCH BEAM ACCIDENTS

I might be accused of deviating a little from the subject as this particular accident involved longshore personnel instead of the crew.

One of our vessels was loading cotton in a southern port. In the hatch in which the accident occurred, the three aftermost sections of the hatch boards and the two aftermost beams had been removed and were on top of the unopened portion of the hatch on the weather deck.

The four aftermost beams in the tween deck were removed and these beams laid on top of the unopened portion of the hatch as the tween deck wings were lined with cargo.

The beams remaining in place were apparently not locked in place.

After lowering the first draft, when the hook was returned to shore for another, the sling which the hook was carrying unseated the No. 3 beam, causing that beam and two others and numerous hatch boards on top of the hatch to fall below, injuring six longshoremen.

It is interesting to note that the hatch beams in this particular vessel were fitted with locks; however, the same had apparently not been used. Further, the longshoremen made no complaints as to the locks being damaged and unusable or otherwise so that ship's Officers could arrange for an emergency method of locking the beams in place.

Obviously, there are several deficiencies which brought about this accident. On working half a hatch and only opening half of same, beams and boards should not be stowed on top of the unopened portion of the hatch and the hatch beams remaining in place should be locked.

Insofar as avoiding a recurrence of this type of accident is concerned, it being particularly embarrassing inasmuch as the same vessel had the same type of accident several trips previously, we could do nothing more than to check the locks on the hatch beams throughout the fleet in order to make certain they were in working order and then to very definitely and strongly instigate a program of beam locks being used and hatches and beams not being stowed while working cargo, on top of the unopened portion of a hatch opening.

We, in States Marine Lines, are convinced that the majority of shipboard accidents which we suffer are a result of one basic factor and that is human failing. We find that the greater majority of accidents on shipboard are not the result of lack of training but, rather, the result of lack of alertness.

Most shipboard accidents compare with the fact that we all know enough to cross the street at the corner but we can get hit by a car at the corner if we daydream when crossing and don't pay attention to what we are doing.

We do feel that this particular factor has created the necessity of increasing, constantly, the development of and making of rearrangements of equipment and working areas on board our ships. This being the state of things, we have not found it difficult to realize the prudence of promoting and carrying out a safety program which involves all of our vessels' licensed Officers and, through the licensed Officers, unlicensed personnel.

The conduct of our safety program follows a pattern, as we have said

before, similar to that of others. This is the only measure we can see which will adequately deal with the problem of creating safety-mindedness and alertness in all persons working on and about our ships.

The secondary goal of our safety program and efforts is education and training of personnel.

The MAIN GOAL of our safety program and efforts is to engender, on the part of our maritime employees, the ALERTNESS AND CONSCIOUSNESS OF GOOD SEAMEN.

TANKER SAFETY PROGRAM

BY MR. E. O. PERKINS, ASSISTANT GENERAL MANAGER, MARINE DEPARTMENT, THE TEXAS CO.

We in the Marine Department of The Texas Co. are reviewing the results of our intensified Safety Program, which was started 1 year ago. We have always been concerned with Safety for our personnel and ships but felt that there was room for improvement in the procedure followed heretofore.

Our first step in building up our program was to obtain ideas from Management, Operating Supervisors and, most important, from Ships Masters and Officers. We then set up Safety Committees on each ship, consisting of licensed Officers and Chief Steward. Now that we have the interest of Ships Officers, we are planning on inviting an unlicensed crew member to the monthly meetings, who will be selected by the Master. The crew member selected to attend the meetings will be a different rating each month. Our idea of having an unlicensed crew member is to obtain their suggestions. It is the unlicensed crew who make your safety record, and it is necessary to have their cooperation.

The importance of selling safety to the Crew is clearly brought out when you consider the causes of accidents. During June and July our fleet report shows Falls and Slips accounted for 40 percent of accidents reported; Bruises due to dropping tools, improperly secured equipment, etc., 23 percent; Burns 15 percent; Strains 13 percent; Cuts 8 percent; and Miscellaneous 1 percent. If we can make the crew safety conscious and gain their cooperation, it is no exaggeration to state accidents will be reduced enormously.

We impress upon our Masters the importance of regular monthly meetings and minutes are sent to the office where they are noted by interested parties. Each suggestion is referred to the Operating, or Repair and Construction Division, for comments or action. Each set of minutes is acknowledged, and the worth-while suggestions are circulated in our monthly safety letter to the fleet. This letter gives a résumé on the most important accident investigations now and then, as an example of how the job should be done.

Some time ago we instituted a "Safety Efficiency" rating policy for all our vessels based on the accident and/or injury frequency. Included are all accidents, however minor, which require attention of any kind. We are also quite concerned with the severity of an injury but primarily our aim is to reduce frequency of accidents—to eliminate carelessness which directly causes 90 percent of all accidents—and to increase supervisory safety efficiency. These "Safety Efficiency" ratings are published as part of our monthly circular. It is our opinion that the advantages of publishing these ratings far exceed the disadvantages. They tend to instill a competitive spirit between the ships and it is our experience that they also tend to make Master and Officers aware of the importance of Safety and the responsibility charged to them.

Material for meetings is sent to each ship and includes periodicals, pamphlets and, of course, Safety Publications of our good friends in the Marine field.

An important step was to provide the proper equipment and tools. The latest and most modern of fire fighting, life saving, and injury prevention equipment is being provided our vessels. We have a full time Safety Inspector, who recently attended the United States Navy Fire Fighting School at Philadelphia for 6 weeks. This Safety Inspector heads the Safety Program under the Operating Manager. He is at present making trips on all ships, showing a series of fire-fighting films, explaining latest fire-fighting techniques, inspecting safety equipment, observing safety practices, conducting fire drills and contributing to the Safety Committee Meetings. We can say this procedure is not only working up interest, but proving worth while insofar as results are concerned.

A very important point, often overlooked by management, in connection with Safety Inspections, is the increased general operating efficiency and the maintenance of equipment due to such inspection.

To assist the Safety Committee in their effort to teach safe working habits to the crew, we are providing twice a year a set of colorful safety posters obtained from the National Safety Council. A fresh poster goes up on the bulletin boards in Mess Rooms and Crew passageways every 2 weeks. We are hoping that the National Safety Council artists will provide more of their excellent posters which will apply directly to ship operations.

A subcommittee of each ship's Safety Committee investigates each accident as soon as possible after it happens, and a report is drawn up including statements from the crew member involved, witnesses, if any, a survey of the tools or equipment in use, and finally recommendations for the prevention of a similar occurrence. We are encouraging the safety subcommittees to carry out this investigation as thoroughly as possible, not only because of the lessons to be learned, but also because such action tends to discourage unethical injury claims, by providing the shore staff with all the facts needed to contest unjustified claims.

No doubt many of you read Mr. George Horne's three articles in the New York Times recently on the operation of the Workmen's Compensation Law in New York and New Jersey, with particular reference to waterfront industries. Mr. Horne pointed out that 1 out of every 10 persons gainfully employed in the Metropolitan area derives his living from shipping and allied endeavors. Workmen's Compensation in New York Harbor threatens to become a gigantic squeeze, menacing the economic welfare of our industry. Conditions in the shipping industry are equally disturbing and call for close study by all concerned.

In providing safety equipment it was generally understood what was required; however, we were deluged with hundreds of ideas for tools, gadgets, and alterations of the vessels' equipment and structure. The suggestions now being received are more practical and ship's personnel are becoming safety conscious.

Several months ago, all vessels were provided with safety helmets. Fifteen helmets were provided each vessel. The thought behind this expenditure was that safety helmets were to be worn in engine spaces while in shipyard undergoing engine repairs, and also to be used by deck gangs while cleaning and mucking tanks.

On one of our ships, the gang was gas freeing and mucking preparatory to entering shipyard. An ordinary seaman was hooking a bucket to a gantline directly over a tank hatch when it slipped out of his hand. The bucket dropped 40 feet striking a man on top of his head. Fortunately, he

was wearing a safety helmet. I don't doubt for a moment that, if the helmet had not been in use, the bucket would have killed him—or, in any event, he would have sustained serious injury.

The safety requirements of the Merchant Marine Inspection branch of the United States Coast Guard, and those specified by the various Classification Societies have now, we believe, been exceeded in respect to lifesaving and fire-fighting equipment as a result of the closer study brought about by the Safety Program.

Management has been called on to devise and, as an example, we are in process of providing such safety items as (a) a portable metal hood to isolate hot asphalt hoses when used during loading and discharging operations and (b) an aluminum platform which can be rigged on the ships' sides for use with a gangway at all angles of lead.

Another result of the Safety Program has been the alteration of the vessel's structure during shipyard periods. Certain doors have been sealed to prevent the spillage of liquids or entry of gases into living spaces; additional ladders have been installed from Transverse structural members to the bottom in after-wing tanks of our T–2's to facilitate tank cleaning; and steam-smothering valves are being relocated to provide greater accessibility.

The most gratifying conclusion to this brief description of our Safety Program would be a statement to the effect that accidents aboard our vessels during the past year have been reduced in frequency and severity. However, these statistics will not be available until the year is ended. We are only now emerging from the experimental stage, and another year is required before an accurate evaluation of the program's results can be made. We have come to realize that an effective safety program is an integral part of vessel operation. For this understanding we owe a debt to the intelligent and persistent efforts of the Coast Guard, the National Safety Council and the USP&I. We also acknowledge an indebtedness to those shipping companies that have preceded us in establishing safety programs, and indicated by their cooperative attitude how helpful those in the industry can be to each other.

We believe the most effective method of terminating the upward trend of P&I insurance costs, malingering and claims that are certainly not justified in many instances, is to have an effective program that will provide the necessary safeguards to protect the Company's interest, and at the same time educate our seagoing personnel to intelligently handle the modern and efficient equipment which Safety Programs and Meetings have evolved for the use of those who go down to the seas in ships.

FORKLIFT TRUCKS

During a visit to a Shipyard an inspector's attention was directed to the use of forklift trucks by the company's employees. It was brought to the Council's attention that these various forklift trucks were not equipped with overhead guards. The overhead guard is to prevent injury to the truck operator when handling material. The fork arrangement of the truck is so designed that the material lifted is tilted backward to prevent its falling over the front ends of the forks. When in a raised position the top sections of the material may tend to slide back upon the operator due to motion of the fork or the truck.

The guard consists essentially of a fabricated framework of steel bars capable of absorbing considerable impact from overhead. The guard is installed over the operator's position, and secured to the fork channels and truck body in a manner that does not interfere with the operation of the truck.

In view of this potential hazard it is recommended that all forklift trucks be furnished with an overhead protective guard in order to further protect the driver from injury.

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INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA, 1948

On October 11, 1951, Public Law 172, Eighty-second Congress, first session, was approved. This law authorizes the President to proclaim regulations for preventing collisions involving water-borne craft upon the high seas and in all waters connected therewith, except certain designated inland water areas and aircraft in Territorial Waters of the United States where other appropriate and adequate sets of rules, regulations, and laws are now in effect. Until the President issues a proclamation and publishes the International Regulations for Preventing Collisions at Sea, 1948, in the Federal Register, these statutory rules will not be in effect.

Until the effective date of the 1948 International Regulations is proclaimed by the President, the present International Rules for Preventing Collisions at Sea, which were adopted by the United States by the act of August 19, 1890, as amended (33 U. S. C. 61–142), must be followed. These International Rules are published by the Coast Guard in the pamphlet entitled "Rules to Prevent Collisions of Vessels and Pilot Rules for Certain Inland Waters of the Atlantic and Pacific Coasts and of the Coast of the Gulf of Mexico," CG 169.

The International Conference on Safety of Life at Sea, 1948, met at London from April 23 to June 10, 1948, with the objective of drafting a convention which would reflect the many advances in nautical science and improvement of techniques which had taken place since the formulation of the International Convention for the Safety of Life at Sea, signed at London on May 31, 1929, which set forth uniform principles and rules relating to the promotion of maritime safety. The 1948 Conference drafted the International Convention for Safety of Life at Sea, 1948, and this Convention was ratified by the United States Senate on April 20, 1949. The 1948 Conference also had before it and used as a basis for discussion the present International Rules for Preventing Collisions at Sea which were adopted by the United States by the Act of August 19, 1890, as amended (33 U. S. C. 61–142). In view of the many technological changes which have taken place in shipping on the high seas since the existing regulations were adopted in 1890, the Conference considered it desirable to revise these regulations, and accordingly approved the International Regulations for Preventing Collisions at Sea, 1948. In view of the fact that rules of the road governing the navigation of ships on the high seas must have almost universal acceptance in order to be effective, the Conference decided not to make these revised regulations a part of the International Convention for the Safety of Life at Sea, 1948, which required only 15 acceptances to enter into force. Accordingly, the Conference invited the Government of the United Kingdom to act as moderator and to forward the International Regulations for Preventing Collisions at Sea, 1948, to the other governments which had accepted the present regulations and also invited the Government of the United Kingdom when substantial unanimity is reached as to the acceptance of the 1948 regulations to fix the date on and after which such revised regulations shall be applied by the governments which have agreed to accept them. The Conference requested the Government of the United Kingdom to give not less than a year's notice of this date to all governments.

Section 1 of Public Law 172, approved October 11, 1951, authorizes the President to proclaim when the International Regulations for Preventing Collisions at Sea, 1948, together with other amendments to United States laws, shall become effective. After the effective date specified in the proclamation by the President such regulations shall have the effect as if enacted by statute and shall be followed by all public and private vessels of the United States and by all aircraft of United States registry to the extent therein made applicable. Such regulations shall not apply to the harbors, rivers, and inland waters of the United States; to the Great Lakes of North America and their connecting and tributary waters as far east as the lower exit of the Lachine Canal in Montreal in the Province of Quebec, Canada; to the Red River of the North and the rivers emptying into the Gulf of Mexico and their tributaries; nor, with respects to aircraft in any Territorial waters of the United States.

In connection with the International Regulations for Preventing Collisions at Sea, 1948, it is important to keep in mind that such regulations will not become effective until the President issues a proclamation specifying the effective date. Until such a date is specified the present International Regulations for Preventing Collisions at Sea which were adopted by the United States by the act of August 19, 1890, as amended (33 U. S. C. 61–142), shall be followed.

NATIONAL SAFETY COUNCIL

HIPPO BITES MAN

The above apparently constitutes news, judging from the wide publicity given to just such an occurrence quite recently.

To us, however, it constituted bad news, for the man was one of our seamen on the *African Star*, and the aforementioned hippo was live cargo thereon. As yet we know none of the details except that the seaman lost a finger and was hospitalized in Mombasa.

So far as we know, this is the first serious accident Farrell Lines has ever had during its quarter century of experience in the transportation of wild animals. It is clear proof, however, that the feeding, tending and handling of all wild animals, reptiles, and even birds, is a matter calling for the exercise of due caution at all times—outward appearances of docility to the contrary notwithstanding.

P. S.—It was later reported this crew member lost his right hand. He had volunteered his service and was selected by Captain LePage as caretaker for the animal on the basis of letters of recommendation, portraying him as an expert animal man. He may well have been, yet the manner in which he received this injury should teach all of us a lesson. To quote the accident abstract:

"Reason for accident—Man's overconfidence with animals—apparently tried to pet hippo on nose."

(Farrell Lines Safety News, August and September 1951.)

CHEMICAL CARTRIDGE RESPIRATORS

By W. J. Wiswesser, Industrial Hygiene Department, Wilson Products Inc., Reading, Pa.

Chemical cartridge respirators never should be regarded as substitutes for adequate ventilation, nor as "more economical" substitutes for gas masks. There are no "economical" replacements for human kidneys, livers, or blood cells! The proper place to use chemical cartridge respirators is in the many industrial and agricultural jobs where *a low concentration exposure to gases and vapors* is involved, so slight that no protection would be needed for only a brief exposure, yet of such nature that continuous daily exposure would constitute a serious health hazard. For example, an organic vapor respirator approved by the United States Bureau of Mines will remove from the air at least 2½ teaspoons of carbon tetrachloride, a dose that certainly would cause permanent kidney damage, and possibly death, if that much were inhaled per hour for any extended period of time.

The demand for chemical cartridge respirators has increased steadily during the past 20 years, mainly because of the tremendous growth of the organic chemical industries. For example, the domestic production of carbon tetrachloride, again a very typical case, increased from 15 to 200 million pounds from 1924 to 1944, reflecting a thirteenfold or 1,300-percent expansion during that period.

The incidence of human injury from this one chemical is indicated in a recent medical report that 1 marine hospital had 12 recognized cases of carbon-tetrachloride poisoning among 5,000 admissions during the past 2 years, and 5 of these 12 cases terminated fatally.

The body-protecting action of the cartridges of activated carbon in an approved organic vapor respirator is remarkable: at the high rate of flow, air rushes through this bed at a speed of about 30 feet a minute, yet in this third of a second of gaseous contact with the carbon, the concentration of contaminant is reduced from 1,000 parts per million to less than 1 part per million.

How Cartridges Work

There is a vast difference between the mode of action of a mechanical dust filter and that of a vapor-absorbing cartridge, so it is helpful to avoid using the general term "filter" for the latter. A typical dust filter contains a microscopic forest of fibers which mechanically traps and lodges the airborne dust specks or mist droplets, much as balloons might be caught by forest branches. In contrast, the cartridge bed catches vapors by a peculiar surface absorption or chemical action which depends on the extremely small size and resulting intense motion of the vapor molecules—thousands of times smaller than the dust specks. Contrasting with the forest analogy, it is more like catching flies with boulder-size sponges, coated to hold them when they hit. While these molecular catching actions are difficult to explain in terms of familiar concepts, it cannot be too strongly emphasized that cartridge beds are not designed to stop dusts, and dust or mist or metal-fume filters cannot stop vapors. Vapors are true gases that can be liquefied at ordinary temperatures, but as gases they can pass through dust filters as easily as the air itself.

Cartridges therefore should not be expected to give adequate protection, by themselves, against mixtures of toxic vapors and toxic dusts or mists, such as might be met in lead paint spraying. If the paint contains lead pigment, the amount of harmful mist leaking through the cartridge bed may be far worse than the amount of solvent vapors leaking through an approved toxic dust or mist filter. In cases where the spray contains solids less toxic than lead, it may be practical to use cartridges with supplementary dust filters, but it should be noted that cartridge respirators are not to be regarded as substitutes for adequate ventilation, nor for other equipment such as air line respirators.

Types of Cartridges

Laboratory tests have shown that the vapor-absorbing process is highly specific, each kind of contaminant vapor being best removed by a certain kind of cartridge chemical. It is rather fortunate, therefore, that the largest class of vapors—organic solvents—is best absorbed by one of the most durable of all cartridge chemicals—activated carbon. This organic vapor class includes compounds of carbon such as alcohols, aldehydes, esters, ethers, hydrocarbons, ketones, and solvents in general. Acid gases, in contrast, are best absorbed by specially prepared soda lime, while certain gases like chlorine are best absorbed by a mixture of soda lime and carbon. These three classes give rise to the three most commonly met types of cartridges. A fourth type is necessary for ammonia, which is best removed by adsorption on silica gel. (The word "absorption" means removal through chemical reaction or solution, while "adsorption" means removal by physical surface adhesion.)

Care of Cartridges

Moisture reduces the efficiency of organic vapor adsorption by carbon, but it increases the efficiency of ammonia adsorption by silica gel, or of acid gases by soda lime. Thus cartridges in general must be kept sealed until used, to prevent adverse moistening of the carbon or adverse drying out of the soda lime.

Rough handling damages cartridges, either by breaking the moisture seals or by crushing and deforming the chemical bed. If this packing is disturbed to such an extent that channels are formed along an edge, the vapors rush through this short circuit and vastly reduce the service life of the cartridge.

How Long Should a Cartridge Last?

This frequently asked question is about as easy to answer as the child's question, "How much can a bag hold?" If the bag is burlap and the substance to be held is water, the obvious answer is, "None." First, therefore, the cartridge must be of the correct type: the quality of the "holding material" is of prime importance, and after this, the quantity in the cartridge. These two determine the vapor-absorbing capacity, meaning a fixed weight of contaminant, independent of time, flow rate, or concentration. The service life, however, strictly depends on the vapor concentration, the breathing rate, and to some extent the humidity. For example, an approved organic vapor cartridge, in a standard machine test, must remove 1,000 parts per million concentration of carbon tetrachloride vapor in a gas flow totalling 1.1 cubic feet per minute through the whole respirator for at least 90 minutes before showing a failing leakage of 5 parts per million. If this gas flow is doubled, the life must be at least 40 minutes; high (85 percent) humidification similarly cuts down the life. On the other hand, if the concentration were only 200 parts per million, and the humidity and breathing rate were low, the life would be around 8 hours. So the final answer is, "It all depends"—but it is a predictable measure when these influencing variables also are measured and taken into account.

A double-ended beacon is a piece of rotating illuminating apparatus which emits two pencil beams, one from each end of the equipment, 180° apart.

NUMBERED AND UNDOCUMENTED VESSELS

The table below gives the cumulative total of undocumented vessels numbered under the provisions of the act of June 7, 1918, as amended (46 U. S. C. 288), in each Coast Guard district by Customs ports for the quarter ending 30 September 1951.

Coast guard district	Customs port	
1 (Boston)	(4) Boston	16,765
	(1) Portland, Maine	11,612
	(2) St. Albans	2,924
	(5) Providence	4,690
Total		35,991
2 (St. Louis)	(45) St. Louis	17,306
	(12) Pittsburgh	2,507
	(34) Pembina	91
	(35) Minneapolis	6,530
	(40) Indianapolis	4,389
	(42) Louisville	4,000
	(43) Memphis (part)	8,115
	(46) Omaha (part)	505
	(47) Denver	6
Total		43,449
3 (New York)	(10) New York	49,488
	(6) Bridgeport	9,301
	(11) Philadelphia	21,264
Total		80,053
5 (Norfolk)	(14) Norfolk	16,606
	(13) Baltimore	23,808
	(15) Wilmington, N. C	8,757
Total		49,171
7 (Miami)	(18) Tampa (part)	23,339
	(16) Charleston	1,973
	(17) Savannah	3,395
	(49) San Juan	470
	(51) St. Thomas	95
Total		29,272
8 (New Orleans)	(20) New Orleans	20,367
	(18) Tampa (part)	801
	(19) Mobile	8,382
	(21) Port Arthur	4,061
	(22) Galveston	10,870
	(23) Laredo	2,140
	(24) El Paso	5
	(43) Memphis (part)	76
Total		46,702
9 (Cleveland)	(41) Cleveland	14,450
	(7) Ogdensburg	6,514
	(8) Rochester	8,869
	(9) Buffalo	8,327
	(36) Duluth	4,238
	(37) Milwaukee	12,610
	(38) Detroit	29,538
	(39) Chicago	8,620
Total		93,166
11 (Long Beach)	(27) Los Angeles	9,285
	(25) San Diego	1,772
	(26) Nogales	110
Total		11,167
12 (San Francisco)	(28) San Francisco	20,847
Total		20,847
13 (Seattle)	(30) Seattle	33,383
	(29) Portland, Oreg	9,030
	(33) Great Falls	1,057
Total		43,470
14 (Honolulu)	(32) Honolulu	3,540
Total		3,540
17 (Juneau)	(31) Juneau	7,150
Total		7,150
Grand total		463,978

PILOT LADDERS

Seldom does an accident result beneficially to anyone involved in it, but we have a recent instance of just such an occurrence in our files. Here is the report on it:

"At Fall River, vessel was preparing to take pilot. The usual ladder had been placed over the side by an A. B. and the end was at or near the water. The A. B. then attempted to raise the ladder so the end would rest on the pilot boat. As he did so the pilot stepped on the ladder..... The pilot later stated that the slight snap of the ladder had cured him of a long-standing back lesion or dislocation."

Comment: Very nice — except that in effecting this cure, the A. B. suffered two broken ribs by being thrown against the bulwark rail when the pilot's weight came on the ladder. And the pilot *might have* suffered death instead of benefit from this accident.

Pilot ladders, like gangways, are potential accident breeders. We suggest that all ship's Safety Committees discuss the proper method of rigging and tending pilot ladders, boat ropes, etc., with a view to assuring absolute safety to both the pilot and the riggers thereof.

(Farrell Lines Safety News, August 1951.)

Allard's law is a mathematical formula defining the relationship between intensity of a light, atmospheric conditions, and the amount of light received at any given distance.

"They Said It..."

In the Declaration of Policy of the Merchant Marine Act of 1936, as amended, Congress has declared that:

"It is necessary for the national defence and the development of the foreign and domestic commerce that the United States shall have a Merchant Marine * * * composed of the best-equipped, *safest*, and most suitable types of vessels * * *."

By section 210 of the same act, Congress has declared that it shall be the duty of the Maritime Administration to adopt a long-range program, to create an adequate Merchant Marine, under ownership and operation by citizens of the United States, with vessels *"designed to afford the best and most complete protection for passengers and crew against fire and all marine perils."*

COOPERATION IN PORT SECURITY

These papers presented at the U. S. Coast Guard Panel at the Twenty-Fifth Annual Convention of The Propeller Club of the United States and The American Merchant Marine Conference, October 17, 18, 19, 1951.

THE MOST IMPORTANT ELEMENT IN PORT SECURITY

BY CAPTAIN S. H. EVANS, USCG

The function known as "port security" means the safeguarding of waterfront facilities and vessels in port against sabotage and accident. It is by no means a simple function; on the contrary, it is most complex, involving many complicated factors such as federal regulation, law enforcement, security intelligence, safety engineering, civil engineering, and—possibly most important of all—human engineering of the highest order.

Because of these complexities, I decided not even to attempt to cover the whole subject of port security in the short time allotted to me today, but to focus on just one aspect of it—the most important single aspect I could find. So I asked half a dozen officers—Admiral Shepheard, Admiral Mauerman, Captain Stinchcomb, and several more—what they considered the one most important factor in the safeguarding of our ships and ports. Everyone of them gave me the same answer: cooperation between the public and the United States Coast Guard.

And so I'd like to talk just for a moment on cooperation—to make a plea, if I may, for unity of thought and effort among all those concerned with safeguarding our waterfront facilities and ships.

In the first place, let us face the fact that we are not tilting with imaginary adversaries; the security of our ports—those channels of our military strength—is endangered by very real and potent enemies. One of these enemies is blind; this enemy is known as "Accidental Disaster"; this cataclysmic strikes in peace and war have left their terrible imprints on Halifax, Texas City, Bombay, and a hundred other ports. The other one of these enemies has many eyes; this enemy is known as "Sabotage." To us in the United States, he is an unknown quantity; his stock-in-trade is stealth and he comes to us from within, well-armed and capable of dealing us a crippling blow. These are the enemies whose shadows the President saw when, in Executive Order 10173 launching the present program, he warned us all that "the security of the United States is endangered." Let us at all times keep the faces of these enemies clearly in our view.

In the second place, faced with these potent national enemies, it is clearly the duty of every loyal citizen to confront and confound them with a coordinated, strong defense. This call to arms likewise was sounded by the President in Executive Order 10173; not only did the latter charge the Federal government with defending the ports against Accident and Sabotage, but the President also urged—"urged" was the word he used—all State and local authorities and all persons to support and assist in carrying out the various measures for port security defense. By "all persons", the Chief Executive meant every loyal son—every owner, every operator, every laborer, every casual visitor to our critical port areas. The President said practically the same thing again quite clearly in Executive Order 10277, when, referring to port security measures generally and to the authority and responsibility of the Coast Guard in defense of the ports, he stated emphatically that the Federal government's activity in safeguarding the ports shall not be construed "as relieving the masters, owners, operators, and agents of vessels or other waterfront facilities from their primary responsibility for the protection and security of such vessels or waterfront facilities".

Thus, the President, it seems to me, sees in port security a duty for us all.

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THE ROLE OF PRIVATE INTERESTS IN PORT SECURITY

BY MR. WILLIAM F. GIESEN,

GENERAL MANAGER, THE MARITIME ASSOCIATION OF THE PORT OF NEW YORK

A year ago today, on October 18, 1950, President Truman, in his first official act upon returning from a conference with General Douglas MacArthur on Wake Island, issued an Executive Order which stated in part: "I hereby find that the security of The United States is endangered by reason of subversive activity."

There were historic events surrounding this Executive Order, events which the majority of American citizens have yet to realize in all of their ramifications. We have seen history record espionage aimed at securing the secret of weapons of destruction with the power of the sun. We have seen a group of individuals convicted of leading a conspiracy to overthrow our Government by force and violence. We have watched developments in Korea and have become aware of various other expositions of subversion and a design for conquest.

It is taking a long time for the full impact and meaning of these incidents to penetrate our peace-loving souls. Perhaps it is the fantastic and monumental character of these activities that dulls our senses. Perhaps it is the disappointment in the fact that the conclusion of hostilities with Germany and Japan did not bring real peace and security that makes many of our people read accounts of these things like every day newspaper reports. Perhaps the average man is sublimely confident of our ability to protect ourselves and preserve our way of life. Nonetheless, we must all remember that anything that makes us indifferent to the danger that exists is not good.

Despite an attitude of simple recognition on the part of most of us, the fact is that the Government is engaged in a tremendous task of internal preparation to meet any emergency. Every red-blooded American must give his aid in this effort. We all must work together in this venture to preserve ourselves, our families, and the generations of Americans to come.

Acting in the realization that our ships and port facilities are indispensable to our nation in time of emergency, Congress saw fit to pass legislation requiring the safeguarding of these facilities. The Magnuson Act, passed shortly before the Executive Order mentioned previously, authorized the President to take the necessary steps for port security. The President designated the United States Coast Guard as the Governmental agency charged with principal responsibility for carrying out the purposes of this Act.

With the enactment of this law, an immediate duty arose in the ranks of all private interests affected. The duty to cooperate with the government came into existence at that moment. The cooperation required in this program is a continuing process, and the key to successful execution lies in genuine cooperation. Passive toleration of security regulations will not suffice. Every private individual affected by this program owes it to himself to take time out from daily business routine and reflect on the serious nature of this work. When this factor is fully realized by everyone, we will have passed the danger of accepting security regulations as red tape, and the door to genuine cooperation is open. From this point on, cooperation can manifest itself in many different ways, as we shall see in considering the main features of the security program as it has taken shape and exists today.

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The Most Important Element in Port Security

(Continued from Page 285)

And so, in the third place, if we—the Coast Guard and the public—have a mutual duty to safeguard our vessels and ports against Accident and Sabotage, and a mutual desire to win a continuing victory on this important front, it is apparent to the Coast Guard—as I hope and actually feel quite sure that it is to you and to you and to every other loyal citizen—that we must all work together and, therefore, that we must first and foremost provide organizational channels toward that end.

The Commandant has authorized me to say that in his firm opinion we, the Coast Guard, cannot engage successfully in port security without the unselfish support, the considered advice, and the active assistance of the entire maritime industry—and by that he means of every individual connected with transportation by sea. This would be true regardless of how big a legal stick the Coast Guard wields. Under Executive Orders 10173 and 10277, in fact, the Coast Guard holds a tremendous legal power, and history amply proves that the Coast Guard has never flinched from exercising the mandates of the law. But history likewise amply proves that full compliance with even the best of laws rests not so much on enforcement as on the public's attitude. In the case of port security regulations, nothing less than full compliance will suffice—otherwise we would have not port security but port insecurity, and the latter is an invitation both to Accident and Sabotage. For this reason, gentlemen, we need your help.

We have established an organizational channel for this assistance; the Commandant has directed every Coast Guard Captain of the Port to establish direct contact with interested parties in his port, including local representatives of Federal, State, and Municipal agencies; owner and operators of ships and waterfront facilities; representatives of maritime labor; and representatives of related organizations; for the purpose of helping to formulate policies and rules. In many ports, especially in all the large ports, the Captain of the Port has formed representatives of these interested groups into a Port Advisory Council, or Committee. These councils are channels for a very substantial cooperation between the public and the Coast Guard, and they are composed of men with long experience and unquestionable "know-how" in port affairs. In every port where they have been established so far, we get the same report from our Captain of the Port: "The Council is 'going to town'; it's tearing into its work; the members show a fine patriotic spirit and technical ability and realize the importance of the contribution they're making".

Of course, one doesn't have to be on a Port Advisory Council to cooperate. Everyone can keep our enemies in sight and can support and conform to established rules and can use every other appropriate means to the enemies' defeat. Everyone can, on occasion, establish direct contact with the Port Advisory Council, the Captain of the port, his Coast Guard port security forces, the Federal Bureau of Investigation, or other agencies, as appropriate, to offer suggestions, request instructions, or make pertinent reports. The important thing is to maintain an attitude of intelligent cooperation towards the whole program of port security—for, in the long run, our security as a nation and as individuals may depend directly upon this program.

The Role of Private Interests in Port Security

(Continued from Page 285)

When the Coast Guard was charged with the responsibility of taking steps to make our waterfront facilities and ships secure, two major hazards were given primary consideration. As a result, regulations were promulgated designed to weed out and prevent poor security risks from gaining access to certain protected facilities, and regulations establishing uniform safety standards for the handling of dangerous cargoes on waterfront facilities were adopted.

In each instance, before final adoption of these regulations, public hearings were held. These hearings provided a wonderful opportunity for private interests to help in this work. It was incumbent upon all affected to familiarize themselves with the proposed regulations, to gain a thorough understanding of the nature of the problem, the approach to its solution, and to offer constructive criticism and suggestions for improving the regulations proposed, where possible. In many instances this is exactly what was done.

I know that as far as industry and labor in New York were concerned, the Coast Guard received this kind of cooperation. Our Maritime Association of the Port of New York is made up of a complete cross-section of people engaged in the maritime industry. We publish a "Maritime Exchange Bulletin" every month, which is furnished free of charge to our 1,500 members. This Bulletin has carried complete details of this security program. Meetings were held on our Floor and were attended by several hundred representatives of all phases of the industry. Representatives of the Coast Guard were present to explain the work being undertaken. Working groups studied the proposed regulations, and our suggestions were offered with a view toward construction and betterment, and not destruction.

With respect to the security screening program, a mere reflection of the hundreds of thousands of people whose livelihood requires that they frequent the waterfront and work on board American ships discloses at a glance the immensity of the task of security planning. The basic approach to this problem has been that among these hundreds of thousands of people, some few individuals may be poor security risks. Some men, by reason of past conduct, either of a criminal nature or of a subvervsive nature, had to be weeded out if security was to be obtained.

The sound logic being pursued at the moment to achieve security is founded on the premise that every man permitted to enter into a restricted zone must be security checked, and once having cleared screening, must be positively identified. Credentials are being issued so that those charged with the responsibility of controlling entry into restricted areas are able to rely on this previous screening, and have some method of immediate assurance that the individual seeking admission is worthy of trust.

In pursuing this policy and following this reasoning, it has been necessary for the Coast Guard to come to industry and labor to place applications for security documents in the proper hands. The hundreds of thousands of people who frequent the waterfront generally cannot be processed all at once. It is doubtful, in fact, that the point will ever be reached when everyone who has some occasion to visit the waterfront will be processed. The regulations themselves do not contemplate such an over-all program. There are obviously only certain areas in dire need of immediate security regulation. It has been necessary to determine who the people are who work regularly in the particular areas that will eventually be proclaimed restricted areas. We at The Maritime Association have helped in every way to see to it that applications for processing have been distributed in an orderly, logical fashion to those who will be in need of security documents when restricted areas are established in the near future. We made arrangements to have a Coast Guard Port Security Card unit present at our Maritime Exchange during 2 weeks of the summer, and over 1,200 key industry officials were thus processed.

I have mentioned a few of the ways in which industry and labor can and have cooperated in this program to date. The planning and installation of security has at this time passed through two phases; regulations have been adopted and processing has been undertaken. Each of these phases has required the help and advice of private agencies. As the program passes into the third and final phase, which consists of the actual operation and enforcement of the security regulations, we reach the point where understanding and help is most required.

We are in the early stages of living up to the safety standards required where dangerous cargoes are handled. Every terminal operator should thoroughly familiarize himself and his staff with these regulations. The attitude adopted in living up to the standards set forth should not be one of minimum compliance and corner cutting, but should be one in which it is realized that these regulations are designed to maintain terminal facilities intact and free from destructive accidents.

In a short time a certain number of restricted areas will be proclaimed, and it will be necessary for persons to be in possession of port security cards or other prescribed documents evidencing security clearance to gain admission. A certain amount of confusion and delay may result in placing this part of the program into operation. When and if some delay and confusion arises every attempt should be made to accept these inconveniences in the proper spirit and remain mindful of the immeasurable benefits the program ultimately will bring.

The Federal Government's port security program is a form of insurance for the entire maritime industry. This is an insurance which can't be bought. The government's interest in this planning has been to preserve intact, as nearly as possible, those potential wartime facilities which would be indispensable in time of extreme emergency. The Federal Government's responsibility and interest in no wise minimize the responsibility of the owners and operators for protecting and keeping their property intact.

In this regard, let me especially emphasize the fact that a Coast Guard Security Card is not a "pass"—that is, it does not give any person permission to enter a waterfront facility; it indicates only that the holder has been screened by the Coast Guard and not found to be a poor security risk. Obviously, in the interest of

MOPE and DOPE

"It ain't New Year's cheer. He's a ferryboat skipper!"

security, under any circumstances, owners and operators should not "pass" persons into their facilities unless they are on legitimate business. More than this, however, in the case of restricted areas, only persons who hold Coast Guard Port Security Cards may be "passed", since it is unlawful for any other person to enter or remain in a restricted area. Thus, the fact that the Government is engaged in port security does not mean that private interests can relax their own guard in protecting their own property. On the contrary, the entire industry must become security-conscious, must take appropriate security measures in its own right, and must maintain close liaison and cooperation with the Coast Guard to insure the successful achievement of real port security.

There is another feature of the security program which has called for and clearly demonstrates the necessity for teamwork, although relatively only a few representatives of labor or industry will be needed to serve in connection with this feature of the program. I am speaking of the appeals panels provided for under the regulations. A person who has been rejected as a poor security risk is entitled to two appeals, one before a Local Appeal Panel, and a further appeal, if desired, before the National Appeal Board in Washington. The Appeal Boards are made up of a representative of the Coast Guard, a representative of industry, and a representative of labor.

When a rejectee appears before a Local Appeal Board, it constitutes his first opportunity to appear in person to convince those charged with the responsibility of recommending his clearance or denial that he is a good security risk. It is the Government's first opportunity to see and hear the individual whose past record has warranted his preliminary exclusion. The responsibility resting in the hands of the members of these Appeal Boards is obviously a most serious and heavy responsibility. The issue to be resolved is whether the appellant is a good security risk, despite the fact that past conduct may indicate that he is not. The appellant's livelihood may well be at stake in this procedure. He may be deprived of following his chosen occupation. Justice, h a r m o n y, full consideration, and freedom from any kind of prejudice are mandatory at this time. While the civilian members of these tripartite Appeal Boards are drawn from special interest groups, all must compose their individual differences to the greater ends of justice and of the national welfare. I have worked on these Appeal Boards, and I can assure you that their proceedings are harmonious and genuinely cooperative. I think everyone fully realizes that special interests must be subordinated to the over-all purposes of these proceedings.

There is one other element in this whole program to which I should like to make a brief reference; this is the element of time. Any feeling of complacency in the minds of the American populace in regard to port security is most hazardous. Time can cure this inertia. Time also permits accomplishment of the endless details of security screening and planning. Time will permit the ironing out of minor bugs in the program as impracticable provisions of the regulations are discovered and corrected, and as bottlenecks in enforcement are straightened out. Time generally will permit more extensive planning and consequently greater security. These are some of the advantages afforded to us by the element of time.

On the other hand, the element of time of itself could be destructive of the security program. We may reach a point where living in the cage of security will become almost overburdensome. We may reach a point where a willing cooperation is again reduced to passive toleration. We may adopt the attitude portrayed in the old story about the boy who had cried "wolf, wolf" and got no assistance because the alarm had been sounded falsely so many times before. We must all be strong and not succumb to the relaxation that time itself will bring, for all we know, this may be the very thing that is being counted upon by our adversaries. The government must continue, despite the many hours of what might appear to be wasted effort in security planning and preparedness. Labor organizations should continue with increased momentum in their drive to weed out those whose idealogy is inimicable to the security of our nation. The owners and operators must continue to adopt and preserve every measure designed to protect their own property. Most important is the fact that all must continue to cooperate.

A pelican hook is a hinged hook fitted with a sliding or hinged link for tripping while under a heavy strain. It is used for stopping off chain; sometimes called a chain stopper.

LESSONS FROM CASUALTIES

HOW FESTIVE CAN CHRISTMAS FESTIVITIES BE?

A Tanker steamed into a South Caribbean harbor for a quick loading and a rapid turnabout for United States on December 24. The Master had decided not to stay in a foreign port for Christmas, evidently feeling that some of "his boys" if granted shore leave might be imbued too deeply with the Christmas "spirit."

The men worked with a will to finish all assignments so that, if any free time was available, they could go ashore for an hour or two before sailing. The officers kept the men so busy that they were in port the shortest time possible and only a few men were able to go ashore and then only for a few minutes.

Men, however, will not be frustrated in their attempts for some "Christmas cheer" and if they can't stay ashore to celebrate will figure some way to have a little party on board ship. Christmas comes but once a year and it is only human to want a party—even if the ship will be at sea on Christmas. In some manner those crew members who were able to get ashore smuggled aboard the necessary ingredients for a party.

The ship sailed at 6 p. m. on December 24 and all crew members were in a happy and jolly mood. After everything had been made shipshape and the activities settled into normal operating routine, the crew members who were not standing watch gathered in the crew's quarters aft for a gay Christmas Eve party. Most of them enjoyed the whiskey, eggnog, and beer that were "broken out" and passed about. In particular the "day men" were "bending the elbow" and some were feeling "no pains" as they sat in the messroom spinning yarns, telling jokes, and listening to the Christmas music from a radio. The party was orderly and the room next morning showed no signs that anything unusual had occurred—other than it was necessary to perform the usual "housekeeping chores."

The watch officers knew little about this party. There were no unusual noises or circumstances that aroused their suspicions that any extra precautions had to be taken. The Master and Deck Officers stated that no alcoholic beverages had been passed out by them to the crew. The men them-

selves stated that the stewards had not given them any kind of alcoholic beverages.

As the party progressed into the night some of the men would "drift" in and out of the messroom. It was hot and they often would go out on the poop deck to get a breath of cool air. Later that Christmas Eve some of the men went to their bunks while others "catnapped" in settees in the recreation room.

When a day maintenance man returned to his room at 3 a. m. he noticed that his roommate had not turned in but he thought nothing of it and went to sleep. When awakening on Christmas Day he noticed that his roommate still had not returned nor had he slept in his bunk. He thereupon began asking his shipmates if they knew where he was, but no one could remember seeing him since 1 a. m. He thereupon told the Master that the man had not slept in his bunk and no one had seen him for some time. The Captain immediately mustered all crew members in the messroom and made inquiry concerning the missing maintenance man, and then caused the ship to be searched to see if he could be found. A thorough search of the ship was made but the fellow was not aboard. The Master made inquiries as to where and when the missing man was last seen. It appears this fellow attended the party and had imbibed quite freely. He was last seen sitting on an empty milk crate on the poop deck well inboard and singing softly "Buttons and Bows" about 1 a. m. At that time he was in good spirits and enjoying a cigarette, probably thinking about turning in. It is a matter of much conjecture as to what happened to him. He has never been located. It can be presumed he became sick and went to the rail. He may have then fallen overboard—who knows? As the sea was choppy on Christmas Day the Master did not turn the ship about to search for the missing man because he did not know where or when he may have fallen off the ship.

Another Christmas Season is here and it is easy to presume that more Christmas parties will be held at sea. While crew members are not allowed to carry alcoholic beverages aboard ship, it is quite possible that some will be smuggled aboard just the same. Don't smuggle alcoholic beverages aboard ship for "special" parties. Let's have more caution and be discreet so that there will be no repetition of this kind this year. We all enjoy a Merry Christmas but let's be careful so that we can all have a Prosperous New Year—Alive and No One Missing.

WHY THE HURRY?

A recent collision occurred when the masters of two vessels were in a hurry and failed to properly appraise the situation involving the Rules of the Road. While no specific provision of the applicable Pilot Rules was violated, yet the consequences of being too hasty resulted in both vessels being laid up for extensive repairs for several days. If either master had taken a litle time and caution to wait, this accident would never have occurred.

The casualty occurred in a congested river at a place where the channel was approximately 1,500 feet wide. To picture the circumstances surrounding this accident it is necessary to visualize a river with many ships traveling both ways. During the early hours around break of day a heavy fog had reduced visibility so that most of the ships had anchored waiting for the fog to lift. As the fog began to lift the master of steamship "A" which had been anchored along the channel bank decided it was time to get under way and in order to reach his destination it would be necessary to turn around in the channel, which was approximately 1,500 feet wide. Before he started this maneuver steamship "B" coming down the river sounded a two-blast passing signal and received a response from "A." Then the master of "A" called the master of "B," requesting that he increase his speed so that a hurried turn-around could be made before another ship arrived. Following "B" by approximately 2 miles was steamship "C" and the record is not clear as to whether or not the master of "A" knew that "C' was approaching. As soon as "B" passed, the Master of "A" started to turn his vessel on a right rudder until the ship was heading directly across the channel, and then he continued the turn by working the ship's engine ahead and astern.

The master of "C" had been proceeding down the river at varied speeds from half ahead to slow or drifting, depending on visibility. When he observed "A" it was well into its turn-around and lying across the channel. When "C" was approximately one-half to one mile from "A" the master of "C" sounded a two-blast passing signal to "A", which was answered by a two-blast signal. So the master of "C" continued at half speed but altered his course to the left in order to give "A's" bow as wide a berth as possible. The master of "C" thought it would be possible to pass "A" while it was still attempting to turn around. When "C" arrived at a point somewhere between 1,500 to 2,000 feet from "A's" bow, the master of "C" figured there was not sufficient room between the channel bank and "A's" bow for his vessel to pass in safety. At this point neither master blew the danger signal, nor any other signal indicating a change in plans. No attempt was made to talk "ship to ship" before the accident. But the master of "C" signaled his engineer for full speed ahead and ordered the wheelsman to hard right rudder. By so doing "C" commenced to swing to the right to pass "A" around the stern. When the master of "C" saw that his vessel was not going to clear the stern of "A" and that a collision was imminent, he signaled the engineer for full speed astern. When the master of "A" saw that "C" was changing course to pass around his stern and that a collision was imminent, he signaled his engineer for full speed ahead and ordered his wheelsman to hard left rudder in hopes of throwing "A's" stern to the right away from "C." Approximately 1 minute later the bow of "C" struck the port side of "A" approximately 30 feet from the stern, causing considerable damage to both vessels. Although both ships were damaged, they were able to proceed to port without assistance. Fortunately no one was killed or injured in this casualty.

This is an accident that illustrates how some officers believe that ships have the same maneuverability as automobiles. While the testimony brings forth the point that such passing situations were quite commonplace although there was not much room for maneuvering and chances for accidents were imminent, it must be remembered that ships navigating any water respond in various ways because of the conditions of the current, tide, draft, etc. Experience is a big factor in safe navigation. But until carelessness and recklessness are replaced by some sane caution, casualties like these will continue to occur.

SAFETY ALWAYS— EVEN AT XMAS

According to custom the ship was sailing on Christmas Eve for a week's coastwise trip from a southern port. The weather was clear, good visibility, calm wind and no sea. To many of the crew, whose homes were in this port, it seemed like cruel fate to be away on Christmas Day—but a job is a necessity if you like to eat regularly three times a day.

This particular ship was leaving port in a light condition and scheduled sailing time was to be sometime around 4 p. m. on December 24. The members of the crew were on Coastwise Shipping Articles for a definite

period of time and many of them had worked and lived on the ship for a year or better. As was the custom, men whose homes were at a particular port were allowed their time off at such ports so they could be with their families. When the ship came in this time the wives were waiting for them at the dock because this was Christmas and they wanted to do so many things. The men were looking forward to 24 hours ashore and the Holiday spirit was high.

In this particular case about the Quartermaster of a ship, he too was happy to be home with his wife. She knew he would not be able to spend Christmas Eve nor Christmas Day at home so they moved up the celebration a day, which is very understandable.

The Quartermaster was returning to his ship feeling a little blue thinking about the good times he would miss because he couldn't spend the Holidays at home. He was carrying a small bag (probably some of the good things to eat his wife had fixed for him especially for Christmas Day on board ship) when first observed by his working shipmates. He was walking at a moderate pace in a normal manner and approached the gangway with the confidence of one who had been up and down it so many times that he knew every inch of it. He should know this gangway having been a crew member on the ship for 15 months and probably thought it was about the best.

The ship was light and approximately 8 feet from the dock so that the gangway had an incline of approximately 45°. The aluminum gangway was 31 feet long, with cleats at intervals of approximately 18 inches, nonskid material between cleats, and suitable hand lines through stanchions at a height of approximately 3 feet.

The Quartermaster started up the gangway clutching the paper bag in one hand and holding on to the hand line with the other. When he was approximately 4 feet from the top, he let go of the hand line and bent over to grasp the gangway under the hand line. He lost his balance, toppled backward, and fell off the gangway, under the hand lines and landed head first in the water between the vessel and the dock. Unfortunately, a large heavy plank was floating in the water and he struck it with his head and in such a manner that he was found lying on the plank face up, with the feet and legs in the water. He fell approximately 30 feet as the ship was light.

Within 7 minutes he had been rescued from the water and placed in an ambulance but he was declared dead upon arrival at the hospital a short time later.

What a Christmas for his family! Instead of a gay, joyful, and happy time they were swamped with the sorrowful details of funeral arrangements for the "breadwinner" of the family. The hand of fate had changed everything.

The safest gangway made can be a dangerous hazard when you are preoccupied with other thoughts and become indifferent to the other hazards involved. Let us have a Merry Christmas this year by exercising more caution and keeping safety foremost in our minds.

SAFETY FIRST—THEN CHRISTMAS

On an extremely cold Christmas Eve a young man after an evening of relaxation was returning to his vessel.

There were no indications to the guard, who was stationed at the foot of the gangway, that either by his actions or appearance he was under the influence of liquor.

It appeared to the guard, who watched the young man proceed slowly up the gangway, that his thoughts were of past Christmas Eves spent at home, that he was not the only sailor away from his home on Christmas Day. The mental picture that the guard was painting suddenly became distorted when he saw the man lose his balance as he attempted to cross the gangway to the wooden stairway and fall into the water. As he fell his heavy overcoat flew up over his head preventing him the use of his arms.

The guard with another observer, who was standing by leaped into the water in a determined effort to save the man's life.

He was pulled from the water by a heaving line which was secured around his body.

While awaiting the arrival of the ambulance, artificial respiration was rendered, with little or no response. The young man was pronounced dead on arrival at the hospital.

Perhaps if it had been at some other time of the year this accident might not have happened.

We should always keep in mind that no matter what the season of the year, we should never allow ourselves to become so engrossed in our thoughts or feelings that we forget that we have a job to do—Eternal Vigilance is the price of safety.

Machines can take a vicious bite. So muzzle 'em and treat 'em right

ONE LAX MOMENT

It happened on Christmas morning. A water taxi was transporting seamen to their vessels, anchored in the stream. It would not be presumptuous to believe that this small group of passengers was quietly meditating their absence from home on Christmas Day. As the small craft fought its way through the choppy sea on this overcast Christmas morning toward their anchored vessels, one man in particular was quietly thinking of his family at home; Mom—trying to keep the din of the laughter and shouts down, when he heard the coxswain shout the name of his vessel—well perhaps next Christmas he would be able to share in his family's happiness. Rising slowly from his seat on the thwart, so as to maintain his balance on the bouncing craft, he inched his way forward to the bow of the taxi where he waited an opportune moment to leap upon the gangway of his vessel. Perhaps if his mind was not occupied with thoughts of spending Christmas at home better judgment would have forewarned him and he would not have leaped at the precise moment he did. Obviously his leap was incorrectly calculated. He lost his balance and fell into the water, sinking immediately. A determined effort was made to locate him but to no avail. Fate usually rears its ugly head when you least expect it. Perhaps this man was thinking of home and how he would have enjoyed being there. Perhaps he had assured himself that next Christmas he would be there.

THOUGHTLESSNESS CAUSES DEATH TO 8

During the latter part of the spring season, a fisherman pursuing his pleasure in a small fishing skiff accidentally came upon an outboard motorboat which was partially submerged in the water. Strewn about in the vicinity were sundry pieces of debris; however, there were no lifesaving devices observed anywhere. After a brief investigation the fisherman found a body lodged in some brush along the shore. Immediately the authorities were notified. A preliminary check on the occupant or occupants of the motorboat was made and also dragging operations begun. The dragging operations confirmed the preliminary investigation in that there were eight occupants in the motorboat.

Inasmuch as there were no witnesses to this accident, a thorough investigation was not possible. However, it is the opinion of the investigating officer that this casualty was

caused by overloading and overpowering the motorboat.

Two of the victims were observed to have worn watches which had stopped at a precise time. At this particular time it was learned that the weather conditions were good. There was a bright moon; little or no wind or tide.

Among the victims of this tragedy, which can only be attributed to failure to use common sense, were five children ranging in age from 9 months to 9 years. This fact alone should have put the adults further on their guard to protect the lives of their own children.

DISCARD BENT HOOKS

Hooks are naturally weaker than shackles of the same size stock since there is only one side to the hook. Good hooks are made of drop forged steel. They are unlikely to contain hidden flaws which would permit the hook to break. Instead, under a heavy overload, the hook opens up. It may open slowly, so that the load can be set down before it is dropped or may open only partially.

This bending action should be looked upon as an indication (possibly without any damage having been done) that the hook has failed and must be discarded. True, all the metal is still there—it may not even be cracked—and it is possible to bend it back into shape. To do so, however, is to risk more rapid straightening of the hook under a lighter load than opened it the first time. The metal has been permanently weakened and gets worse with each succeeding bend.

Therefore, treat an opened hook in the same manner as you would treat a broken one. Discard it and replace it with a new one. To bend the hook back into shape, and continue using it is false economy.

(Seamen's Safety Guide, August 1951, Accident Prevention Bureau of Pacific Maritime Association, San Francisco, Calif.)

FOIL THE VILLAINS

There are all kinds of galley pests, but the most common and dangerous are rats, mice, flies, and roaches. They walk and feed on all kinds of filth, pick up germs on their feet and bodies and in their stomachs, then transfer these germs to food and utensils. They are found wherever food, garbage, or waste matter is present—and wherever they go they leave bacteria and deposit their filth.

APPENDIX

Amendments to Regulations

CG 187

Chapter I—Coast Guard, Department of the Treasury

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

[CGFR 51–19]

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

SUBPART—DETAILED REGULATIONS GOVERNING INFLAMMABLE LIQUIDS

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Order No. 120, dated July 31, 1950 (15 F. R. 6521), the following corrections shall be made in Coast Guard Document CGFR 51–19, Federal Register Document 51–8521, filed July 23, 1951, and published in the FEDERAL REGISTER dated July 24, 1951, 16 F. R. 7211–7262:

Section 146.21–100 *Table D—Classification: Inflammable liquids* is corrected as follows:

1. For "acetone" (16 F. R. 7222) the required conditions for transportation set forth in column 4 under "outside containers" for "steel barrels or drums" is corrected by changing the phrase "(ICC–17E) STC, not over 5 gal. cap." to "(ICC–17E) STC, not over 55 gal. cap."

2. For "ethyl methyl ether" (16 F. R. 7237) the required conditions for transportation set forth in columns 6 and 7 are corrected by inserting the following note under "outside containers": NOTE: Total number of one or both type packages shall not exceed ten (10) on any voyage."

(R. S. 4405 and 4472, as amended; 46 U. S. C. 375, 170)

Dated: October 18, 1951.

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

[F. R. Doc. 51–12811; Filed, Oct. 24, 1951; 8:52 a. m., 16 F. R. 10857—10/25/51.]

Subchapter O—Regulations Applicable to Certain Vessels During Emergency

[CGFR 51–50]

PART 154—WAIVERS OF NAVIGATION AND VESSEL INSPECTION LAWS AND REGULATIONS [1]

ABLE SEAMEN EMPLOYED ON MERCHANT VESSELS OTHER THAN GREAT LAKES VESSELS

The purpose of the following amendment to 46 CFR 154.10, regarding employment of able seamen on merchant vessels, is to extend its application to include passenger vessels. This waiver order modifies certain statutory requirements regarding percentage of able seamen required in the crews of merchant vessels to such extent and in such manner and upon such terms as are set forth below. This waiver is also published in 33 CFR 19.10 and the change in 46 CFR 154.10 shall likewise be made in 33 CFR 19.10. Because of the urgency of providing general waiver authority in the interest of national defense it is hereby found that compliance with the notice of proposed rule making, public rule making procedure thereon, and effective date requirements of the Administrative Procedure Act is impracticable and contrary to the public interest.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by an order of the Acting Secretary of the Treasury, dated January 23, 1951, identified as CGFR 51–1, and published in the FEDERAL REGISTER dated January 26, 1951 (16 F. R. 731), the following waiver order is promulgated and § 154.10 is amended to read as follows which shall become effective on and after October 5, 1951:

§ 154.10 *Able seamen employed on merchant vessels other than Great Lakes vessels*—(a) *Waiver.* I hereby waive compliance with the provisions of section 13 of the act of March 4, 1915, as amended (38 Stat. 1169, sec. 1, 50 Stat. 199; 46 U. S. C. 672 (a)), to the extent that when properly qualified able seamen are not available to man merchant vessels of the United States other than those navigating the Great Lakes, to allow seamen examined and rated able seamen under said section after having served on deck 12 months at sea or on the Great Lakes, to compose not more than one-half of the number of able seamen required by such section to be shipped

[1] This is also codified in 33 CFR Part 19.

or employed on merchant vessels other than those navigating the Great Lakes.

(b) *Terms and conditions.* The employment of seamen examined and rated able seamen after having served on deck 12 months at sea or on the Great Lakes, as herein authorized, shall be permitted only to the extent of the nonavailability of properly qualified able seamen, as determined after reasonable efforts made by the master, owner, and others concerned to secure the employment of properly qualified able seamen, and in no event to exceed one-half the number of able seamen required by law to be employed on any merchant vessel other than those navigating the Great Lakes, and as specified in the vessel's certificate of inspection.

(c) *Penalties.* The failure of the master of any vessel sailing with a deficiency in the required complement of able seamen to comply with the conditions required by this waiver shall be considered misconduct within the meaning of R. S. 4450, as amended, 46 U. S. C. 239, and shall constitute grounds for suspension or revocation of the license of such matter; and shall subject him and the owners to all other penalties provided by law. No penalty shall be imposed as a consequence of any waiver made effective pursuant hereto.

(d) *Effective date.* This order shall be in effect on and after October 5, 1951.

(Pub. Law 891, 81st Cong.)

Dated: October 18, 1951.

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

[F. R. Doc. 51-12812; Filed, Oct. 24, 1951; 8:53 a. m., 16 F. R. 10857—10/25/51]

MOPE and DOPE

What a predicament!
No oars or lifesaving appliances.

Equipment Approved by the Commandant

[CGFR 51-44]

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Order No. 120, dated July 31, 1950 (15 F. R. 6521), and in compliance with the authorities cited below, the following approvals of equipment are prescribed and shall be effective for a period of five years from date of publication in the Federal Register unless sooner canceled or suspended by proper authority, except Approval No. 160.008/442/0, which is further limited to the duration of the National Emergency and for six months thereafter, and the following change in name of a manufacturer of approved equipment shall be made:

BUOYANT CUSHIONS, KAPOK, STANDARD

NOTE: Cushions are approved for use on motorboats of classes A, 1, or 2, not carrying passengers for hire.

Approval No. 160.007/105/0, Standard kapok buoyant cushion, U. S. C. G. Specification Subpart 160.007, manufactured by The American Pad and Textile Co., Greenfield, Ohio, for Spiegel, Inc., 1061 West Thirty-fifth Street, Chicago, Ill.

Approval No. 160.007/106/0, Standard kapok buoyant cushion, U. S. C. G. Specification Subpart 160.007, manufactured by Melman, Inc., Miami, Fla., for Phillips Hardware Co., 490 Northwest South River Drive, Miami 36, Fla.

(R. S. 4405, 4491, 54 Stat. 164, 166, as amended; 46 U. S. C. 375, 489, 526e, 526p; 46 CFR 25.4-1, 160.007)

An off station is a floating aid that has been moved from its station by adverse conditions; a deficiency to be corrected.

BUOYANT CUSHIONS, NON-STANDARD

NOTE: Cushions are approved for use on motorboats of classes A, 1, or 2, not carrying passengers for hire.

Approval No. 160.008/442/0, 15" x 15" x 2" rectangular buoyant cushion, 32 oz. Typha (processed cattail floss), dwg. No. 105B2, dated July 24, 1951, manufactured by H. S. White Manufacturing Co., Inc., Sixth and Rosabel Streets, St. Paul 1, Minn. (This approval is for the duration of the national emergency and for 6 months thereafter or for 5 years, whichever shall end first.)

(R. S. 4405, 4491, 54 Stat. 164, 166, as amended; 46 U. S. C. 375, 489, 526e, 526p; 46 CFR 25.4–1, 160.008)

BUOYANT APPARATUS

Approval No. 160.010/14/1, 10.0' x 5.0' (11" dia. body section), elliptical, hollow aluminum buoyant apparatus, 24-person capacity, dwg. No. 3177–1, dated June 13, 1951, manufactured by Welin Davit and Boat Division of Continental Copper & Steel Industries, Inc., Perth Amboy, N. J. (Supersedes Approval No. 160.010/14/0 published in the Federal Register dated Feb. 12, 1948.)

(R. S. 4405, 4417a, 4426, 4488, 4491, 49 Stat. 1544, 54 Stat. 346, and sec. 5 (e), 55 Stat. 244, as amended; 46 U. S. C. 367, 375, 391a, 404, 489, 1333, 50 U. S. C. 1275; 46 CFR 59.54a, 60.47a, 76.51a, 160.010)

Dated: September 28, 1951.

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

[F. R. Doc. 51–11938; Filed, Oct. 3, 1951; 8:53 a. m., 16 F. R. 10133–10/4/51.]

Equipment Accepted by the Commandant

CERTIFICATION OF ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of Ships' Stores and Supplies certificated from September 26 to October 25, 1951, 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:

New Process Chemical Co., Inc., 121 Clay Street, San Francisco 11, Calif., Certificate No. 337, dated October 19, 1951, "Tricon Bilge Emulsifier."

Safety Devices like parachutes are no good if you need them and don't have them

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Accidents never take a vacation

ACCEPTABLE COVERED STEEL ARC WELDING ELECTRODES

The below list includes electrodes which are acceptable to the Coast Guard for use in welded fabrication. Electrodes tested by the American Bureau of Shipping and meeting ASTM Designations A233 and A316, or electrodes tested by and meeting the Specifications of Navy Department, Bureau of Ships, will be included in the list upon request.

Position limitations indicated by numerals have restrictions as follows:

1. All positions (overhead, vertical, or horizontal fillet and flat).
2. Horizontal fillet and flat positions.
3. Flat position.

The electrodes have been tested with current as required by the specification except as noted. The electrodes where suitable for use with both AC and DC currents shall not be used with the current with which they have not been tested. The below classifications of electrodes are suitable for positions, currents and polarity as follows:

AWS Classification	Position	Type of current
Exx10	F, V, OH, H	D. C. reversed polarity.
Exx11	do	A. C. or D. C. reversed polarity.
Exx12	do	A. C. or D. C. straight polarity.
Exx13	do	Do.
Exx15	do	D. C. reversed polarity.
Exx16	do	A. C. or D. C. reversed polarity.
Exx20	H-Fillets, F	A. C. or D. C. straight polarity for horizontal fillet welds and A. C. or D. C. either polarity for flat position welding.
Exx30	F	A. C. or D. C. either polarity.

Note.—Types E6012 and E6013 electrodes shall not be employed in the fabrication of strength joints for pressure vessels, piping and other pressure-containing appurtenances. (Marine Engineering Regulations and Material Specifications, Section 56.01–20, Subchapter F, Title 46, Shipping, C. F. R.) The above types of electrodes also are not to be employed on ships' hulls in the fabrication or repair of any joint of the shell, strength deck, tank top, strength bulkheads, longitudinal strength members nor an galvanized material (Rules for Building and Classing Steel Vessels, Par. 18, Section 26, American Bureau of Shipping.)

AIR REDUCTION SALES CO., 42d St., Opposite Grand Central, New York 17, N. Y.
(Arcrods Corp., Manufacturer)

Brand	AWS class	Operating positions and electrode sizes (inches)				
		And below 5/32	3/16	7/32	1/4	5/16
Airco 78E	E6010	1	1	2	2	3
Airco 230	E6011	1	1	2	2	3
Airco 87	E6012	1	1	2	2	3
Airco 387	E6012	1	1	2	2	3
Airco 90	E6013	1	1	2	2	3
Airco 312	E6016	1	2	2	2	3
Airco 81	E6020	2	2	2	2	3
Airco 315	E6020	2	2	2	2	3
Airco 306	E6020	.....	.....	2	2	.....
Airco 93 (½ Mo.)	E7010	1	1	2	2	3
Airco 382 (½ Mo.)	E7011	1	1	2	2	.....
Airco 396 (2½ Ni.)	E7016	1	2	2	2	.....
Airco 94 (½ Mo.)	E7020	2	2	2	2	3
Airco 351 (2¼ Cr. 1 Mo.)	E9016	1	2	2	2	3

ALLIS-CHALMERS MANUFACTURING CO., Box 512, Milwaukee 1, Wis.
(The Champion Rivet Co., Manufacturer)

E6010	E6010	1	1	2	2	[1] NA
E6011	E6011	1	1	2	.....	.....
E6020	E6020	2	2	2	2	3

ALLOY RODS CO., York, Pa.
(The Champion Rivet Co., Manufacturer)

Weld Arc Type 6010	E6010	1	1	2	2	[1] NA
Weld Arc Type 6011	E6011	1	1	2	.....	.....
Weld Arc Type 6012 [2]	E6012	1	1	2	2	3
Weld Arc Type 6020	E6020	2	2	2	2	3

[1] Electrode unacceptable in these sizes.
[2] Manufactured by Alloy Rods Co.

(Continued on following pages)

BABCOCK & WILCOX CO., THE, 5 Liberty St., New York 6, N. Y.

Brand	AWS class	Operating positions and electrode sizes (inches)				
		And below 5/32	3/16	7/32	1/4	5/16
B&W 10	E6010	1	1		2	
B&W 12 [1]	E6012	1	1			
B&W 710 (½ Mo.)	E7010	1	1			
B&W 710 HT (½ Cr. ½ Mo.)	E7010	1	1			
B&W 715 (½ Mo.)	E7015	1	2		2	
B&W Croloy 2¼ (2¼ Cr. 1 Mo.)	E7015	1	2			
B&W Croloy 2 (2 Cr. ½ Mo.)	E7015	1	2			
B&W 75 (½ Mo.) [1]	E7030	3	3	3	3	3
B&W 730 (½ Mo.)	E7030				3	

CHAMPION RIVET CO., THE, Harvard Ave. and East 108th St., Cleveland 5, Ohio

Blue Devil	E6010	1	1	2	2	[3] NA
Bluedac	E6011	1	1	2		
Gray Devil No. 2	E6012	1	1	2	2	3
Graydac	E6013	1	1	NA	NA	NA
Hy-Lo	E6016	1	2	2	2	3
Black Devil	E6020	2	2	2	2	3
Blue Devil 85 (½ Mo.)	E7010	1	1	NA	NA	
Black Devil 75 (½ Mo.)	E7020	2	2		2	NA

COMBUSTION ENGINEERING-SUPERHEATER, INC., 1032 West Main St., Chattanooga 2, Tenn.

A-4	E6010	1	1			
A-2 [1]	E6030		3	3	3	
A-1 [1] (½ Mo.)	E7030		3	3	3	

GENERAL ELECTRIC CO., Schenectady 5, N. Y.
(Arcrods Corp., Manufacturer)

W-22	E6010	1	1	2	2	3
W-26	E6011	1	1	2	2	3
W-20	E6012	1	1	2	2	3
W-28	E6012	1	1	2	2	3
W-25	E6013	1	1	2	2	3
W-32	E6016	1	2	2	2	3
W-24	E6020	2	2	2	2	3
W-27	E6020	2	2	2	2	3
W-27S	E6020			2	2	
W-52 (½ Mo.)	E7010	1	1	2	2	3
W-56 (½ Mo.)	E7011	1	1	2	2	
W-62 (2½ Ni.)	E7016	1	2	2	2	
W-54 (½ Mo.)	E7020	2	2	2	2	3
W-65 (2¼ Cr. 1 Mo.)	E9016	1	2	2	2	3

HARNISHFEGER CORP., 4400 West National Ave., Milwaukee 14, Wis.

AP	E6010	1	1	2	2	3
APV	E6010	1	1	2	2	3
AC-1	E6011	1	1	2	2	3
PF	E6012	1	1	2	2	
PFA	E6012	1	1	2	2	3
AC-3	E6013	1	1		2	3
70 LA-2	E6016	1	2	2	2	3
DH-2	E6020	2	2	2	2	3
80 LE (1 Cr. ½ Mo.)	E7015	1	2	2	2	3
90 LE (2 Cr. 1 Mo.)	E8015	1	2	2	2	3

HOBART BROS., Hobart Sq., Troy, N. Y.

Hobart No. 10	E6010	1	1	2	2	
Hobart No. 55	E6010	1	1		2	
Hobart No. 335	E6011	1	1			
Hobart No. 12	E6012	1	1	2	2	3
Hobart No. 77	E6012	1	1	2	2	
Hobart No. 447	E6013	1	1	2	2	3
Hobart No. 111	E6020	2	2	2	2	
Hobart No. 885 (½ Mo.)	E7010	1	1		2	
Hobart No. 111 HT (½ Mo.)	E7020		2		2	

[1] Acceptable for use with direct current only.
[2] Acceptable for use with alternating current only.
[3] Electrode unacceptable in these sizes.
[4] Electrode also acceptable in 5/32-inch size.

(Continued on following pages)

AFFIDAVITS

The following affidavits were accepted during the period from September 15 to October 15, 1951:

Bethlehem Pacific Coast Steel Corp., Shipbuilding Division, Twentieth and Illinois Streets, San Francisco 19, Calif. Valves, flanges, fittings, forgings, bolting, and castings.

Bethlehem Pacific Coast Steel Corp., Shipbuilding Division, San Pedro Yard, Terminal Island, Calif. Valves, flanges, fittings, forgings, bolting, and castings.

Granberg Corp., 1308 Sixty-Seventh Street, Oakland 8, Calif. Fittings.

Huron Forge & Machine Co., 9041 Alpine Avenue, Detroit 4, Mich. Forgings.

Clifford-Jacobs Forging Co., Champaign, Ill. Steel Forgings.

FUSIBLE PLUGS

The Marine Engineering Regulations and Material Specifications require that manufacturers submit samples from each heat of fusible plugs to the Commandant for test prior to plugs manufactured from the heat being used on vessels subject to inspection by the Coast Guard. A list of approved heats which have been tested and found acceptable during the period from September 15 to October 15, 1951, is as follows:

H. B. Sherman Manufacturing Co., Battle Creek, Mich., Heat Nos. 746, 747, and 748.

The Lunkenheimer Co., P. O. Box 360, Annex Station, Cincinnati 14, Ohio, Heat Nos. 401 through 409.

WEAR YOUR RIGGING BELT

A seaman was standing on the mast ladder about 8 feet above the deck, painting a ventilator. He stooped over to dip the brush in the paint bucket. Just then the ship lunged, throwing him and the bucket off the ladder.

A safety or rigging belt, with a short lanyard made fast so as to support the man, would have given him plenty of freedom to move and turn, and protection against a fall.

Don't save your rigging belt until you are 30 feet off the deck. A three-foot fall can be serious too, if you land wrong.

(Shipboard Safety, August 1951, Accident Prevention Bureau of Pacific Maritime Association, San Francisco, Calif.)

CRANKING BOAT ENGINES

Boat engines equipped with starters must sometimes be cranked when the battery is low. The crankshaft and socket into which it fits are likely to be rusty. When the motor starts, the crank does not slip off easily, but turns a few revolutions before

flying off. Therefore, grease them up and be sure they slide before cranking the engine. (Your editor had the wisdom of this knocked into his head.)

Grasp the crank handle with your thumb beside your fingers, rather than in the natural way. If the engine kicks back, the handle can roll off the palm of your hand without danger. A tight grip may result in a broken thumb or arm.

(Shipboard Safety, August 1951, Accident Prevention Bureau of Pacific Maritime Association, San Francisco, Calif.)

LINE ON A GYPSY

A mooring line, under heavy tension as it is heaved in on the gypsy, has a lot of stretch in it. As it passes around the several turns on the gypsy, the tension decreases and the stretch is taken up. This take-up may proceed smoothly, or it may occur in short jerks.

If a man is not prepared for these jerks and standing well back of the gypsy, he may be caught off balance and slammed up against the winch.

The men handling the lines should be instructed and closely supervised so that no accidents occur from easily corrected mistakes. Mooring and letting go lines are a couple of operations during which the mates have direct and constant supervision of the men. They provide a good opportunity for teaching safe practices.

(Seamen's Safety Guide, August 1951, Accident Prevention Bureau of Pacific Maritime Association, San Francisco, Calif.)

DO IT BY HAND

A man was being heaved aloft in a bosun's chair on the fall. The winch driver did not hear him yell and, before the winch was stopped, the man's hand was pulled into the block.

It doesn't take much imagination to picture what would happen if the winch driver lost sight of the man in the sun or, for some other reason, hauled in a couple of feet more.

Men should be hoisted aloft by hand power. The men get their hands pinched, but there is no danger of their lines being parted. If the hauling part is kept within reach of the man in the chair, and he helps lift himself, he is in no danger of being dropped if the men below should lose their grip.

(Shipboard Safety, August 1951, Accident Prevention Bureau of Pacific Maritime Association, San Francisco, Calif.)

A whip is a single hoisting wire rope led from the boom and having a hook on the end for hoisting weights. It is one of the most useful tackles on a tender.

HOLLUP CORPORATION, 4700 West 19th St., Chicago 50, Ill.

Brand	AWS class	Operating positions and electrode sizes (inches)				
		And below 5/32	3/16	5/32	1/4	5/16
Sureweld B	E6010	1	1	2	2	3
Sureweld CB	E6011	1	1	2	2	
Sureweld N	E6012	1	1	2	2	3
Sureweld G	E6012	1	1	2	2	3
Sureweld C	E6013	1	1	2	2	3
Sureweld CN	E6013	1	1	2	2	3
Sureweld UE	E6013	1	1	2	2	3
Sureweld 7016	E6016	1	2	2	2	3
Sureweld FD	E6020		2	2	2	3
Sureweld MLY 50 (½ Mo.)	E7010	1	1		2	
Sureweld Grade 9016 (½ Mo.)	E9016	1	2	2	2	3

LINCOLN ELECTRIC CO., THE, 12818 Coit Rd., Cleveland 1, Ohio

Fleetweld 5	E6010	1	1	2	2	3
Fleetweld 35	E6011	1	1	2	2	
Fleetweld 7	E6012	1	1	2	2	3
Fleetweld 72	E6012	1	1	2	2	
Fleetweld 37	E6013	1	1			
Fleetweld 47	E6013	1	1		2	3
Shield Arc LH-70	E6016	1	2	2	2	
Fleetweld 11	E6020		2		2	3
Shield Arc 85 (½ Mo.)	E7010	1	1		2	

McKAY COMPANY, THE, York, Pa.

McKay 15	E6010	1	1	2	2	3
McKay 15D	E6010	1	1	2	2	3
McKay 11	E6011	1	1	2	2	3
McKay 17	E6012	1	1	2	2	3
McKay 14	E6013	1	1	2	2	3
McKay 24	E6013	1	1	2	2	3
McKay 16	E6020	2	2	2	2	3
McKay 20	E6020	2	2	2	2	3

METAL & THERMIT CORP., 120 Broadway, New York 5, N. Y.
(Arcrods Corp., Manufacturer)

Murex Type R [1]	E6010	1	1	2	2	3
Murex Type A	E6011	1	1	2	2	3
Murex Genex	E6012	1	1	2	2	3
Murex Genex M	E6012	1	1	2	2	3
Murex Type U	E6013	1	1	2	2	3
Murex Type HTS	E6016	1	2	2	2	3
Murex Type D	E6020		2	2	2	3
Murex Type FHP	E6020	2	2	2	2	3
Murex Molex (½ Mo.)	E7010	1	1	2	2	3
Murex Type MA (½ Mo.)	E7011	1	1	2	2	
Murex Type 8016 Q (2½ Ni.)	E7016	1	2	2	2	
Murex Type O (½ Mo.)	E7020	2	2	2	2	3
Murex Type 4216 (2¼ Cr. 1 Mo.)	E9016	1	2	2	2	3

PAGE STEEL & WIRE DIVISION, AMERICAN CHAIN & CABLE CO., Monessen, Pa.
(The Lincoln Electric Co., Manufacturer)

Page Hi-Tensile C	E6010	1	1	2	2	3
Page Hi-Tensile F	E6012	1	1	2	2	3

REID AVERY CO., Dundalk, Baltimore 22, Md.

Raco 7	E6010	1	1	2	2	3
Raco 11	E6011	1	1	2	2	3
Raco 8	E6012	1	1	2	2	3
Raco 16	E6016	1	2	2	2	3
Raco 20	E6020	2	2	2	2	3

SMITH CORP., A. O., Milwaukee 1, Wis.

SW-10	E6010	1	1	2	2	
SW-14	E6011	1	1	2	2	
SW-11	E6012	1	1	2	2	
SW-15	E6013	1	1	2	2	3
SW-35	E6020	2	2	2	2	3
SW-75 (½ Mo.)	E7010	1	1	2	2	
SW-76 (½ Mo.)	E7020	2	2	2	2	
SW-89 (2¼ Cr. 1 Mo.)	E9016	1	2		2	

[1] Manufactured by Metal & Thermit Corp.

(Continued on page 296)

UNIVERSAL POWER CORP., 735 Carnegie Ave., Cleveland 15, Ohio

(Hobart Bros., Manufacturer)

Brand	AWS class	‡ Operating positions and electrode sizes (inches)				
		And below 5/32	1/8	5/32	3/16	1/4
Hevikoat RP	E6010	1	1	----	2	----
Hevikoat AC11	E6011	1	1	----	----	----
Hevikoat SP2	E6012	1	1	2	2	----
Hevikoat AC13	E6013	1	1	2	2	3
Hevikoat FF	E6020	2	2	2	2	----
Hevikoat (½ Mo.)	E7010	1	1	----	2	----
Hevikoat HTF (½ Mo.)	E7020	2	2	----	2	----

WELD-WELL SERVICE CO., Lancaster, Pa.

(Reid Avery Co., Manufacturer)

Weld-Well 6010	E6010	1	1	2	2	3
Weld-Well 6011	E6011	1	1	2	2	3
Weld-Well 6012	E6012	1	1	2	2	3
Weld-Well 6020	E6020	2	2	2	2	3

WESTINGHOUSE ELECTRIC CORP., East Pittsburgh, Pa.

Flexare AP	E6010	1	1	2	2	3
Flexare ACP	E6011	1	1	2	2	3
Flexare FP	E6012	1	1	2	2	3
Flexare Type FP-2	E6012	1	1	2	2	3
Flexare SW	E6013	1	1	----	----	----
Flexare SW-2	E6013	1	1	2	2	3
Flexare Type LOH-2	E6016	1	2	2	2	3
Flexare DH	E6020	2	2	2	2	3

WILSON WELDER & METALS CO., Lincoln Bldg., 42d St. and Grand Central, New York 17, N. Y.

(Arcrods Corp., Manufacturer)

Wilson 98 N	E6010	1	1	2	2	3
Wilson 530	E6011	1	1	2	2	3
Wilson 107	E6012	1	1	2	2	3
Wilson 109	E6012	1	1	2	2	3
Wilson 520	E6013	1	1	2	2	3
Wilson 512	E6016	1	2	2	2	3
Wilson 105	E6020	2	2	2	2	3
Wilson 106	E6020	2	2	2	2	3
Wilson 596	E6020	----	----	2	2	----
Wilson Alloyrod A (½ Mo.)	E7010	1	1	2	2	3
Wilson 582	E7011	1	1	2	2	3
Wilson 596 (2½ M.)	E7016	1	2	2	2	----
Wilson Alloyrod B (½ Mo.)	E7020	2	2	2	2	3
Wilson 551 (2¼ Cr. 1 Mo.)	E9016	1	2	2	2	3

‡ 5/16-inch size is purchased from Wilson Welder & Metal Co.

MERCHANT MARINE PERSONNEL STATISTICS

INVESTIGATING UNITS

Coast Guard Merchant Marine Investigating Units and Merchant Marine Details investigated a total of 763 cases during the month of August 1951. From this number, hearings before examiners resulted involving 16 officers and 66 unlicensed men. In the case of officers, no licenses were revoked, 8 were suspended without probation, 5 were suspended with probation granted, 1 was voluntarily surrendered, 4 were dismissed after hearing and 1 hearing was closed with an admonition. Of the unlicensed personnel, 10 certificate were revoked, 20 were suspended without probation, 24 were suspended with probation granted, 17 were voluntarily surrendered, 3 were closed with an admonition and 7 were dismissed after hearing.

MERCHANT MARINE DECK OFFICER LICENSES ISSUED

AUGUST 1951

	Original	Renewal
Master:		
Ocean	31	210
Coastwise	3	14
Great Lakes	----	5
B. S. & L.	8	64
Rivers	3	32
Chief Mate:		
Ocean	61	51
Coastwise	----	----
Mate:		
Great Lakes	----	----
B. S. & L.	5	5
Rivers	4	23
Second mate:		
Ocean	26	72
Coastwise	----	----
Third mate:		
Ocean	78	59
Coastwise	----	----
Pilots:		
Great Lakes	1	6
B. S. & L.	85	185
Rivers	49	60
Master:		
Uninspected vessels	----	7
Mate:		
Uninspected vessels	3	----
Total	357	793
Grand total	1,150	
Radio officer licenses issued	70	

MERCHANT MARINE ENGINEER OFFICER LICENSES ISSUED

AUGUST 1951

	Original	Renewal
STEAM		
Chief engineer:		
Unlimited	32	232
Limited	6	75
First assistant engineer:		
Unlimited	44	97
Limited	4	21
Second assistant engineer:		
Unlimited	40	100
Limited	1	4
Third assistant engineer:		
Unlimited	82	93
Limited	1	----
MOTOR		
Chief engineer:		
Unlimited	5	87
Limited	19	84
First assistant engineer:		
Unlimited	4	13
Limited	6	3
Second assistant engineer:		
Unlimited	----	11
Limited	1	----
Third assistant engineer:		
Unlimited	53	95
Limited	----	----
Chief engineer:		
Uninspected vessels	7	5
Assistant engineer:		
Uninspected vessels	4	----
Total	309	920
Grand total	1,229	

ORIGINAL SEAMEN'S DOCUMENTS ISSUED MONTH OF AUGUST 1951

Region	(1) Staff Officer	(2) Continuous discharge book	(3) U. S. merchant mariner's documents	(4) AB any waters unlimited	(5) AB any waters 12 months	(6) AB Great Lakes 18 months	(7) AB tugs and tow boats any waters	(8) AB bays and sounds [1]	(9) AB seagoing barges	(10) Lifeboatman	(11) Q. M. E. D.	(12) Radio operators	(13) Certificate of service	(14) Tankerman
Atlantic coast	52	68	1892	188	83	3	----	2	----	247	275	7	1761	8
Gulf coast	8	18	631	67	27	4	----	----	----	58	63	1	602	24
Pacific coast	15	----	988	77	58	2	1	----	----	158	77	7	894	8
Great Lakes and rivers	5	1	1206	34	106	49	----	----	----	118	84	2	1122	14
Total	80	87	4717	366	274	58	1	2	0	581	499	17	4379	54

[1] 12 months, vessels 500 gross tons or under not carrying passengers.

NOTE.—Columns 4 through 14 indicate endorsements made on U. S. merchant mariner's documents.

WAIVER OF MANNING REQUIREMENTS FROM JULY 1 TO JULY 31, 1951

Region	Number of vessels	Deck officers substituted for higher ratings	Engineer officers substituted for higher ratings	Ordinary seamen substituted for able seamen	Wiper or coal passers substituted for qualified members of engine department	Total
Atlantic coast	59	----	1	53	32	86
Gulf coast	30	----	1	30	6	37
Pacific coast	39	1	----	11	57	69
Great Lakes	28	----	----	28	20	48
Total	156	1	2	122	115	240

NOTE.—In addition, individual waivers were granted to permit the employment of 21 able seamen holding certificates for "any water—12 months" in excess of the 25 percent authorized by statute.

WAIVER OF MANNING REQUIREMENTS FROM AUGUST 1 TO AUGUST 31, 1951

Region	Number of vessels	Deck Officers substituted for higher ratings	Engineer Officers substituted for higher ratings	Ordinary Seamen substituted for able seamen	Wiper or coal passers substituted for qualified members of engine department	Total
Atlantic coast	101	----	2	106	44	152
Gulf coast	18	----	----	20	3	23
Pacific coast	45	----	1	12	70	83
Great Lakes	9	----	----	3	11	14
Total	173	----	3	141	128	272

NOTE.—In addition, individual waivers were granted to permit the employment of 49 able seamen holding certificates for "any water—12 months" in excess of the 25 percent authorized by statute.

FALL FROM GANGWAY

While a vessel was loading at a Boston, Mass., berth in August, at about 9:45 p. m. a crew member returning aboard ship was observed walking on gangway returning aboard. The lower section of the gangway was lying flat on the dock with wooden planks laid across the steps for safe walking inasmuch as the dock and ship were on the same level. The crewman, a wiper, walking along this section of the gangway with a box on his left shoulder and his hat in his right hand made a grab for the man rope with his right hand, then lost his balance and toppled over the man rope. He fell between the ship and the dock, landing on the log camel. Immediate aid was given and the wiper was rushed to the hospital where he died a few hours later as a result of fractured skull and ribs. The gangway was properly rigged and lighted.

TOO MANY PACKAGES

When a fireman returned aboard his vessel from shore leave at 12:44 p. m. in September, at Alpena, Mich., he was seen carrying a package. It was raining and he was hurrying to come aboard to go on watch when he evidently slipped or lost his balance on the ship's ladder, falling about 8 feet to the concrete dock, striking his head and then fell into the water and was drowned. He was about two-thirds of the way up the ladder when he fell. A dockman witnessed the fatal accident.

UNSAFE GANGWAY

A vessel was moored to the dock at Helena, Ark., in October. At about 9:45 p. m. the cook returning to his ship fell from the gangway and drowned. The gangplank consisted of two planks about 10 inches wide, 16 feet long, and 2 inches thick. They were placed side by side and fastened with cleats placed about 14 inches apart. The distance between the vessel and the dock was about 6 feet. There were no hand rails or life lines attached to the gangplanks. No evidence of drinking or foul play.

SAFETY FOLLOWS WISDOM

The roller at the foot of both shore gangways and the ships' accommodation ladder has been the cause of many accidents.

Visitors, longshoremen, passengers, and even crew members (who should know better) have been injured, usually by catching their feet under it as the ship surges.

The surging cannot be prevented, but we feel that the accidents can, and at least one ship in our fleet has come up with an idea we feel that we should pass on.

The *African Crescent* has constructed guards in varying sizes which fit both the shore gangways and the ship's accommodation ladders. Of simple construction they screw over the bottom step and come down at right angles to cover the roller. The legend "DANGER — MOVING ROLLER" is prominent in large red letters, and the balance is painted in diagonal red and white stripes.

We feel that it is effective and worthy of duplication, as it certainly calls attention to the roller. May we suggest that our other ships follow suit.

(Farrell Lines Safety News, September 1951)

Many suggestions, and good ones, have been made on ways and means to prevent accidents. We are sure a considerable decrease has resulted. Yet one major fire can do more damage than almost all the rest of our accidents put together.

There are many ways of starting such a fire, and smoking, or lighting the smokes, in the vicinity of inflammable material, or gasses, is one of the best. We all know that. Nevertheless instances do occur when our officers do discover and stop irresponsible people smoking in proximity to, or even actually in the hatches of a vessel.

The fact that this is almost commonplace should not lessen our awareness of the potential danger, nor should the fact that it has been done so many times without untoward incident lessen our desire to control it. There is a law of averages, which is probably well on the way toward catching up with those of you who are lax in this respect.

Personal observation has shown that visitors to a ship are not the only offenders, officers and crew members as well as longshoremen and repair workers have been guilty on occasion.

Remember the law of averages, remember the tremendous dangers involved and remember that control of this smoking is *up to you! Do something about it!* If drastic measures are necessary, use them, but in any event—*STOP IT!* Signs are not enough. Enforcement is what is needed, and again that is up to you. It is your job, and we are all depending on you.

(Farrell Lines Safety News, September 1951)

An astronomical time clock is a device operating an electric switch used to turn a light off at sunrise and on at sunset. It automatically compensates for changes in seasons.

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The Merchant Marine Council gratefully acknowledges the many helpful ideas and constructive suggestions that have been received from the readers of the "Proceedings" during the past year and takes this opportunity to wish each and every member of the American Merchant Marine a most joyous and peaceful Christmas and successful New Year.