

PROCEEDINGS

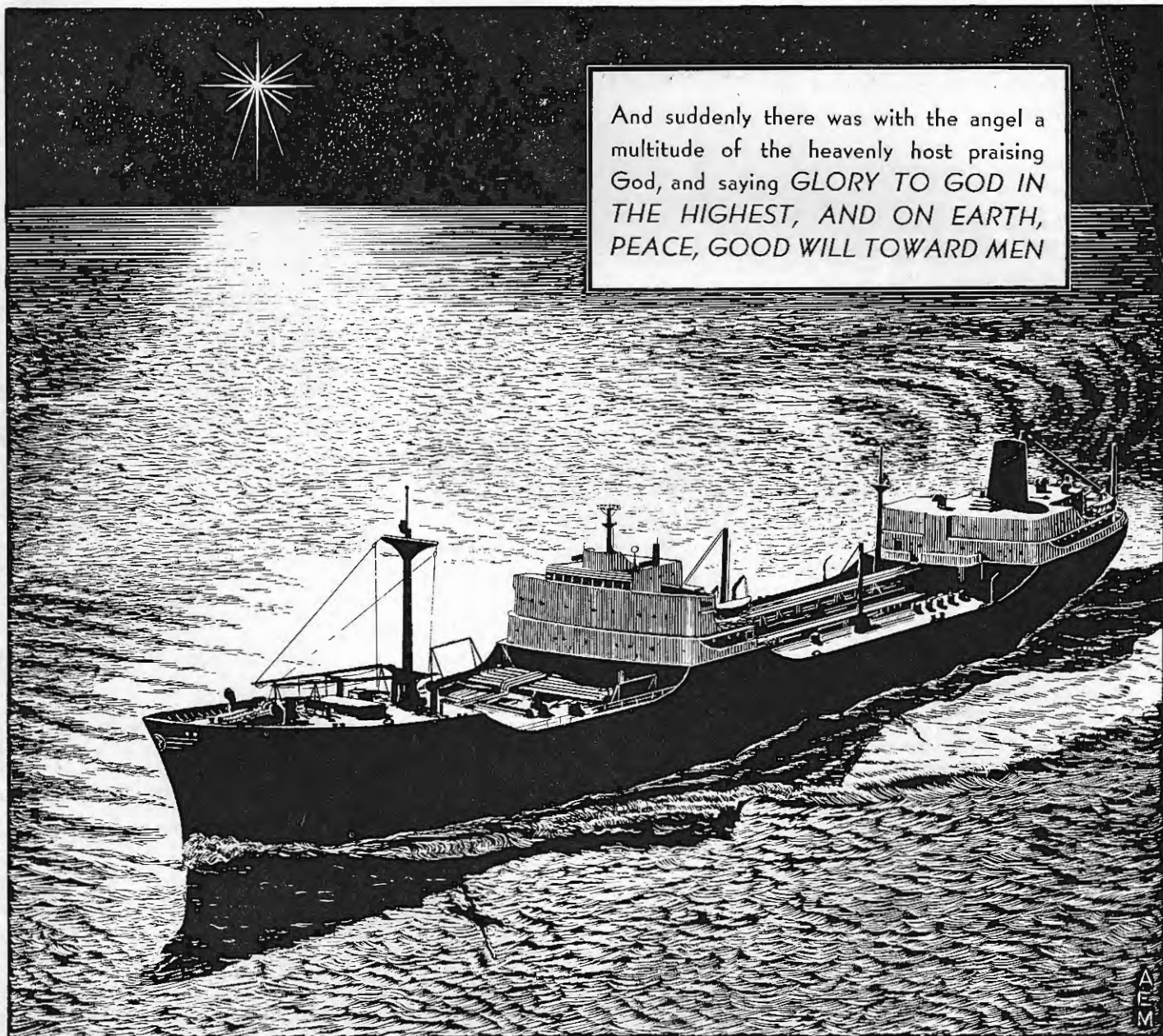
OF THE MERCHANT MARINE COUNCIL



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And suddenly there was with the angel a multitude of the heavenly host praising God, and saying *GLORY TO GOD IN THE HIGHEST, AND ON EARTH, PEACE, GOOD WILL TOWARD MEN*

Christmas 1963

PROCEEDINGS

OF THE MERCHANT MARINE COUNCIL

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Season's Greetings

As another year draws to a close the voice of Christmas is heard throughout the land and on the seas. I wish all seamen and their loved ones everywhere a joyous holiday and a safe voyage through the new year.

E. J. ROLAND,
Admiral, U.S. Coast Guard,
Commandant.

THIS COPY FOR NOT LESS THAN 20 READERS—PASS IT ALONG

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FRONT COVER

Christmas cover courtesy of Al Merrikin, Texaco.

BACK COVER

Season's Greetings and safety wishes from the National Safety Council.

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LEFT-HANDED SHIPHANDLING

By Donald F. Miley

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Editors Note: The following article by Captain Miley on Rules of the Road is presented as a matter of general interest. The views expressed by Captain Miley are his own and do not necessarily represent the official view of the U.S. Coast Guard.

WHEN TWO VESSELS are approaching each other so as to risk collision, the Rules of the Road forbid any alteration of course to the left, except when overtaking or—in the case of a burdened vessel—to avoid crossing ahead. Common violations of this rule, says the author, have resulted in many maritime catastrophies in clear weather as well as in fog.

Some time ago I was on the wing of the bridge with my Third Officer who was new to the 7,218-ton freighter *F. E. Weyerhaeuser*. He had a vessel dead ahead showing green only and headed to pass close aboard to starboard. This officer said to me, "Well, I guess I had better haul to the left a bit."

"What for?" I asked.

"To give her a little more room."

"And what are you going to do if he hauls to his right?"

"I don't believe he would do that from where he is," the Third replied.

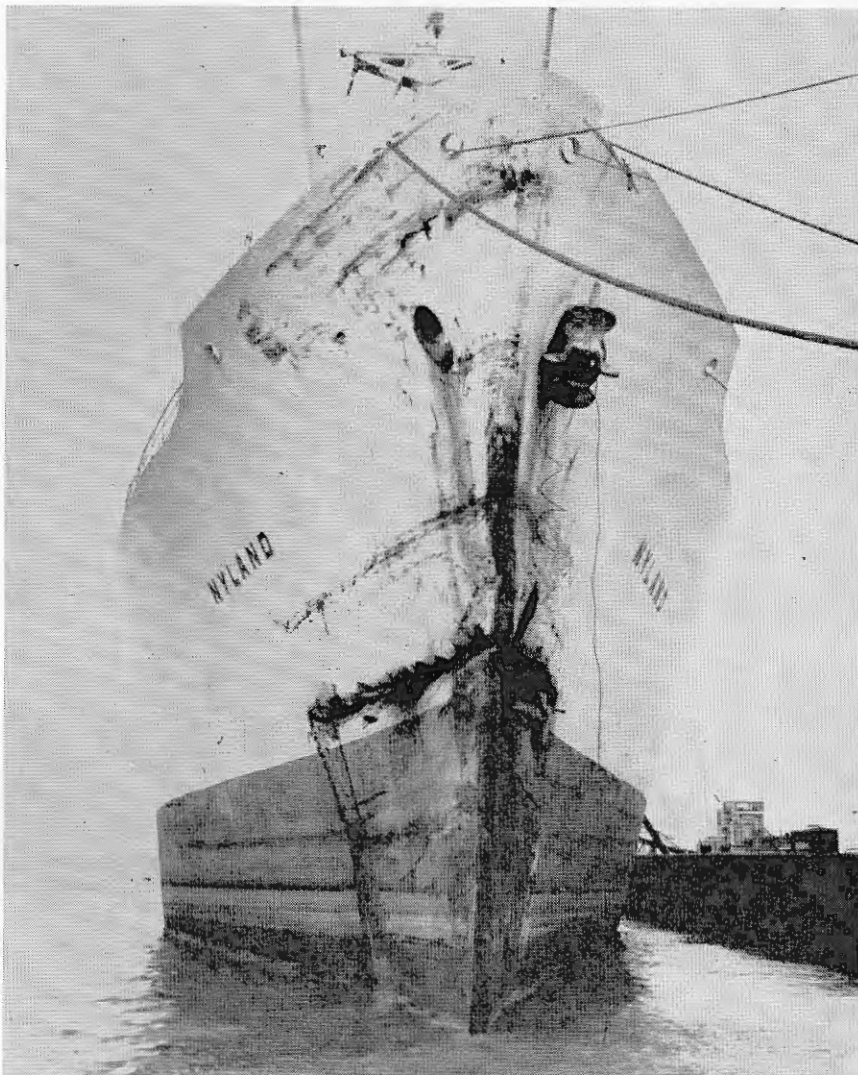
Promptly, as if on cue, the approaching vessel made a major course change to her right.

Under the International Rules, when two power-driven vessels are approaching each other so as to involve risk of collision, a turn to the left is allowed only in the following two situations: a burdened crossing vessel may swing to her left to avoid crossing ahead, and, a vessel may alter course to the left when overtaking.

In inland waters of the United States the privilege is permitted only when a vessel is overtaking. Under the Pilot Rules, a burdened crossing vessel is to avoid crossing ahead "by directing her course to starboard so as to cross the stern of the other steam vessel. . . ."

The Rules consistently hold against any alteration of course to the left. A common disregard of this precept has resulted in catastrophic consequences in clear weather as well as in fog.

Any experienced bridge watch officer has frequently met the fellow who, though he would be well clear to starboard, suddenly remembers he has read something regarding porting the helm and showing red, and so he alters course abruptly and radically to his



A COLLISION at sea can ruin your entire day.—Thucydides of Athens (371–400 B.C.)

right. But always give me this fellow in favor of the one who, in a meeting situation, skims close down your starboard side. I am unable to understand this maneuver, but it is prevalent enough to vie with the Rule itself.

This latter is a very trying situation even though the weather be clear. The following discussion pertains to this situation and its resolution.

Ship "A" is a northbound vessel on a course of 357° true. Ship "B" is southbound on a course of 180° true.

The Watch Officer of Ship "A" sees both sidelights of the other ship 3° relative on his starboard bow. He knows, if he is in international waters, that his own vessel is crossing,¹ he cannot cross ahead, and the other vessel must hold her course and speed. Vessel "A" should promptly alter course to her right.

Relative to inland waters of the United States, the court has been more lenient in their interpretation of the "end on" Rule.² The above vessels would be meeting under the *Amolco* decision; however, "A's" ob-

ligation to alter course to her right remains.

An alteration to the right seems easy enough, yet why, oh why, does a ship in "A's" situation so frequently hold on, or haul to her left? If she would simply change course promptly in accord with the Rule as soon as she recognizes the situation, everything would be easy for everyone. If she fails to do so, a problem is created for Ship "B."

Under International Rules, Ship "B" is obliged to hold her course and speed and, as long as "A" shows only green, they should leave each other clear to starboard. But, as the range closes, and as the palpitation potential climbs, "B" frequently alters course to her left "to give her a little more room." If Ship "A" should act simultaneously, altering to her right in accord with the Rule, the ships would be exactly in the ambiguous relationship that the Rules attempt to eradicate.

On the inland waters of the United States, if Ship "A" fails to alter her course to the right, "B" has a more complex problem. However, the only legal course open to her, in the opinion of this writer, is for her to alter course to her right as soon as she realizes that Ship "A" is coming too fine down her starboard side. The problems and their resolution follow.

First: Does the Watch Officer in Ship "A" consider himself crossing or meeting?

What the Watch Officer in Ship "A" thinks, or what his opposite number in Ship "B" may think he thinks, alters the situation not one bit. The court has determined this a meeting situation in a number of decisions, and a meeting situation it remains, irrespective of what anyone may think. The problem should be approached as it exists. An assumption that the other fellow *might* violate the Rule as you see it in a particular circumstance is extremely dangerous, as witness two collisions where, in the first, the OOD of a Destroyer Escort in a narrow channel surmised that a meeting ship "was about to alter course and pass down the starboard side of his vessel," and, in the other, the pilot of one vessel "thought the (other vessel) was going to pass on the left."

Second: If "A" continues to show her green, may "B" haul to her own right against that light?

In inland waters of the United States, in this meeting situation, "B" not only *may* alter her course to the right against the green light, but she *must*.

Third: If both vessels hold their courses while they close and then "A" should suddenly haul to her right,

should "B" respond with a similar alteration to her own right?

If both ships hold their courses while they close, "B" must evaluate the situation as a crossing one. If she subsequently swings to her right in answer to a similar alteration by "A", and a collision ensues, she will be faced with the irreconcilable facts in her attempt to defend her action. She will be obliged to establish why, if she considered the vessels to be meeting, she held on so long before altering course as required by the "end on" Rule, or why, if she considered the situation a crossing one, she subsequently altered course in violation of her "privilege" under the crossing Rule.

Fourth: If "A" holds on, or alters course to her left, can "B" also alter to her own left?

She cannot, except at her own peril. The meeting Rule only exempts from its requirements "two vessels which must, if both keep on their respective courses, pass clear of each other." The court has held there to be "sufficient *risk of collision* to invoke the rule not only when two vessels are heading so as to pass through the same point, but when their courses will take them near enough to each other so that an unexpected and unwarranted change of course by either vessel might bring about a collision with the other." Thus, if a watch officer feels he need haul to the left, the other vessel is not passing clear as required by the Rule. He stands self-convicted when he has "to give her a little more room."

To sum up, a vessel in international waters seeing the green light of another vessel ahead whose range lights indicate a heading close down the starboard side, must hold her course and speed, the situation is crossing. She must bank on the other ship clearing her. In inland waters of the United States, in the same situation she *must* haul to her right, as the situation is a meeting one. She should take this action immediately and unmistakably as soon as the situation becomes clear.

Nowhere do the Rules ratify a change of course to the left in meeting or crossing. Almost all the officers I have sailed with, however,

make an alteration of course to the left when a ship is coming close down their starboard side; the reason is always the same, "I wanted to give her a little more room." They take this action though they are totally unable to justify it, even though many of them can quote the Rules.

In a collision between the *Marine Leopard* and the *Howard Olsen* on the California coast, the Second Officer of the *Howard Olsen* hauled left "to allow more passing room" and his ship was sliced in half. This happened in perfectly clear weather.

Many other clear weather collisions can be cited demonstrating the tragedy of this lefthandedness—senseless tragedy. The following information is incidentally available aboard the ship, and many more examples could be cited upon careful examination of the record.

On 16 December 1949, the Swedish MV *Ekefors*, inbound toward the Quarantine Anchorage in New York Harbor, passed Craven Shoal Buoy and hauled to her left to pass outward bound traffic starboard to starboard. The reason for this maneuver was so that she wouldn't have to round to into the flood tide at the anchorage. The cost was about \$110,000. She tangled with the *Seatrain Texas* when she proposed a two-blast passing where port-to-port was clearly indicated.

On the night of 27 June 1950, I was entering New York Harbor. As our vessel passed through the Narrows, bright lights and a bustle of activity could be seen ahead on Gowanus Flats. As we entered Bay Ridge Channel, we saw the SS *Excalibur*, down by the head, with a gaping hole in her side, apparently grounded on the flats. How did she come there? Via the same route, the starboard-to-starboard passage attempt. She had rounded buoy 24 and, in a clearly meeting situation with the inbound Danish MV *Colombia*, proposed a two-blast passing.

On 16 February 1951, the SS *Exanthia* and the SS *Elizabeth* tore about \$450,000 worth of skin off each other on Miah Maul Range in the Delaware River where, in this restricted channel, the *Elizabeth* proposed a starboard-to-starboard passage.

Again on Miah Maul Range at the junction of Cross Ledge Range, an inward bound U.S. Navy destroyer escort, as mentioned earlier, sounded a two-blast signal to an outward bound vessel on the "Officer of the Deck's surmise that (the other ship) *was about to* (italics supplied) alter course and pass down the starboard side of his vessel." Imagine the fear that clutched suddenly at the down-

ABOUT THE AUTHOR

Formerly Master of the SS F. E. Weyerhaeuser, Donald F. Miley is presently Master of the George S. Long of the Weyerhaeuser Steamship Co. During World War II, he served with the U.S. Merchant Marine and is now a lieutenant commander in the U.S. Naval Reserve.

bound pilot as that blast signal turned a routine meeting into a catastrophe.

The *Yoshida Maru* some years ago near Fort Stevens in the Columbia River walloped into the *Charles R. McCormick* because the *Yoshida's* pilot "thought the *McCormick* was going to pass on the left."

It is understandable, even if inexcusable, how this kind of casualty can occur when one reads an article on radar plotting which adequately indicates what little consideration may be given to a change of course to the left. This article appeared in the September 1959 issue of *Proceedings of the Merchant Marine Council*, a publication dedicated to increasing safety at sea.

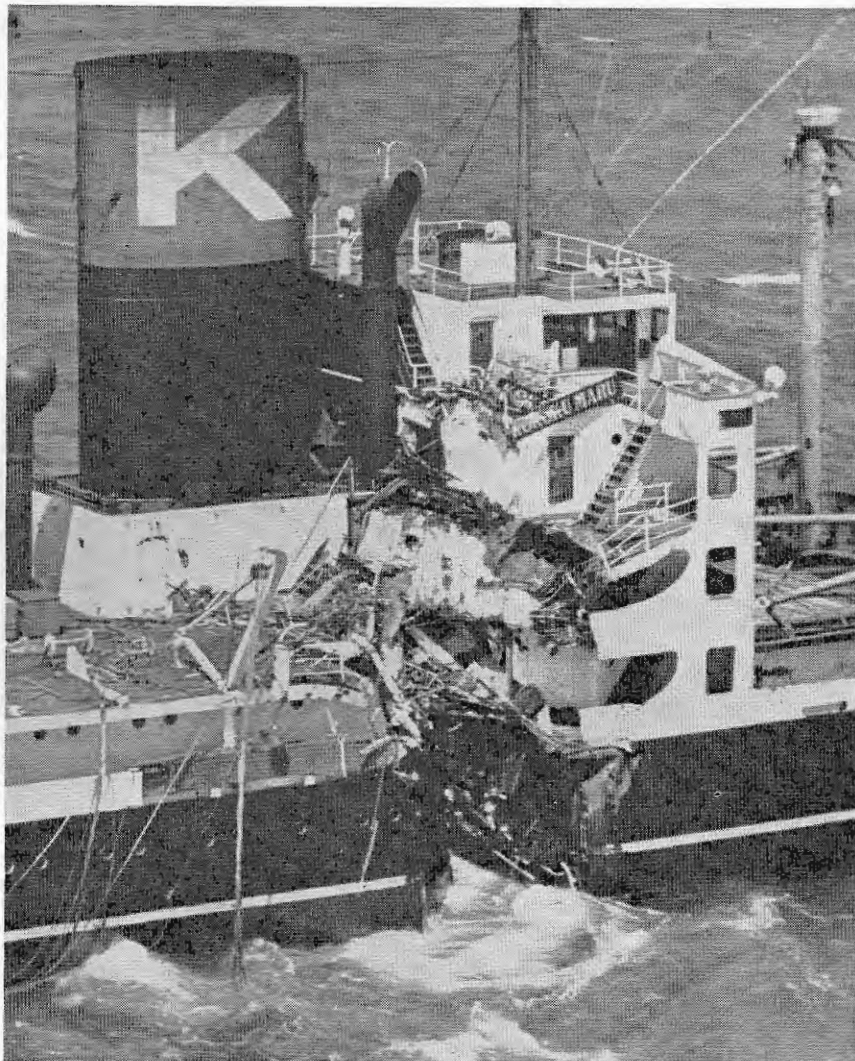
I must emphatically state that I fully understand this article to be an example of radar plotting, not at all dealing with Rules of the Road. But its author has had command experience at sea and the mere fact that he could seriously suggest the following procedure makes my point exactly.

The article asks the reader to imagine himself a Watch Officer in a ship approaching the English Channel on a course of 055° true. The Old Man has a standing order to call him if any other ship should pass within 1 mile. A vessel appears on the radar at 20,000 yards and bearing 040° true at 0205 hours. The article demonstrates the plot by which the approaching vessel's course is determined to be 192.5° true, crossing from your port to your starboard. The article then continues as follows: "You are ready to call the Old Man through the speaking tube. Without waiting for him to wake clear up, you can recommend that you haul *left* (italics supplied) to 032° true at 0214 and that the other ship should pass 2 miles off your starboard beam. With such positive information, he will probably tell you to go ahead and change course and roll over and go back to sleep. In any event, you have demonstrated your proficiency as a 20th century navigator."

Perhaps that "Old Man" would roll over and go back to sleep, but not this one. Any Watch Officer who, in the clearest possible case of privilege, suggested hauling the vessel in *any* direction would be a risk, but one who suggested hauling left couldn't be trusted to stand another watch.

The reason given for altering to the left in the article is "Naturally, if it becomes necessary to change course, you want to make the minimum course change." So *that's* why they do it!

Almost all clear weather collisions occur because of a violation of the meeting or crossing Rules. In fog, however, the absence of any right of



AP wirephoto

way allows a shipmaster to alter course in any direction.

In the *Andrea Doria/Stockholm* collision, the testimony brought out that the *Andrea Doria* had seen the *Stockholm* on her radar at 17 miles distant and 4° on the starboard bow. When the *Stockholm* was bearing about 15° and 3½ miles on the starboard bow, Captain Calamai altered the *Andrea Doria's* course 4° to the left. The next bearing given in the testimony was when the "glow" of the *Stockholm's* lights was seen about 20° to 25° to starboard and about 1.1 miles off, when the *Andrea Doria's* helm was put full left. Seconds later, she shuddered and resounded with the tearing of steel as the *Stockholm* ripped deep into her starboard side.

In the *Santa Rosa/Valchem* collision at sea in a patchy fog off the

Jersey Coast, the Assistant Watch Officer on the bridge of the *Santa Rosa* during the midwatch, plotted a target just picked up on the 6-mile scale of the radar—bearing 018° true, 4.9 miles off. This bearing was also relative as the ship was steering North. The engineroom telegraph was rung up to stand by and fog signals were begun as the lights of the other vessel were not visible. The course was altered 1° to the left. Three minutes later the target was again plotted bearing 021° relative, 3 miles distant. The closest point of approach (which, of course, depended upon both vessels holding course and speed) was calculated as 0.3 mile to starboard. The Master of the *Santa Rosa* altered course 4° to the left "to allow for more room." At 0301 the *Santa Rosa* sliced into the boiler room

spaces of the *Valchem*. Four men died, 44 were injured, and about \$1,890,000 went down the drain in property damage.

A Victory ship, Ship "A," was proceeding down the Washington coast in dense fog when a large radar target appeared ten degrees relative on her starboard bow, 5 or 6 miles distant. When this target had closed to 3½ to 4 miles without appreciable change in bearing, the Master of the Victory ship changed course 5° to the left. A few minutes later he changed course another 5° left. The ships steadied up on this new course when the other vessel was sighted about one-half mile off and crossing the bow. Ship "A" immediately rang "full astern" but, nevertheless, slammed into Ship "B," a T-2 tanker, at the forward end of the poop deck.

In the above-mentioned low visibility collision situations, the master of each ship that hauled to the left commenced his action when the vessels were in the same approximate relative positions. They each made the same approximate course change, and all with identical results.

In the similar left-handed *Royalton/Monrovia* collision, the Marine Board of Investigation remarked that "in the absence of any determination as to the course or intention of the *Monrovia*, the course alterations to the left on the part of the *Royalton* were ill advised." Yes indeed!

It might well be argued that, had these vessels been maintaining a proper plot, these accidents would never have happened. Let me, then, cite a case which occurred while I was writing this article, and to my own ship.

On 14 March 1961 at 0330, we departed Cape Henry for Cristobal. We encountered fog patches at False Cape Buoy and then continual low visibility conditions throughout the morning.

While we were making Bodie Island Buoy a radar target appeared dead ahead. We plotted the oncoming vessel directly down the heading marker which, of course, put us on reciprocal courses, i.e., we were also dead ahead of her.

When her range was 6 miles, we reduced speed from half to slow and altered course 10° right to pass very close to the buoy. This left the other vessel about 3,500 miles of sea room to her right. At 4 miles we heard her whistle and stopped the engine. As she had not yet made any course change, and we were not opening the bearing satisfactorily at our slow speed, we again altered course another 15° right, shaping to pass on the wrong side of the buoy. Suddenly we heard two blasts of her whistle.

The radar plot showed clearly that she was making way. Therefore, her Master was making one of two mistakes. The first, he could be sounding two blasts indicating his vessel was under way but had no way upon her when all he had done was stop the engine, a practice not uncommon. (In the *Santa Rosa/Valchem* collision, the *Valchem*, making 16 knots at full speed, sounded two prolonged blasts at the same time that the engine order telegraph was rung to stop.) Or, second, he could be indicating that he was putting his rudder left, an illegal signal when vessels are not in sight of one another.

As there was no reason whatsoever to suggest that he would alter his course to the left, it seemed that the first supposition was likely the correct one. An alteration to the left would not only have been inadvisable, but entirely unreasonable. My concern with this very problem, however, prompted me to be wary. I decided to act as if he were swinging left, as that was the only action he could take which would enable him to get at us.

If he were swinging left, stopping our ship athwart his projected course would have been a bid for bisection. We were already swinging right so we went full ahead and full right rudder. He sounded another two-blast signal and I could see the trace of his wake on the radar as he turned directly into us. We could do nothing further.

The other vessel broke clear of the fog about a point forward of our beam, headed into our port bow. We had little way on, and by this time our bow was swinging rapidly away. We came broadside to each other about two-tenths of a mile apart. A few seconds delay in acting would have put us among the 1961 statistics. It can be seen that our maintaining of a proper plot in no way prevented the other ship from hauling to her left, nor could it have prevented the collision.

By the above examples of left-handedness, both in clear weather and fog, I intended to demonstrate the touchiness of a situation where, in meeting, one ship is slightly on other's starboard bow. I have also tried to show the consistency of the Rules in their insistence that meeting vessels alter course to the right where risk of collision exists. But, more imperatively, I hope to have established adequately that there is need for a specific provision in the Rules prohibiting an alteration of course to the left when vessels are meeting during low visibility.

A simple supplement to the present Rule specifically prohibiting, ex-

cept *in extremis*, a change of course to the left by either vessel when there is risk of collision in low visibility would have prevented not only the *Andrea Doria* disaster, but also the *Santa Rosa/Valchem* collision and numerous others.

It is noted that the Annex to the proposed new International Rules of the Road states in Section (6) "The direction of an alteration of course is a matter in which the mariner must be guided by the circumstances of the case. An alteration to starboard, particularly when vessels are approaching apparently on opposite or nearly opposite courses is generally preferable to an alteration to port."

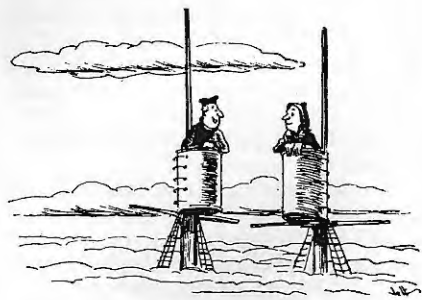
This is a tottering step in the right direction, but tottering because of its vague application. It is a general recommendation carrying little weight or force.

The problem of meeting vessels is covered by a Rule which, in its almost ridiculous redundancy, indicates accurately the danger inherent in this situation. But this Rule deals only with vessels which are in sight of each other. It certainly cannot be considered a less dangerous situation in fog.

¹ See R. F. Farwell and A. Prunski, *The Rules of the Nautical Road* (Annapolis: U.S. Naval Institute, 1959), p. 249. "... the *Comus* (2 CCA) 1927 AMC 860, in which two vessels at sea intersecting courses 1° from head to head until within 2 miles of each other were held to be crossing vessels."

² *Supra*, p. 250. "Approaching vessels whose courses diverge not more than one or two points are meeting end on or nearly so within Art. 18 of the Inland Rules and are required to pass port to port." The *Amolco* (CAA Mass. 1922) 283 F. 890.

³ *Supra*, p. 249, pt. III, sec. 47.



Quite a fog layer, isn't it? Did you hear a heckuva crash a few minutes ago?

Courtesy of Shipping Register & Shipbuilder.



MARITIME SIDELIGHTS

There were 911 vessels of 1,000 gross tons and over in the active oceangoing U.S. merchant fleet on October 1, 1963, 7 more than the number active on September 1, according to the Maritime Administration. There were 15 Government-owned and 896 privately owned ships in active service. These figures did not include privately owned vessels temporarily inactive. They also exclude 26 vessels in the custody of the Departments of Defense, State, Interior, and the Panama Canal Company. A combination passenger-cargo containership, *Santa Maria*, 3 freighters, the *Aimee Lykes*, *Charlotte Lykes*, and *Export Champion*, and the tanker *Texaco Maryland*, were delivered from construction. A passenger-cargo ship, a freighter and a tanker were transferred foreign, and two freighters were converted to barges. The total Government fleet decreased by 7 to 1,826. The total U.S. merchant fleet decreased by 7 to 2,804.



American Export and Isbrandtsen Lines have adopted a new system for identifying the 44 ships comprising the company's recently combined fleet. The red and white bands with blue top on tan funnels, adopted in 1951 to distinguish the luxury liners *Independence* and *Constitution*, and also the *Atlantic*, will henceforth be the standard design for the 39 cargo-liners as well as the "Aces" *Excalibur* and *Exeter*.

Isbrandtsen's familiar sky blue flag with its white St. Andrews cross on a tan funnel will soon disappear from the high seas. All passenger and cargo ships in the combined fleet now fly the newly designed house-flag comprised of a white globe, outlined in blue, and surmounted with a block "E" in the center of a red field.



The Life Saving Benevolent Association of New York has presented the Maritime Association with a radar simulator for use by the Federal agency's radar training school in New York City.



MEMBERS OF THE Western Rivers Panel of the Merchant Marine Council of the U.S. Coast Guard are shown above as they met in New Orleans last September to consider and make recommendations concerning safety of navigation on the Mississippi River System and the Gulf Intracoastal Waterway. The Panel, whose 29 members were appointed by Admiral Edwin J. Roland, Commandant of the Coast Guard, is an industry advisory group to the Coast Guard. Braxton B. Carr, President of The American Waterways Operators, Inc., is chairman of the Panel and presided at the meeting. Admiral Roland headed the Coast Guard delegation of 17 officers which met with the Panel.

The new Farrell Lines freighter *African Dawn* recently established a new speed record between Capetown and Boston, making the 6,730-mile run to the States in 12 days, 12½ hours for an average speed of 22.4 knots. The vessel had also established a speed record on her outbound maiden voyage to Capetown. The ship is under the command of Capt. Erik Tallbe.



The Coast Guard has rescued a West German seaman who spent a total of 15 hours swimming in the Atlantic Ocean without a lifejacket. The man had fallen overboard from the freighter *Freiburg* en route from Tampico to Antwerp. He was reported to be in excellent condition, apparently suffering no more than salt irritation and sunburn from his long immersion. The rescue was greatly assisted by the man when he used his white undershirt to signal the searching cutter.

The keel for the fourth of six cargo-liners being constructed for Moore-McCormack Lines has been laid at Ingalls shipyard, Pascagoula, Miss. The six ships, called collectively the Constellation class, form the third group ordered by the company in its replacement program. Each of the vessels will be of 12,055 deadweight tons and will have a rated speed of 21 knots.



Alcoa Steamship Co. has acquired three C-2-type freighters under the company's continuing program of vessel replacement. The ships, purchased from the U.S. Maritime Administration, have been named the *Alcoa Master*, the *Alcoa Marketer*, and the *Alcoa Voyager*. A total of four C-2-type vessels have to date joined the Alcoa roster under provisions of legislation passed in 1960 which enables nonsubsidized U.S.-flag companies to update their fleets.



nautical queries

DECK

Q. Sextant errors which cannot be adjusted and which are indicated on the manufacturers certificate are:

- (a) Prismatic errors
- (b) Graduation errors
- (c) Centering errors
- (d) Errors of collimation
- (e) (a), (b), and (c) above

A. (e) (a), (b), and (c) above

Q. In order to obtain the correction for great circle for a radio bearing, the appropriate table should be entered with ----- between the sending and receiving stations.

- (a) The middle longitude and difference of latitude
- (b) The difference of longitude and the middle latitude
- (c) The difference of longitude and the difference of latitude
- (d) The middle latitude and middle longitude

A. (b) The difference of longitude and the middle latitude

Q. A vessel whose fresh water allowance is 5 inches is loading in a port where the water is brackish and of a density of 1.015. How much may the salt-water load line be immersed?

A. Salt-water density =

$$1.026 \text{ or } 1.025$$

Fresh-water density =

$$1.015 \quad 1.015$$

$$\text{Difference} \quad 11 \text{ or } 10$$

Immersion of salt-water load

$$\text{line} = 11/26 \times 5 = 2.1 \text{ inches}$$

$$\text{or } 10/25 \times 5 = 2.0 \text{ inches}$$

Salt-water load line may be immersed 2.0 or 2.1 inches.

Q. A cargo of gasoline has a coefficient of expansion of .0006 per degree Fahrenheit. If this cargo is loaded at a temperature of 60° F., and cargo temperatures up to 74° F. are anticipated on the voyage, how many barrels would you leave out in a tank whose capacity is 10,000 bbls., in order to allow for expansion?

$$A. .0006 \times (74 - 60) = .0084$$

$$.0084 \times 10,000 = 84 \text{ bbls. to be allowed for expansion}$$

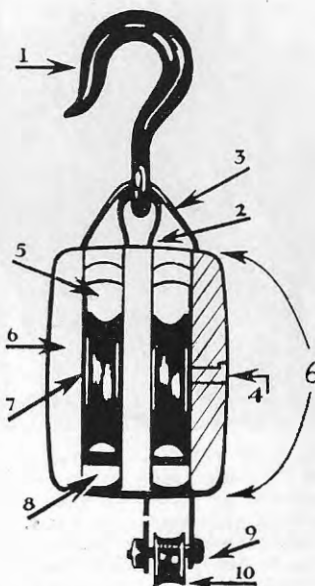
The above solution is the one in general use. A somewhat more refined solution would be:

$$\frac{10,000}{1.0084} = 9916.7$$

83.3 bbls. to be allowed for expansion

BLOCKS AND TACKLES

Q. Name seven of the ten parts of a block indicated on the diagram below:



- | | |
|---------------------------|--------------------|
| A. 1. Hook | 6. Cheeks or shell |
| 2. Inner strap or thimble | 7. Sheaves |
| 3. Outer strap | 8. Breech |
| 4. Pin | 9. Becket |
| 5. Swallows | 10. Thimble |

Q. Three hundred (300) tons of ½" steel plates with a stowage factor of 7 are stowed across the bottom of a cargo hold measuring 60 feet by 40 feet. At what height is the center of gravity of the parcel of cargo above the inner bottom?

How could you raise the height of the center of gravity and facilitate discharge?

$$A. 60 \times 40 = 2400 \text{ sq. ft. of area of bottom of hold.}$$

$$300 \times 7 = 2,100 \text{ cu. ft. required stowage space.}$$

$$\frac{2100}{2400} = \frac{7}{8}' \text{ or } \frac{7}{8} \times 12 = 10\frac{1}{2}''$$

total height of cargo

$$5\frac{1}{4}'' \text{ Center of Gravity of parcel above tank top}$$

The Center of Gravity could be raised and discharging facilitated by using ample dunnage between plates.

ENGINE

Q. What action would you take, as a Chief Engineer, if you discovered bagged or blistered plates in boilers for which you were responsible? What repairs may be made in such cases?

A. When the shell plates of cylindrical boilers which are exposed to the radiant heat of the fire become bagged or blistered, it shall be the duty of the chief engineer in charge of the vessel to notify the Officer in Charge, Marine Inspection for examination before raising steam on the boiler.

Where the shell plate is bagged due to overheating, the Officer in Charge, Marine Inspection, may, in his judgment it is practicable, permit the same to be driven back to its original position.

Where the shell plate has blistered, bagged, or bulged to such an extent that there is an appreciable thinning of the plate, the Officer in Charge, Marine Inspection shall require the defective portion to be cut away and the shell repaired by fitting a patch of steel plate conforming to the requirements in place of the defective portion, care being taken that the riveting schedule of the patch is so arranged as to give the plate sufficient strength to withstand the allowable stress placed on it in service.

Q. State when and how the main steam piping and other steam piping subject to main boiler pressure and over 3 inches in diameter shall be tested.

A. Main steam piping shall be subjected to a hydrostatic test equal to 1¼ times the maximum allowable pressure at the same periods as prescribed for the boilers. The hydrostatic test shall be applied from the boiler drum to the throttle valve. If the covering of the piping is not removed, the test pressure shall be maintained on the piping for a period of 10 minutes, and, if any evidence of moisture or leakage is detected, the covering shall be removed and the piping thoroughly examined. Other steam piping subject to main boiler pressure and exceeding 3 inches in diameter shall be subjected to a hydrostatic test pressure of 1¼ times the maximum allowable pressure after each 4 years of service.

MERCHANT MARINE PERSONNEL STATISTICS

MERCHANT MARINE OFFICER LICENSES ISSUED

QUARTER ENDING SEPTEMBER 30, 1963

DECK

Grade	Original	Renewal	Grade	Original	Renewal
Master:			3d mate:		
Ocean.....	35	420	Ocean.....	131	97
Coastwise.....	12	27	Coastwise.....		
Great Lakes.....		13	Pilots:		
B.S. & L.....	7	67	Great Lakes.....	1	13
Rivers.....	3	62	B.S. & L.....	42	26
Radio officer licenses issued.....	21	46	Rivers.....	192	38
Chief mate:			Master: Uninspected vessels.....	21	15
Ocean.....	19	81	Mate: Uninspected vessels.....	10	4
Coastwise.....	2	2	Motorboat operators.....	286	580
Mate:			Total.....	851	1,607
Great Lakes.....					
B.S. & L.....	3	11	Grand total.....	2,458	
Rivers.....	14	23			
2d mate:					
Ocean.....	52	82			
Coastwise.....					

ENGINEER

Grade	Original	Renewal	Grade	Original	Renewal
STEAM			1st assistant engineer:		
Chief engineer:			Unlimited.....	7	12
Unlimited.....	25	528	Limited.....	8	19
Limited.....	2	71	2d assistant engineer:		
1st assistant engineer:			Unlimited.....	4	8
Unlimited.....	37	139	Limited.....	4	---
Limited.....	3	8	3d assistant engineer:		
2d assistant engineer:			Unlimited.....	184	129
Unlimited.....	43	188	Limited.....	2	---
Limited.....			Chief engineer: Uninspected vessels.....	14	7
3d assistant engineer:			Assistant engineer: Uninspected vessels.....	13	2
Unlimited.....	226	216	Total.....	603	1,522
Limited.....			Grand total.....	2,125	
MOTOR					
Chief engineer:					
Unlimited.....	5	90			
Limited.....	26	105			

WAIVER OF MANNING REQUIREMENTS

Waivers	Atlantic coast	Gulf coast	Pacific coast	Great Lakes	Total
Deck officers substituted for higher ratings.....					
Engineer officers substituted for higher ratings.....	1	1			2
Ordinary seamen for able seamen.....	1				1
Wiper or coalpassers for qualified member engine dept.....					
Total waivers.....	2	1	0	0	3
Number of vessels.....	2	1	0	0	3

INVESTIGATING UNITS

Coast Guard Merchant Marine Investigating Units and Merchant Marine Details investigated a total of 3,150 casualty cases and 2,126 complaint cases during the third quarter of 1963. During this period 828 licensed and 2,367 unlicensed seamen were subject to investigation and remedial action involving 73 licenses and 481 merchant mariner's documents were completed. In the case of licensed personnel, 1 license was revoked, 3 suspended outright, 9 suspended outright plus an additional suspension on probation, 16 suspended on probation, 4 cases were closed with an admonition and 38 warnings were issued. Seventeen cases were dismissed after a hearing. Of the unlicensed personnel, 11 merchant mariner's documents were revoked, 21 suspended outright, 60 suspended outright plus an ad-

ORIGINAL SEAMEN'S DOCUMENTS ISSUED

Type of document	Atlantic coast	Gulf coast	Pacific coast	Great Lakes and rivers	Total
Staff Officer.....	24	6	19	2	51
Continuous discharge book.....	232	16			248
Merchant mariner's documents.....	1,711	749	1,133	1,036	4,629
AB any waters unlimited.....	154	58	97	40	349
AB any waters, 12 months.....	71	36	26	45	178
AB Great Lakes, 18 months.....	1		8	14	23
AB tugs and towboats, any waters.....	2	1	5	2	10
AB bays and sounds.....	2				2
AB seagoing barges.....	2				2
Lifeboatman.....	392	7	65	18	482
QMED.....	287	83	107	57	534
Certificate of service.....	1,760	737	1,057	974	4,528
Tankerman.....	18	81	11	58	168
Total.....	4,656	1,774	2,528	2,246	11,204

ditional suspension on probation, 95 suspended on probation, 30 cases were closed with an admonition and 244 warnings were issued. Twenty-six cases were dismissed after a hearing. Two licenses and 23 documents were voluntarily surrendered in lieu of a hearing. Twenty-four licenses and 183 documents were voluntarily deposited due to temporary unfitness for sea duty and 8 licenses and 90 documents returned upon a finding of fit for duty.

SPIRAL WOUND GASKET BLOWOUT

Simultaneous blowout of two flange gaskets on a main steam line at 425 psi recently allowed steam to escape and ground out the main lighting, AC generators and switchboards. The vessel involved had to be towed to port for repairs. Had this casualty occurred ten minutes later it is very probable that several men might have been injured by this sudden release of main steam.

Apparently the failure was brought on by a surge in steam pressure associated with using the steam soot-blower. Visual inspection, if it had been physically possible, might have indicated the failure was imminent. However, there seems to be a better way to prevent such a dangerous failure. The failed gaskets were of the spiral wound type without a solid steel centering ring.

A leading manufacturer of this type of gasket has stated that he concurs with the Investigating Officer's statements that spiral-wound gaskets with solid steel centering rings are preferred for safety reasons. It is possible for leakage to occur in this type of joint, but if the joint is properly made-up, it is virtually impossible to have a gasket blowout.

This manufacturer further recommends that any gaskets without solid steel centering rings, which are currently in use on Class I steam piping, be replaced when expedient. It is realized it would be uneconomical to issue instructions to require immediate replacement or to prohibit the further use of gaskets without the outer ring. The Commandant does believe that it would be wise to replace the gaskets in question with the type having the integral solid steel outer ring whenever overhauls are scheduled.

In addition to the safety factor of preventing gasket blowouts by using the solid integral outer ring, this type of gasket will insure proper alignment and centering of the gasket in the joint. It will also serve as a compression gauge to indicate to the fitter when he has achieved optimum gasket compression and provides increased radial strength to the gasket.

The above is offered for information and guidance. The Commandant does not intend to issue regulations requiring any of the actions recommended above.



STATISTICAL SUMMARY OF PERSONNEL INJURIES ON BOARD ALL COMMERCIAL VESSELS* (NOT INVOLVING A VESSEL CASUALTY)

1 July 1962-30 June 1963

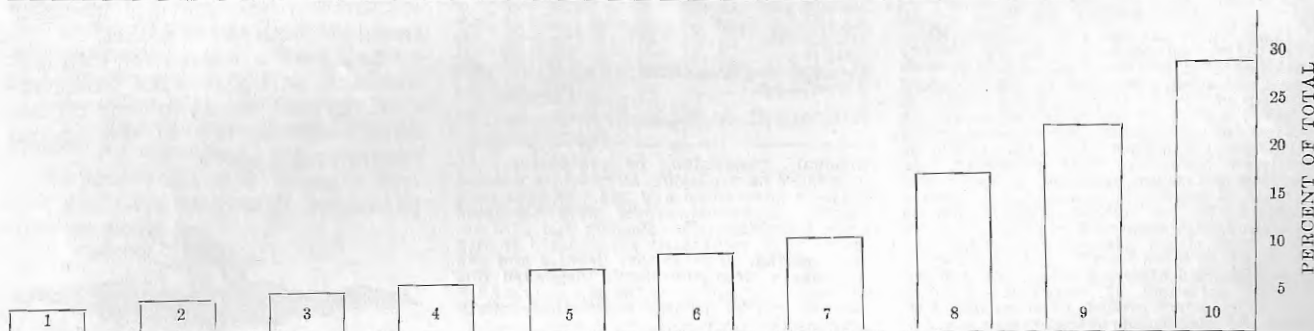
Injuries (Total)	Type of casualty	Cause of injury																	
		Intoxication	Physical deficiency	Unsafe movement (running, jumping, etc.)	Psychological (immaturity, insanity)	Unsafe practice	Law violation	Human errors (carelessness)	Weather conditions	Poor maintenance (housekeeping)	Inadequate lighting	Inadequate rails, guards, etc.	Failure approved equipment or material	Failure unapproved equipment or material	Supervision inadequate	Life preservers insufficient	Lack of tools/equipment	Lack of protective gear	Miscellaneous causes
		<i>Number of injuries</i> Crewmembers..... 1,792 Passengers..... 26 Longshoremen/harborworkers... 12 Others..... 5 Total..... 1,835																	
167	Slips and falls—Ladders.....	6	3	4		28	1	96	4	11		2		4			6		2
35	Slips and falls—Gangways.....	10		2		1		15	2			2					1		2
254	Slips and falls—On deck.....	16	6	7		9		119	26	50	1	1		2	2		5		10
67	Slips and falls, other—Same level.....	2	1	2		8		37	2	9	1						2		3
3	Falls from vessel—Into water.....		1					2											
9	Falls from vessel—Other.....			2		5		2											
14	Falls into hold, tank.....		1			3		9											
126	Falls—Other—Different level.....	5	4	1		31		53	4	3		6		6	7		5		1
143	Struck by—Falling object.....		4	1		17		75	1	2		1		16	11	3	11	2	3
76	Struck by—Flying object (mooring lines—Cargo gear).....					12		21	4					21	12		4		2
32	Struck by—Moving object (other than vessel).....					5		19						2	3		2		1
2	Struck by—Boat or vessel.....																		2
2	Exposure.....					2													
2	Asphyxiation.....					2								2					
152	Struck against.....	5		2		7		99	22	2				2			6	2	5
3	Cargo handling.....														1				
50	Operating machinery—Tools.....			1		12		22						1	5		9		
45	Burns.....					4		30						3	4		2		
39	Scalds.....					2		23	2					6	2		3		
6	Electric shock and burns.....					3		2									1		
56	Caught in lines and chains.....					9		30	1	1		1		3	2		5	1	3
126	Pinching—Crushing.....	1	2			12		89	12	1				1	4		4		
1	Heavy weather.....							1											
87	Over exertion.....		2	84				1											
119	Sprains and strains.....	2	1	66		12		25	5	4			1	1			2		
101	Cuts, punctures, etc.....	1		1		7		70	3	4		1		2	2		10		
5	Galley accidents.....					1		3	1										
90	Fights.....	5			1			84									6	7	3
25	Not otherwise classified.....					2		7											
1835	Totals	53	21	173	1	192	1	933	90	87	2	15	2	72	55	3	84	14	37

*Statistics concerning recreation and pleasure boating accidents are published in CG-357.

1. Injuries not otherwise classified (26)
2. Operating machinery, tools, cargo gear (53)
3. Fights and misconduct (90)
4. Burns, scalds, electric shock, asphyxiation (92)
5. Cuts, punctures, galley accidents (106)
6. Falls into water, cargo holds and different levels (152)
7. Caught in lines, crushed, pinched (182)
8. Overexertion, sprains, strains (206)
9. Struck by or against objects (405)
10. Slips and falls on ladders, gangways and on deck (523)

Total injuries

Crewmembers.....	1,792
Passengers.....	26
Longshoremen and harbor workers.....	12
Others.....	5
Total.....	1,835



STATISTICAL SUMMARY OF CASUALTIES TO COMMERCIAL VESSELS*

- 1 July 1962-30 June 1963

	Ground- ing	Found- ing, capsiz- ing, sinking	Colli- sions with vessels	Colli- sions with objects other than vessels	Fires and explo- sion	Heavy weather damage	Material failure	Cargo damage; no damage to vessel	Undeter- mined or insuf- ficient informa- tion	Casualty not other- wise classi- fied	Total
Number of casualties.....	511	247	370	476	182	50	262	10	5	21	2,134
Number of vessels involved.....	552	270	790	571	197	51	262	11	3	28	2,735
Number of inspected vessels involved.....	316	35	331	326	62	44	220	10	2	17	1,363
Number of uninspected vessels involved.....	236	235	459	245	135	7	42	1	1	11	1,372
Types of vessels involved											
Passenger:											
Vessels over 65'-Inspected.....	14	2	20	17	5	2	15			3	78
Vessels not over 65'-Inspected.....	16	20	17	14	13		5	1		1	87
Freight:											
Vessels-Inspected.....	154	4	117	166	28	22	125	6		8	630
Barges-Inspected and uninspected.....	42	65	88	80	4	3	4	3		3	290
Tank:											
Ships.....	84	2	55	62	9	12	49			5	278
Barges.....	33	4	100	54	14	2	2		2		211
Public.....	4	3	20	8			17				55
Towing:											
Inspected.....	2	2	9	3			4				20
Uninspected.....	48	52	138	80	29	1	11	1		4	364
Fishing.....	89	91	82	33	67	4	21		1	2	390
Motorboats (commercial) not over 65' in length uninspected.....		3	2	1	2						8
Foreign.....	58	1	123	37	8	1	1			2	231
Miscellaneous.....	8	21	21	16	18	1	8				93
Vessels totally lost:											
Inspected.....	10	12		5	7						34
Uninspected.....	50	120	23	15	66	2	2		1		279
Lives lost in vessel casualties											
Passengers:											
Inspected.....											
Uninspected.....		2									2
Crew members:											
Inspected.....		39	1		2						42
Uninspected.....	3	71	54		14	1	4		1		148
Longshoremen/Shore workers:											
Inspected.....					12						12
Uninspected.....							4				4
Others:											
Inspected.....							1				1
Uninspected.....	2	4	7		4						17
Lives lost by types of vessel involved											
Inspected vessels.....		39	1		14		1				55
Fishing vessels-Inspected.....	4	42	1		15	1	1		1		65
Tugs-Inspected.....	1	18	17		1		1				38
Foreign-flag vessels.....			41								41
Other uninspected vessels.....		17	2		2		6				27
Total deaths.....	5	116	62		32	1	9		1		226
Injured and incapacitated over 72 hours:											
Passengers-Inspected vessels.....		1		1							2
Passengers-Uninspected vessels.....					6						6
Crew-Inspected vessels.....	4		3		1		2			3	13
Crew-Uninspected vessels.....	1	4	16	1	25	2	1			1	51
Longshoremen/Harbor workers-Inspected vessels.....					1		3				4
Longshoremen/Harbor workers-Uninspec- ted vessels.....					5						5
Others-Inspected.....			1		2						3
Others-Uninspected.....	1			2	2						5
Primary cause											
Personnel fault:											
Pilots-State, Federal, foreign.....	26	1	73	15						2	117
Licensed officer.....	62	3	59	16	10	1	20			2	173
Documented seaman.....	1		6	2	4		2			1	16
Unlicensed, undocumented, all others.....	86	34	134	48	36		15	1		3	357
Error in judgment-Calculated risk.....	79	2	63	99						2	245
Weather.....	69	56	37	103	2	50	34	6		5	362
Currents.....	7	9	15	40			1				72
Sheer, suction, bank cushion.....	6		9	6							21
Depth of water less than expected.....	123	1	1	3			1				129
Failure of equipment.....	47	37	35	24	61		159	2		1	366
Unseaworthy-Lack of maintenance.....	3	86	5	1	54		22	1		1	173
Unknown-Insufficient information.....	4	3			14		3		3		27
Fault on part of other vessel or person.....	33	27	353	116	16		5	1		11	562
Floating debris-Submerged object.....	6	11		98							115
Total vessels involved.....	552	270	790	571	197	51	262	11	3	28	2,735

* Statistics concerning recreation and pleasure boating accidents are published in CG-357.

STATISTICAL SUMMARY OF DEATHS ON BOARD UNINSPECTED COMMERCIAL VESSELS*

(NOT INVOLVING A VESSEL CASUALTY)

1 July 1962-30 June 1963

Deaths (Total)	Type of casualty	Cause of death																	
		Intoxication	Physical deficiency	Unsafe movement (running, jumping, etc.)	Psychological (immaturity, insanity)	Unsafe practice	Law violation	Human errors (carelessness)	Weather conditions	Poor maintenance (housekeeping)	Inadequate lighting	Inadequate rails, guards, etc.	Failure approved equipment or material	Failure unapproved equipment or material	Supervision inadequate	Life preservers insufficient	Lack of tools/equipment	Lack of protective gear	Miscellaneous causes
30	Natural Cause.....																		
1	Homicide.....																		
5	Suicide.....																		
2	Disappearance.....																		
1	Slips and falls—Ladders.....	1																	
3	Slips and falls—Gangways.....					1													
73	Slips and falls—on deck.....										2								
2	Slips and falls—Other—same level.....																		
2	Falls from vessel—into water.....	15	4	1	6			32	11	1				1		1			
4	Falls from vessel—Other.....																2		
4	Falls into hold, tank.....							4											
2	Falls—Other—Different Level.....																		
5	Struck by—Falling Object.....				1			1					2				1		
1	Struck by—Flying Object (Mooring lines—Cargo gear).....												1						
1	Struck by—Moving Object (Other than Vessel).....																		
1	Struck by—Boat or vessel.....																		
4	Exposure.....																		
1	Asphyxiation.....							1					2				1		
1	Struck against.....														1				
1	Cargo handling.....												1						
2	Operating machinery—Tools.....							1									1		
1	Burns.....																		
1	Scalds.....																		
1	Electric shock.....					1													
2	Caught in lines.....							2											
2	Pinching—crushing.....																		
1	Heavy weather.....																		
1	Over exertion.....																		
1	Sprains and Strains.....																		
1	Cuts, punctures, etc.....																		
1	Galley accidents.....																		
1	Fights.....																		
1	Unknown causes—not otherwise classified.....																		
139	TOTALS.....	16	4	1	7	2		41	11	1		2		6	2		6		1

Number of deaths	
Crewmembers.....	112
Passengers.....	9
Longshoremen/Harbor workers.....	12
Others.....	6
Total.....	139

*Statistics concerning recreation and pleasure boating accidents are published in CG-357.

DEATHS

In the summary of DEATHS on board inspected and uninspected commercial vessels it can be seen by the attendant tabulation that a total of 226 persons lost their lives as a result of casualties to vessels. The disappearance of the molten sulphur carrier, the *Marine Sulphur Queen*, accounted for the greatest single loss, with a total of thirty-nine persons missing and presumed drowned. There were five casualties involving explosions and fires on board tank ves-

sels or tank barges killing twelve shore workers and one crew member. One person was killed when a towing shackle on board a freighter suffered a material failure while being used with a nylon hawser.

Collisions involving American and Foreign vessels took a total of forty-one lives on board the foreign vessels. The most significant casualty being the collision involving the Norwegian tank vessel *Boheme* and the uninspected tug *Bonnie D* pushing four tank barges in the Mississippi River north of New Orleans. As a result of this casualty twenty crew members on

the tank vessel perished. Two other collisions involving American cargo vessels and Foreign fishing vessels in international waters took a total of sixteen lives, on the foreign vessels, eight in each collision.

Deaths as a result of casualties to fishing vessels resulted in the loss of sixty-five lives. The most significant casualty in this class of vessel was the foundering of the F/V *Midnight Sun* which accounted for eleven lives lost. Foundering, capsizing and sinkings accounted for the largest loss of life on board fishing vessels where forty-two persons perished. Fifteen persons

STATISTICAL SUMMARY OF CASUALTIES TO COMMERCIAL VESSELS*

1 July 1962-30 June 1963

	Grounding	Foundering, capsizing, sinking	Collisions with vessels	Collisions with objects other than vessels	Fires and explosion	Heavy weather damage	Material failure	Cargo damage; no damage to vessel	Undetermined or insufficient information	Casualty not otherwise classified	Total
Number of casualties.....	511	247	370	476	132	50	262	10	5	21	2,134
Number of vessels involved.....	552	270	790	571	197	51	262	11	3	28	2,735
Number of inspected vessels involved.....	316	35	331	326	62	44	220	10	2	17	1,363
Number of uninspected vessels involved.....	236	235	459	245	135	7	42	1	1	11	1,372
Types of vessels involved											
Passenger:											
Vessels over 65'—Inspected.....	14	2	20	17	5	2	15			3	78
Vessels not over 65'—Inspected.....	16	20	17	14	13		5	1		1	87
Freight:											
Vessels—Inspected.....	154	4	117	166	28	22	125	6		8	630
Barges—Inspected and uninspected.....	42	65	88	80	4	3	4	3		3	290
Tank:											
Ships.....	84	2	55	62	9	12	49			5	278
Barges.....	33	4	100	54	14	2	2		2		211
Public.....	4	3	20	8		3	17				55
Towing:											
Inspected.....	2	2	9	3			4				20
Uninspected.....	48	52	138	80	29	1	11	1		4	364
Fishing.....	89	91	82	33	67	4	21		1	2	390
Motorboats (commercial) not over 65' in length uninspected.....		3	2	1	2						8
Foreign.....	58	1	123	37	8		1			2	231
Miscellaneous.....	8	21	21	16	18	1	8				93
Vessels totally lost:											
Inspected.....	10	12		5	7						34
Uninspected.....	50	120	23	15	66	2	2		1		279
Lives lost in vessel casualties											
Passengers:											
Inspected.....											
Uninspected.....		2									2
Crew members:											
Inspected.....		39	1		2						42
Uninspected.....	3	71	54		14	1	4		1		148
Longshoremen/Shore workers:											
Inspected.....					12						12
Uninspected.....							4				4
Others:											
Inspected.....							1				1
Uninspected.....	2	4	7		4						17
Lives lost by types of vessel involved											
Inspected vessels.....		39	1		14		1				55
Fishing vessels—Uninspected.....	4	42	1		15	1	1		1		65
Tugs—Uninspected.....	1	18	17		1		1				38
Foreign-flag vessels.....			41								41
Other uninspected vessels.....		17	2		2		6				27
Total deaths.....	5	116	62		32	1	9		1		226
Injured and incapacitated over 72 hours:											
Passengers—Inspected vessels.....		1		1							2
Passengers—Uninspected vessels.....					6						6
Crew—Inspected vessels.....	4		3		1		2			3	13
Crew—Uninspected vessels.....	1	4	16	1	25	2	1			1	51
Longshoremen/Harbor workers—Inspected vessels.....					1		3				4
Longshoremen/Harbor workers—Uninspected vessels.....					5						5
Others—Inspected.....			1		2						3
Others—Uninspected.....	1			2	2						5
Primary cause											
Personnel fault:											
Pilots—State, Federal, foreign.....	26	1	73	15						2	117
Licensed officer.....	62	3	59	16	10	1	20			2	173
Documented seaman.....	1		6	2	4		2			1	16
Unlicensed, undocumented, all others.....	86	34	134	48	36		15	1		3	357
Error in judgment—Calculated risk.....	79	2	63	99						2	245
Weather.....	69	56	37	103	2	50	34	6		5	362
Currents.....	7	9	15	40			1				72
Sheer, suction, bank cushion.....	6		9	6							21
Depth of water less than expected.....	123	1	1	3			1				129
Failure of equipment.....	47	37	35	24	61		159	2		1	366
Unseaworthy—Lack of maintenance.....	3	86	5	1	54		22	1		1	173
Unknown—Insufficient information.....	4	3			14		3		3		27
Fault on part of other vessel or person.....	33	27	353	116	16		5	1		11	562
Floating debris—Submerged object.....	6	11		98							115
Total vessels involved.....	552	270	790	571	197	51	262	11	3	28	2,735

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STATISTICAL SUMMARY OF PERSONNEL INJURIES ON BOARD ALL COMMERCIAL VESSELS* (NOT INVOLVING A VESSEL CASUALTY)

1 July 1962-30 June 1963

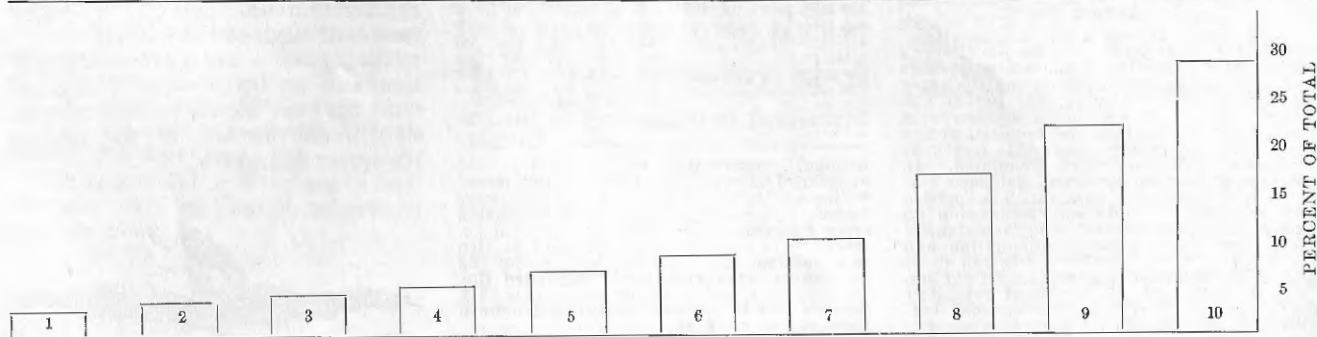
Injuries (Total)	Type of casualty	Cause of injury																	
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		Number of injuries																	
		Crewmembers..... 1,792 Passengers..... 26 Longshoremen/harborworkers..... 12 Others..... 5 Total..... 1,835																	
167	Slips and falls—Ladders.....	6	3	4	28	1	96	4	11	2	4	6	2	2	2	6	2	2	
35	Slips and falls—Gangways.....	10	2	2	1	15	2	2	2	2	2	2	2	2	2	2	2	2	
254	Slips and falls—On deck.....	16	6	7	9	119	26	50	1	1	2	2	2	2	2	2	2	10	
67	Slips and falls, other—Same level.....	2	1	2	8	37	2	9	1	1	2	2	2	2	2	2	2	3	
3	Falls from vessel—Into water.....	2	1	2	5	2	2	2	2	2	2	2	2	2	2	2	2	2	
9	Falls from vessel—Other.....	1	1	2	5	2	2	2	2	2	2	2	2	2	2	2	2	2	
14	Falls into hold, tank.....	1	1	2	3	9	2	2	2	2	2	2	2	2	2	2	2	2	
126	Falls—Other—Different level.....	5	4	1	31	53	4	3	6	1	6	6	7	3	5	5	1	1	
143	Struck by—Falling object.....	1	1	1	17	75	1	2	1	1	16	11	3	3	11	2	2	3	
76	Struck by—Flying object (mooring lines—Cargo gear).....	1	1	1	12	21	4	2	2	2	21	12	2	2	4	2	2	2	
32	Struck by—Moving object (other than vessel).....	1	1	1	5	19	2	2	2	2	2	3	2	2	2	2	2	1	
2	Struck by—Boat or vessel.....	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
2	Exposure.....	1	1	1	7	99	22	2	2	2	2	2	2	2	6	2	5	5	
2	Asphyxiation.....	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
152	Struck against.....	5	2	2	7	22	2	2	2	2	2	2	2	2	2	2	2	2	
3	Cargo handling.....	1	1	1	12	22	2	2	2	2	2	2	2	2	2	2	2	2	
50	Operating machinery—Tools.....	1	1	1	12	22	2	2	2	2	2	2	2	2	2	2	2	2	
45	Burns.....	1	1	1	4	30	2	2	2	2	2	2	2	2	2	2	2	2	
39	Scalds.....	1	1	1	4	23	2	2	2	2	2	2	2	2	2	2	2	2	
6	Electric shock and burns.....	1	1	1	3	2	2	2	2	2	2	2	2	2	2	2	2	2	
56	Caught in lines and chains.....	1	1	1	9	30	1	1	1	1	3	2	2	2	5	1	3	3	
126	Pinching—Crushing.....	1	2	2	12	89	12	1	1	1	1	4	4	4	4	4	4	4	
1	Heavy weather.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
87	Over exertion.....	1	2	84	12	25	5	4	4	1	1	1	2	2	2	2	2	2	
119	Sprains and strains.....	2	1	66	12	70	3	4	4	1	2	2	2	10	10	10	10	10	
101	Cuts, punctures, etc.....	1	1	1	7	3	1	1	1	1	2	2	2	2	2	2	2	2	
5	Galley accidents.....	1	1	1	1	84	7	7	7	7	7	7	7	7	7	7	7	7	
90	Fights.....	5	5	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
25	Not otherwise classified.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
1835	Totals	53	21	173	1	192	1	933	90	87	2	15	2	72	55	3	84	14	37

*Statistics concerning recreation and pleasure boating accidents are published in CG-357.

1. Injuries not otherwise classified (26)
2. Operating machinery, tools, cargo gear (53)
3. Fights and misconduct (90)
4. Burns, scalds, electric shock, asphyxiation (92)
5. Cuts, punctures, galley accidents (106)
6. Falls into water, cargo holds and different levels (152)
7. Caught in lines, crushed, pinched (182)
8. Overexertion, sprains, strains (206)
9. Struck by or against objects (405)
10. Slips and falls on ladders, gangways and on deck (523)

Total injuries

Crewmembers.....	1,792
Passengers.....	26
Longshoremen and harbor workers.....	12
Others.....	5
Total.....	1,835



**STATISTICAL SUMMARY OF DEATHS ON BOARD UNINSPECTED COMMERCIAL VESSELS*
(NOT INVOLVING A VESSEL CASUALTY)**

1 July 1962-30 June 1963

Deaths (Total)	Type of casualty	Cause of death																	
		Intoxication	Physical deficiency	Unsafe movement (run- ning, lumping, etc.)	Psychological (immaturity, insanity)	Unsafe practice	Law violation	Human errors (carelessness)	Weather conditions	Poor maintenance (housekeeping)	Inadequate lighting	Inadequate rails, guards, etc.	Failure approved equipment or material	Failure unapproved equipment or material	Supervision inadequate	Life preservers insufficient	Lack of tools/equipment	Lack of protective gear	Miscellaneous causes
30	Natural Cause.....																		
1	Homicide.....																		
5	Suicide.....																		
2	Disappearance.....																		
1	Slips and falls—Ladders.....	1																	
3	Slips and falls—Gangways.....					1													
3	Slips and falls—on deck.....																		
3	Slips and falls—Other—same level.....										2								
73	Falls from vessel—into water.....	15	4	1	6			32	11	1					1		1		1
2	Falls from vessel—Other.....																2		
4	Falls into hold, tank.....							4											
2	Falls—Other—Different Level.....																		
5	Struck by—Falling Object.....				1			1						2				1	
1	Struck by—Flying Object (Mooring lines—Cargo gear).....												1						
1	Struck by—Moving Object (Other than Vessel).....																		
1	Struck by—Boat or vessel.....																		
4	Exposure.....																		
4	Asphyxiation.....							1					2				1		1
1	Struck against.....																		
1	Cargo handling.....												1						
2	Operating machinery—Tools.....							1										1	
1	Burns.....																		
1	Scalds.....																		
1	Electric shock.....					1													
2	Caught in lines.....							2											
2	Pinching—crushing.....																		
	Heavy weather.....																		
	Over exertion.....																		
	Sprains and Strains.....																		
	Cuts, punctures, etc.....																		
	Galley accidents.....																		
	Fights.....																		
	Unknown causes—not otherwise classified.....																		
139	TOTALS.....	16	4	1	7	2		41	11	1		2		6	2		6		1

	<i>Number of deaths</i>	
	Crewmembers.....	112
	Passengers.....	9
	Longshoremen/Harbor workers.....	12
	Others.....	6
	Total.....	139

*Statistics concerning recreation and pleasure boating accidents are published in CG-357.

DEATHS

In the summary of DEATHS on board inspected and uninspected commercial vessels it can be seen by the attendant tabulation that a total of 226 persons lost their lives as a result of casualties to vessels. The disappearance of the molten sulphur carrier, the *Marine Sulphur Queen*, accounted for the greatest single loss, with a total of thirty-nine persons missing and presumed drowned. There were five casualties involving explosions and fires on board tank ves-

sels or tank barges killing twelve shore workers and one crew member. One person was killed when a towing shackle on board a freighter suffered a material failure while being used with a nylon hawser.

Collisions involving American and Foreign vessels took a total of forty-one lives on board the foreign vessels. The most significant casualty being the collision involving the Norwegian tank vessel *Boheme* and the uninspected tug *Bonnie D* pushing four tank barges in the Mississippi River north of New Orleans. As a result of this casualty twenty crew members on

the tank vessel perished. Two other collisions involving American cargo vessels and Foreign fishing vessels in international waters took a total of sixteen lives, on the foreign vessels, eight in each collision.

Deaths as a result of casualties to fishing vessels resulted in the loss of sixty-five lives. The most significant casualty in this class of vessel was the foundering of the F/V *Midnight Sun* which accounted for eleven lives lost. Foundering, capsizing and sinkings accounted for the largest loss of life on board fishing vessels where forty-two persons perished. Fifteen persons

STATISTICAL SUMMARY OF DEATHS ON BOARD INSPECTED COMMERCIAL VESSELS*
(NOT INVOLVING A VESSEL CASUALTY)

1 July 1962-30 June 1963

Deaths (total)	Type of casualty	Cause of death																	
		Intoxication	Physical deficiency	Unsafe movement (running, jumping, etc.)	Psychological (immaturity, insanity)	Unsafe practice	Law violation	Human errors (carelessness)	Weather conditions	Poor maintenance (housekeeping)	Inadequate lighting	Inadequate rails, guards, etc.	Failure approved equipment or material	Failure unapproved equipment or material	Supervision inadequate	Life preservers insufficient	Lack of tools/equipment	Lack of protective gear	Miscellaneous causes
181	Natural cause.....																		
1	Homicide.....																		
16	Suicide.....																		
2	Disappearance.....																		
2	Slips and falls—Ladders.....							2											
2	Slips and falls—Gangways.....	1						1											
2	Slips and falls—On deck.....	1						1											
26	Slips and falls—Other—same level.....																		
1	Falls from vessel—Into water.....	9		1	1	3		9	2				1						
1	Falls from vessel—Other.....							1											
12	Falls into hold, tank.....					1		11											
1	Falls—Other—different level.....							1											
4	Struck by—Falling object.....					3		1											
1	Struck by—Flying object (mooring lines, cargo gear).....							1											
1	Struck by—Moving object (other than vessel).....					1													
1	Struck by—Boat or vessel.....																		
5	Exposure.....																		
1	Asphyxiation.....	1	1			2							1						
1	Struck against.....								1										
1	Cargo handling.....																		
1	Operating machinery—Tools.....														1				
	Burns.....																		
	Scalds.....																		
	Electric shock.....																		
	Caught in lines.....																		
	Pinching—Crushing.....																		
	Heavy weather.....																		
	Over exertion.....																		
	Sprains and strains.....																		
	Cuts, punctures, etc.....																		
	Galley accidents.....																		
1	Fights.....	1																	
1	Unknown causes—Not otherwise classified.....	1																	
267	Totals.....	14	1	1	1	10		28	3				2	1					

Number of deaths
 Crew members..... 186
 Passengers..... 66
 Longshoremen/harborworkers..... 13
 Others..... 2
 Total..... 267

*Statistics concerning recreation and pleasure boating accidents are published in CG-357.

were killed as the result of fire and explosions while another eight persons died as the result of other casualties such as groundings and collisions.

In addition to the twenty lives lost in the *Boheme-Bonnie D* tragedy already mentioned, uninspected tugs and towboats were involved in casualties resulting in the death of an additional thirty-eight persons. The foundering of the *Gwendoline Steers* on Long Island Sound claiming the lives of nine crew members was another significant casualty involving an uninspected tug. Four more founderings accounted for the death of eight

persons while a capsizing of a tug while towing resulted in the loss of one more life. Eight collisions involving pleasure vessels and tugs with tows claimed another thirteen lives.

Deaths on board inspected and uninspected commercial vessels that did not involve a casualty to a vessel totaled 406 lives. The category, natural causes, accounted for the greatest number of deaths and totaled 211. Personal accidents, such as slips and falls, falls into water, falls into cargo holds, and asphyxiation accounted for 162 deaths.

Deaths not involving casualty to vessel.....	406
Natural causes.....	211
Homicide.....	2
Suicide.....	21
Disappearances.....	10
Personal accidents.....	162
Deaths involving casualty to vessel.....	226
Groundings.....	5
Foundering, capsizings and sinkings.....	116
Collisions.....	62
Fires and explosions.....	32
Other.....	11
Total deaths.....	632

AMENDMENTS TO REGULATIONS

[EDITOR'S NOTE.—The following regulations have been promulgated or amended since the last issue of the PROCEEDINGS. A complete text of the regulations may be found in the Federal Register indicated at the end of each article. Copies of the Federal Register containing the material referred to may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402]

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

SUBCHAPTER I—CARGO AND MISCELLANEOUS VESSELS

[CGFR 63-59]

PART 94—LIFESAIVING EQUIPMENT

Subpart 94.43—Ring Life Buoys and Water Lights

INSPECTED BARGES; RING LIFE BUOY REQUIREMENTS

Pursuant to the notices of proposed rulemaking published in the FEDERAL REGISTER on February 2, 1963 (28 F.R. 1052-1058) and February 16, 1963 (28 F.R. 1510, 1511) and the Merchant Marine Council Public Hearing Agenda dated March 25, 1963 (CG-249), the Merchant Marine Council held a public hearing on March 25, 1963 for the purpose of receiving comments, views and data.

The proposals considered were identified as Items I to XI, inclusive. Item V regarding "vessel operations and inspection" contained a proposal entitled "unmanned barges; ring life buoy requirements." This proposal was to require 2 ring life buoys on all inspected barges, whether manned or unmanned, regardless of the route or waters navigated. This proposal was intended to clarify the application of existing requirements to inspected barges. Oral objections were made at the public hearing and 18 written objections were received, and the Council deferred action until after objections could be resolved. A further study was made concerning the proposal and it was found that the vast majority of the inspected, unmanned barges were not required to carry ring life buoys. Therefore, the proposal is adopted in part to require all manned inspected barges to carry 2 ring life buoys, and a specific exception added to 46 CFR 94.43-10(a) stating that

unmanned barges are exempt from carrying ring life buoys. This proposal, as revised, is approved and set forth in this document, which is the 11th of a series regarding the regulations considered at the March 25, 1963 Public Hearing and Annual Session of the Merchant Marine Council.

(Federal Register of October 2, 1963)

TITLE 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of the Treasury

SUBCHAPTER M—COAST GUARD VESSELS

[CGFR 63-56]

PART 135—LIGHTS FOR COAST GUARD VESSELS OF SPECIAL CONSTRUCTION

Exemption of Statutory Requirements for U.S.C.G.C. Bramble

The "U.S.C.G.C. Bramble" was transferred from Miami, Florida, to Detroit, Michigan, for service on the Great Lakes. Because of its special construction, this Buoy Tender carries the forward masthead light and after range light with a horizontal separation of 16 feet.

The provisions of section 2 and Rule 13(b) in section 6 of the Act of October 11, 1951 (65 Stat. 407, 415; 33 U.S.C. 143a, 145k), and section 1 of the Act of December 3, 1945, as amended (59 Stat. 590; 33 U.S.C. 360), provide in essence that Coast Guard vessels of special construction may be exempted from certain requirements of the various applicable laws on rules of the road with respect to the number, position, range of visibility, or arc of visibility of the lights required to be displayed by vessels when navigating on the high seas or on navigable waters of the United States, its territories or possessions. Section 2 of the Act of October 11, 1951, and section 1 of the Act of December 3, 1945, also provide that if any exempted vessel or class of vessels, by reason of special construction, cannot comply with the applicable requirements, the lights prescribed shall conform as closely to the requirements of the applicable laws as it is found and certified to be feasible. These laws also require that notices of such findings or certifications and the requirements describing the character and position of the lights to be displayed on such exempted vessels shall be published in the FEDERAL REGISTER and in the Notice to Mariners.

It is hereby found the "U.S.C.G.C. Bramble," Buoy Tender, Class 180-C,

is of special construction and cannot comply with the minimum requirement for horizontal separation of range lights in Rule 3(e), Great Lakes Rules (33 U.S.C. 252(e)), and is therefore exempted from this requirement. This law requires in part that for a vessel over 100 feet register length the horizontal separation between the forward masthead light and the after range light shall be more than 50 feet. In lieu thereof, this vessel shall carry the forward masthead light and after range light with a horizontal separation of 16 feet. Except as otherwise provided herein, the "U.S.C.G.C. Bramble" is in full compliance with the other applicable provisions of the Great Lakes Rules (33 U.S.C. 241-295). The amendments to 33 CFR 135.25(g) and 135.50(d) in this document continue this exemption in effect and reflect the change in area of operation for the "U.S.C.G.C. Bramble."

(Federal Register of October 2, 1963)

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

SUBCHAPTER A—PROCEDURES APPLICABLE TO THE PUBLIC

[CGFR 63-49]

PART 2—VESSEL INSPECTIONS

Certificates of Approval Administered by Chief, Merchant Marine Technical Division

Certain navigational and vessel inspection laws in Title 46, U.S. Code, sections 367, 390b, 481, 489, 1333, Title 33, U.S. Code, section 1007, Title 43, U.S. Code, section 1333, and Title 50, U.S. Code, section 198, as well as specific regulations in 33 CFR Chapter I and 46 CFR Chapter I, provide for and require the Commandant's approval before specific types of safety equipment, materials or installations may be installed or used on vessels subject to Coast Guard inspection, or on other described vessels, motorboats, artificial islands, and fixed structures. These approvals are issued to persons, partnerships, companies, or corporations who offer for sale specific items of safety equipment, materials, or installations or who intend them for their own or others' use. These approvals are intended to provide a control over the quality of such approved items.

The Commandant's approvals are issued to qualified holders in the form of certificates of approval (Form

CGHQ-10030), by appropriate descriptions in documents published in the Federal Register, by letters, or by appropriate markings on drawings, plans, etc. Under the direction of the Commandant and the Chief, Office of Merchant Marine Safety, the Chief, Merchant Marine Technical Division, is hereby delegated the authority to exercise the necessary actions relating to the granting, suspension, cancellation or revocation of approvals for specific items of safety equipment, materials or installations required by law or the regulation in 33 CFR Chapter I or in 46 CFR Chapter I to have the Commandant's approval. The authority hereby delegated to the Chief, Merchant Marine Technical Division, may be further delegated by him in the case of suspensions. The Chief, Merchant Marine Technical Division, normally will issue a certificate of approval to a party after ascertaining that a specific item submitted complies with requirements in applicable laws and regulations. Such an approval shall be in effect for a period of 5 years from the date on the certificate of approval unless sooner suspended, canceled, or revoked by proper authority, or specifically stated otherwise on the certificate.

(Federal Register of October 15, 1963)

TITLE 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of the Treasury

[CGFR 63-62]

SUBCHAPTER E—NAVIGATION REQUIREMENTS FOR THE GREAT LAKES AND ST. MARY'S RIVER

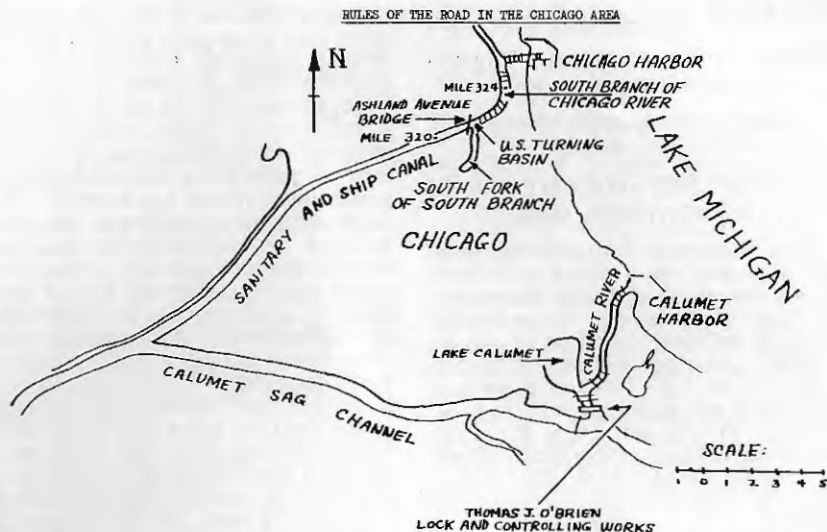
PART 90—PILOT RULES FOR THE GREAT LAKES

SUBCHAPTER F—NAVIGATION REQUIREMENTS FOR WESTERN RIVERS

PART 95—PILOT RULES FOR WESTERN RIVERS

Demarcation Lines Between Rules of Road for Great Lakes and Western Rivers in Chicago Port Area

The statutory definition of the waters subject to the Act of February 8, 1895, as amended (33 U.S.C. 241), states that the "Rules of the Road—Great Lakes" (CG-172) apply in part " * * * upon the Great Lakes and their connecting and tributary waters * * * ." The statutory definition of the waters subject to the provisions



THE ABOVE SKETCH illustrates the new location of the Rules of the Road line of demarcation between the Great Lakes and the Western Rivers in the Chicago area. This line is now located at the east side of the Ashland Avenue Bridge on the Chicago River and on the Calumet River at the Thomas J. O'Brien Lock by authority of the Coast Guard administrative ruling published in Federal Register of October 15, 1963 (excerpted below).

of section 4233 of the Revised Statutes, as amended (33 U.S.C. 301), states that the "Rules of the Road—Western Rivers" (CG-184) apply in part " * * * upon the waters of the Mississippi River * * * and all of the tributaries emptying thereinto and their tributaries * * * ." Certain waters in the Chicago port area, by reason of these definitions, seemingly are subject to both sets of "Rules of the Road." The Coast Guard, in an effort to obtain uniform administration and compliance, since 1939 has treated the waters between Lockport, Illinois, and Lake Michigan as subject only to the "Rules of the Road—Great Lakes."

It now appears changing conditions within the Chicago port area require a different demarcation line. Originally, the Chicago River was a tributary of Lake Michigan. However, at the time of the opening of the Chicago Sanitary and Ship Canal, which connects the Chicago River and the Des Plaines River, the direction of the flow of the Chicago River was changed so that this River is now a tributary of the Mississippi River. Furthermore, an analysis of the traffic within the Chicago port area indicates that on the waters west of the Ashland Avenue Bridge it is essentially river traffic while that to the east is primarily lake traffic. These factors dictate the designation of a line of demarcation between the two sets of "Rules of the Road" at the east side of the Ashland Avenue Bridge on the Chicago River. Similarly, on the Calumet River, the Thomas J. O'Brien Lock and Controlling Works is a logical divide.

It is realized there are many differences between the requirements of the "Rules of the Road—Great Lakes" and those of the "Rules of the Road—Western Rivers." It is essential for the safety of navigation that everyone on a particular body of water follow the same set of "Rules." The specified landmarks, being readily recognizable, will aid navigators in determining which set of "Rules" they are required to follow when in the Chicago port area.

The demarcation line description designated 33 CFR 90.03 in effect provides that the "Rules of the Road—Great Lakes" apply from the shores of Lake Michigan to the east side of the Ashland Avenue Bridge (between mile 321 and 322) on the Chicago River and to the Thomas J. O'Brien Lock and Controlling Works (between mile 326 and 327) on the Calumet River.

The demarcation line description designated 33 CFR 95.02 in effect provides that the "Rules of the Road—Western Rivers" apply on the Chicago River to the east side of Ashland Avenue Bridge (between mile 321 and 322) and on the Calumet River to the Thomas J. O'Brien Lock and Controlling Works (between mile 326 and 327). The Chicago River and Calumet River are tributaries of the Mississippi River.

These rules shall become effective on the date of publication of this document in the FEDERAL REGISTER.

(Federal Register of October 15, 1963)

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

SUBCHAPTER D—TANK VESSELS

[CGFR 63-45]

LIQUEFIED INFLAMMABLE GASES AND ETHYLENE OXIDE

This document contains the final actions taken with respect to the proposals described as "Bulk Shipments of Ethylene Oxide" and "Liquefied Inflammable Gases" in "Item IV—Tank Vessels" of the Agenda (CG-249, pages 77 to 128). These proposals, as revised, are approved and set forth herein. This is the tenth document of a series containing regulations considered at the March 25, 1963 Public Hearing and Annual Session of the Merchant Marine Council.

The revised regulations governing the transportation of liquefied inflammable gases recognize certain technological advances developed in the handling of such gases and permit various methods of transportation not previously allowed.

The regulations designated 46 CFR 38.01-5, 38.05-1, 38.05-10, 38.05-20, 38.05-25, 38.10-1, 38.10-20, and 38.25-1 contain changes from the original proposals set forth in the Agenda. The special endorsement required on the certificate of inspection was changed so it will show both the minimum and maximum temperatures for liquefied inflammable gas cargoes. The design requirements will require consideration to be given to the pressures anticipated in normal service and when testing the tanks. With a couple of exceptions, a tank vessel having a tank installed in a dry cargo hold with a portion extending above the weather deck shall be required to maintain the weathertightness of such deck. When a refrigerated cargo needs to be kept in an insulated tank, the insulation shall be of approved materials. While the regulations describe specific means for gaging contents in a tank, the use of alternate means will be permitted when such means are acceptable to the Commandant.

The regulations governing the transportation of ethylene oxide in bulk are in a new Subpart 40.05 in 46 CFR Part 40, entitled "Special construction, arrangement, and other provisions for carrying certain inflammable or combustible dangerous cargoes in bulk." The characteristics of ethylene oxide, when compared with other inflammable liquids commonly carried in tank vessels, present an unusually high degree of fire hazard.

The regulations governing ethylene oxide and designated 46 CFR 40.01-5, 40.05-1, 40.05-2, 40.05-5, 40.05-10, 40.05-20, 40.05-30, 40.05-35, 40.05-40, 40.05-45, 40.05-60, 40.05-65, 40.05-69, 40.05-73, 40.05-75, 40.05-80, 40.05-83, 40.05-85, 40.05-86, and 40.05-87 contain changes from the original proposals set forth in the Agenda. The tanks certified for ethylene oxide may be used for transportation of other compatible products under conditions which must be approved by the Commandant. During the transportation of ethylene oxide, arrangements must be provided to keep the cargo temperature below 90° F. During the loading operation, the temperature of ethylene oxide shall be below 70° F. With a couple of exceptions, a tank vessel having a tank installed in a dry cargo hold with a portion extending above the weather deck will be required to maintain the weathertightness of such deck. The insulation requirements were changed to establish specified minimum conditions, including specific approval of such materials by the Commandant. The regulations provide for a manual method of operation of the cooling system. The setting of the relief valve is at the design pressure of the tank when such pressure is higher than 75 pounds per square inch. The filling density for ethylene oxide was increased from 82 percent to 83 percent. The cargo hose used for ethylene oxide may be used only with products compatible with it, and the manufacturer shall guarantee the maximum pressure for such hose and have it labeled "certified for ethylene oxide." The special operating requirements were revised to have a water system, including water hoses, provided for immediate use during filling and discharging operations to assist in controlling spillages which may occur, and to have the cargo transfer operations performed by personnel especially qualified in the handling of ethylene oxide. The cargo marking requirements were revised to include a color coding for barges carrying ethylene oxide. The proposals for vessel design in 46 CFR 40.05-15 were not adopted at this time.

The proposals described as "Special construction, arrangement and provisions for certain dangerous cargoes in bulk: Application; elemental phosphorus in water; sulfuric acid; hydrochloric acid; liquid chlorine; and anhydrous ammonia" in "Item V—Vessel Operations and Inspection" of the agenda are withdrawn. These proposals were intended to make additional corrections, to clarify certain requirements, and to add additional requirements based on the properties of the chemicals being transported.

Approximately 146 comments were received. Since many comments were adverse to the proposals and raised questions not previously considered, it was determined desirable to review all the regulations.

The regulation and amendments in this document are prescribed and shall become effective January 1, 1964; however, the amendments and regulations in this document may be complied with on and after the date of publication of this document in the FEDERAL REGISTER in lieu of existing requirements. Existing tank vessels shall be in compliance with the new or revised requirements in this document regarding liquefied inflammable gases by the time of their inspections for certification or by January 1, 1965, whichever occurs first.

(Federal Register of October 8, 1963)

TITLE 33—NAVIGATION AND NAVIGABLE WATERS

Chapter I—Coast Guard, Department of the Treasury

SUBCHAPTER K—SECURITY OF VESSELS

[CGFR 63-60]

PART 124—CONTROL OVER MOVEMENT OF VESSELS

Advance Notice of Time of Arrival of Vessels at First U.S. Port-of-Call on the Great Lakes

By Executive Order 10173 the President found that the security of the United States is endangered by reason of subversive activities and prescribed certain regulations relating to the safeguarding against destruction, loss, or injury from sabotage or other causes of similar nature to vessels, ports, and waterfront facilities in the United States and all territory and waters, continental or insular, subject to the jurisdiction of the United States exclusive of the Canal Zone.

Pursuant to the authority of 33 CFR 6.04-8 in Executive Order 10173 (15 F.R. 7007; 3 CFR, 1950 Supp.) the Captain of the Port may supervise and control the movement of any vessel and shall take full or partial possession or control of any vessel or any part thereof when within the territorial waters of the United States under his jurisdiction whenever it appears to him that such action is necessary in order to secure such vessel from damage or injury or to prevent damage or injury to any waterfront facility on waters of the United States or to secure the observance of rights and obligations of the United States.

The provisions of 33 CFR 124.10 set forth the requirements regarding the advance notice of a vessel's estimated time of arrival at a United States port-of-call to the Captain of the Port. The purpose for amending § 124.10(b) (2) is to revise procedures for the Great Lakes since many masters and agents of vessels en route to ports on the Great Lakes have encountered difficulties in determining when their vessels will arrive at their first United States ports-of-call because they cannot estimate the number of days their vessels may first spend in passing through the Welland Canal or at various prior Canadian ports-of-call. In addition, the first United States port-of-call may be selected after a vessel arrives at a Canadian port. The amendment to § 124.10(b) (2) will now require the master of every vessel when proceeding westbound to United States waters of the Great Lakes and/or the St. Lawrence River (other than vessels of the United States or Canadian nationality engaging in the coastal trade of their respective countries or between their two countries en route), in addition to other reports and at least 24 hours in advance of the vessel's estimated time of arrival at the first United States port-of-call, to advise the Commander, Ninth Coast Guard District, Cleveland, Ohio, of the vessel's time of arrival at such port.

(Federal Register of October 9, 1963)

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

[CGFR 63-69]

MISCELLANEOUS AMENDMENTS TO CHAPTER

SUBCHAPTER D—TANK VESSELS

SUBCHAPTER F—MARINE ENGINEERING

SUBCHAPTER H—PASSENGER VESSELS

SUBCHAPTER I—CARGO AND MISCELLANEOUS VESSELS

(Federal Register of October 26, 1963)

FUSIBLE PLUGS

A list of approved heats which have been tested and found acceptable during the period from September 15, 1963 to October 15, 1963.

Lunkenheimer Co., Cincinnati 14, Ohio, HEAT NOS. 673, 674, 675, 676, 677, 678, and 679.

December 1963

CORRECTION

Section 10.10-15 as printed on page 24 of the "Rules and Regulations for Licensing and Certificating of Merchant Marine Personnel", CG-191, dated July 1, 1963 is in error. The correct wording of this section is as follows:

10.10-15 First assistant engineer; motor vessels.

10.10-15(a) The minimum service required to qualify an applicant for license as first assistant engineer of motor vessel is:

10.10-15(a)(1) 1 year's service as second assistant engineer of motor vessels; or,

10.10-15(a)(2) 2 years' service as third assistant engineer or junior second assistant engineer in charge of a watch on motor vessels, while holding a license as second assistant engineer of motor vessel; or,

10.10-15(a)(3) While holding a license as first assistant engineer of steam vessels, either:

10.10-15(a)(3)(i) 3 months' service as second assistant engineer of motor vessels;

10.10-15(a)(3)(ii) 3 months' service as observer first assistant engineer on motor vessels; or,

10.10-15(a)(3)(iii) 6 months' service as oiler or junior engineer of motor vessels; or

10.10-15(a)(4) 3 years' service as oiler or fireman on motor vessels for a license as first assistant engineer of motor towing or ferry vessels of not more than 2,000 horsepower.

10.10-15(a)(5) While holding a license as third assistant engineer of motor vessels of any horsepower, 3 months' service as third assistant engineer or observer first assistant engineer on motor vessels for a license as first assistant engineer of motor towing or ferry vessels of not over 2,000 horsepower.

10.10-15(a)(6) 3 years' service as oiler or fireman on motor vessels for a license as first assistant engineer of motor vessels of not more than 1,000 horsepower.

EQUIPMENT APPROVED BY THE COMMANDANT

[EDITOR'S NOTE.—Due to space limitations, it is not possible to publish the documents regarding approvals and terminations of approvals of equipment published in the Federal Register dated October 16, 1963 (CGFR 63-54 and 63-64). Copies of

these documents may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402.]

ARTICLES OF SHIPS' STORES AND SUPPLIES

Articles of ships' stores and supplies certificated from October 1, to October 31, 1963, 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:

Eastburn Marine Chemical Co., Inc., 53 Abbett Ave., Morristown, N.J., Certificate No. 576, dated October 23, 1963, EASTBURN 230 VELVOLINE. Certificate No. 577, dated October 23, 1963, EASTBURN 337 ECONO SLOSH. Certificate No. 578, dated October 23, 1963, EASTBURN 234 CHALLENGER TYPE CLEANER.

Pennsalt Chemicals Corp., 2700 South Eastern Ave., Los Angeles, Calif., Certificate No. 579, dated October 25, 1963, PENNSALT 3003 HEAVY DUTY CLEANER. Certificate No. 580, dated October 25, 1963, PENNSALT 3013 OIL SIDE CLEANER. Certificate No. 581, dated October 25, 1963, PENNSALT 3012 SOLVENT EMULSIFIER. Certificate No. 582, dated October 25, 1963, PENNSALT 3011 INTERPORT TANK CLEANING COMPOUND. Certificate No. 583, dated October 25, 1963, PENNSALT 3004 MEDIUM DUTY CLEANER. Certificate No. 584, dated October 25, 1963, PENNSALT 3005 NEUTRALIZER.

AFFIDAVITS

The following affidavits were accepted during the period from September 15, 1963, to October 15, 1963:

Curtiss Wright Corp., Metals Processing Div., 760 Northland Ave., Buffalo 15, N.Y., PIPE AND TUBING.

Shaffer Tool Works, P.O. Box 398, Brea, Calif., VALVES.

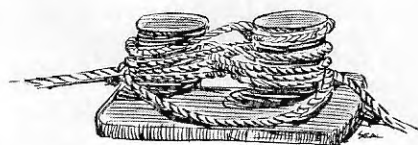
Anchor Coupling Co., Inc.,¹ 342 North 4th St., Libertyville, Ill., FITTINGS.

¹ Currently listed in CG-190 for Valves. The listing is hereby annotated to indicate that the listing is changed from valves to fittings.

NOTE: The following name will be deleted in the currently approved affidavit section and added to the formerly approved affidavit section in the revised edition of CG-190: *Alco Products Inc.*, 220 Avenue A, Beaumont, Tex.

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MERCHANT MARINE SAFETY PUBLICATIONS

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

CG No.	TITLE OF PUBLICATION
101	Specimen Examination for Merchant Marine Deck Officers (7-1-58).
108	Rules and Regulations for Military Explosives and Hazardous Munitions (8-1-62).
115	Marine Engineering Regulations and Material Specifications (3-1-63), F.R. 8-20-63, 10-26-63.
123	Rules and Regulations for Tank Vessels (1-2-62). F.R. 5-2-62, 9-11-62, 2-6-63, 4-4-63, 5-30-63, 8-20-63, 9-6-63, 10-8-63, 10-26-63.
129	Proceedings of the Merchant Marine Council (Monthly).
169	Rules of the Road—International—Inland (6-1-62), F.R. 1-18-63, 5-23-63, 5-29-63, 7-6-63, 10-2-63.
172	Rules of the Road—Great Lakes (6-1-62). F.R. 8-31-62, 5-11-63, 5-23-63, 5-29-63, 10-2-63, 10-15-63.
174	A Manual for the Safe Handling of Inflammable and Combustible Liquids (7-2-51).
175	Manual for Lifeboatmen, Able Seamen, and Qualified Members of Engine Department (9-1-60).
176	Load Line Regulation (9-1-61). F.R. 7-27-62, 11-14-62, 2-2-63, 6-11-63.
182	Specimen Examinations for Merchant Marine Engineer Licenses (12-1-59).
184	Rules of the Road—Western Rivers (6-1-62). F.R. 1-18-63, 5-23-63, 5-29-63, 9-25-63, 10-2-63, 10-15-63.
190	Equipment Lists (4-2-62). F.R. 5-17-62, 5-25-62, 7-24-62, 8-4-62, 8-11-62, 9-11-62, 10-4-62, 10-30-62, 11-22-62, 11-24-62, 12-29-62, 1-4-63, 1-8-63, 2-7-63, 2-27-63, 3-20-63, 4-24-63, 6-11-63, 6-15-63, 6-22-63, 6-28-63, 8-10-63, 10-16-63.
191	Rules and Regulations for Licensing and Certifying of Merchant Marine Personnel (7-1-63). F.R. 9-18-63.
200	Marine Investigation Regulations and Suspension and Revocation Proceedings (7-1-58). F.R. 3-30-60, 5-6-60, 12-8-60, 7-4-61, 5-2-62, 10-5-62, 9-13-63.
220	Specimen Examination Questions for Licenses as Master, Mate, and Pilot of Central Western Rivers Vessels (4-1-57).
227	Laws Governing Marine Inspection (6-1-62).
239	Security of Vessels and Waterfront Facilities (8-1-61). F.R. 11-3-61, 12-12-61, 8-8-62, 8-31-62, 11-15-62, 1-30-63, 3-27-63, 5-29-63, 6-4-63, 10-9-63.
249	Merchant Marine Council Public Hearing Agenda (Annually).
256	Rules and Regulations for Passenger Vessels (1-2-62). F.R. 5-2-62, 9-11-62, 12-28-62, 4-4-63, 5-30-63, 8-20-63, 9-6-63, 10-26-63.
257	Rules and Regulations for Cargo and Miscellaneous Vessels (11-1-62). F.R. 2-1-63, 2-6-63, 3-13-63, 4-4-63, 5-30-63, 8-20-63, 9-6-63, 10-2-63, 10-26-63.
258	Rules and Regulations for Uninspected Vessels (9-1-61). F.R. 1-20-62, 4-24-62, 5-2-62, 9-11-62, 5-14-63, 9-6-63.
259	Electrical Engineering Regulations (12-1-60). F.R. 9-23-61, 9-30-61, 5-2-62, 9-11-62, 8-20-63, 9-6-63.
266	Rules and Regulations for Bulk Grain Cargoes (5-1-62). F.R. 9-11-62.
268	Rules and Regulations for Manning of Vessels (2-1-63).
269	Rules and Regulations for Nautical Schools (5-1-63). F.R. 10-2-63.
270	Rules and Regulations for Marine Engineering Installations Contracted for Prior to July 1, 1935 (11-19-52). F.R. 12-5-53, 12-28-55, 6-20-59, 3-17-60.
293	Miscellaneous Electrical Equipment List (6-1-62).
320	Rules and Regulations for Artificial Islands and Fixed Structures on the Outer Continental Shelf (10-1-59). F.R. 10-25-60, 11-3-61, 4-10-62, 4-24-63.
323	Rules and Regulations for Small Passenger Vessels (Not More Than 65 Feet in Length) (6-1-61). F.R. 9-11-62, 10-5-62, 12-28-62, 1-22-63, 9-6-63.
329	Fire Fighting Manual for Tank Vessels (4-1-58).

Official changes in rules and regulations are published in the Federal Register, which is printed daily except Sunday, Monday, and days following holidays. The Federal Register is a sales publication and may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402. It is furnished by mail to subscribers for \$1.50 per month or \$15 per year, payable in advance. Individual copies desired may be purchased as long as they are available. The charge for individual copies of the Federal Register varies in proportion to the size of the issue and will be 15 cents unless otherwise noted in the table of changes below.

CHANGES PUBLISHED DURING OCTOBER 1963

The following have been modified by Federal Registers:

- CG-169, CG-172, CG-184, CG-257, and CG-269 Federal Register, October 2, 1963.
- CG-123 Federal Register, October 8 1963.
- CG-239 Federal Register October 9, 1963.
- CG-172, and CG-184 Federal Register, October 15, 1963.
- CG-190, Federal Register, October 16, 1963.
- CG-115, CG-123, CG-256, and CG-257 Federal Register, October 26, 1963.

Season's Greetings



A Safe Holiday
and a Happy one

