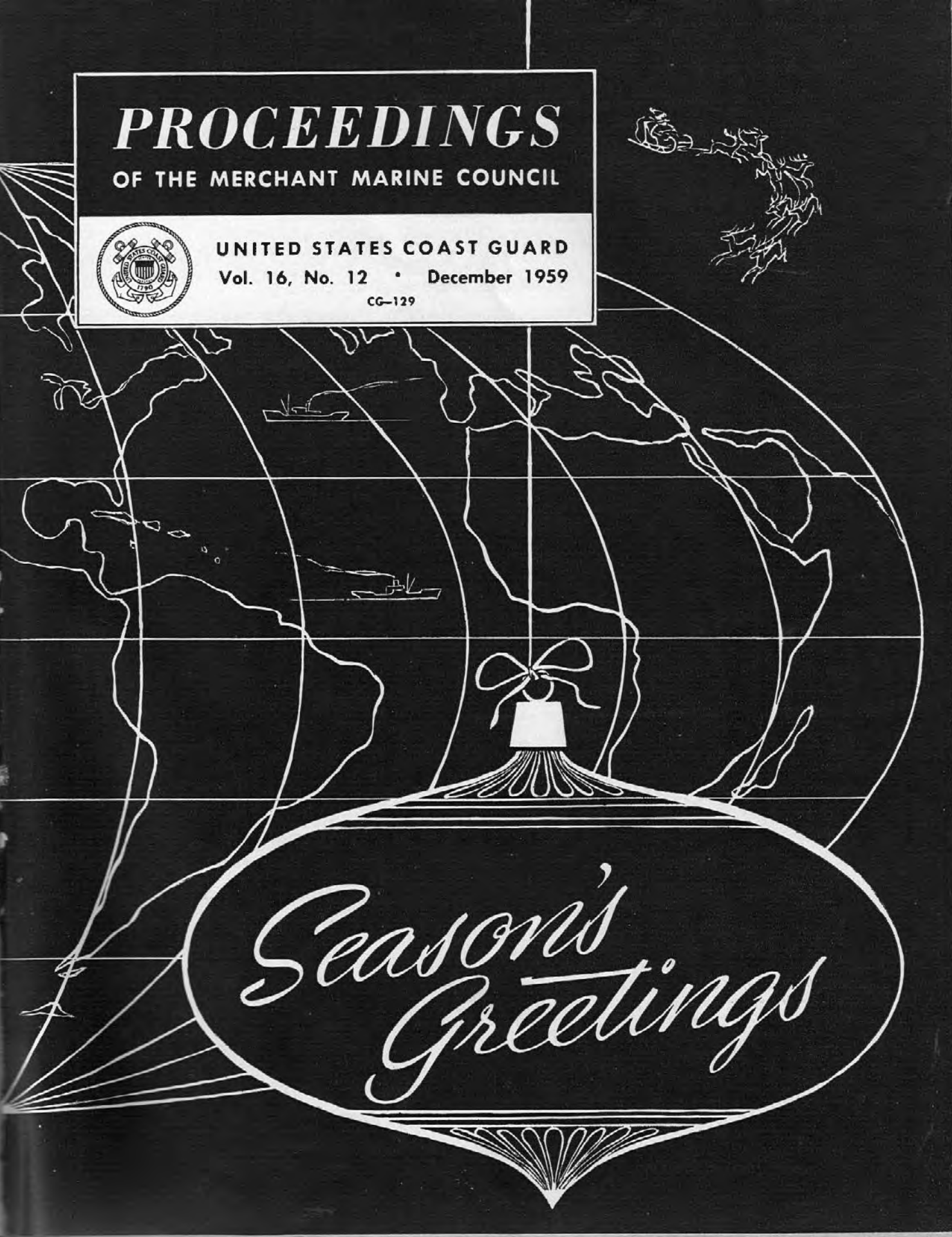
PROCEEDINGS

OF THE MERCHANT MARINE COUNCIL

UNITED STATES COAST GUARD

Vol. 16, No. 12 • December 1959

CG–129



PROCEEDINGS

OF THE

MERCHANT MARINE COUNCIL

Published monthly at Coast Guard Headquarters, Washington 25, D.C., under the auspices of the Merchant Marine Council, in the interest of safety at sea. Special permission for republication, either in whole or in part, with the exception of copyrighted articles or pictures, is not required provided credit is given to the Proceedings of the Merchant Marine Council. Use of funds for printing this publication has been approved by the Bureau of the Budget October 3, 1957.

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FRONT AND BACK COVER

"Home for Christmas," from an idea suggested by LTJG James R. Treese, USCGR, extends our Season's Greetings to the American Merchant Marine.

DISTRIBUTION (SDL 69)

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Season's Greetings

Understanding between peoples and nations is the key to peace and the unity of mankind. May the spirit of Christmas extend throughout the year to you at sea and ashore, who in the advancement of peaceful world trade contribute to this understanding. Best wishes for a peaceful and joyous Christmas and a New Year of happiness and good health.

A. C. Richmond

Vice Admiral, U.S. Coast Guard
Commandant

PUBLIC LAW 219 EXAMINATIONS

AMONG THE MANY duties a merchant marine officer commissioned in the U.S. Coast Guard will be called upon to do will be that of observing fire and lifeboat drills aboard merchant vessels. In the picture above, a ship's crew exhibits speed and efficiency during a fire drill.

THE ANNUAL examination period in 1960 for merchant marine officers who desire to qualify for commissions in the U.S. Coast Guard has recently been established. An applicant can now designate where he wishes to sit for these examinations within a three month period between February 1 and April 30, 1960. Applicants may also choose to be examined at any one of 28 cities in the United States and the Commonwealth of Puerto Rico.

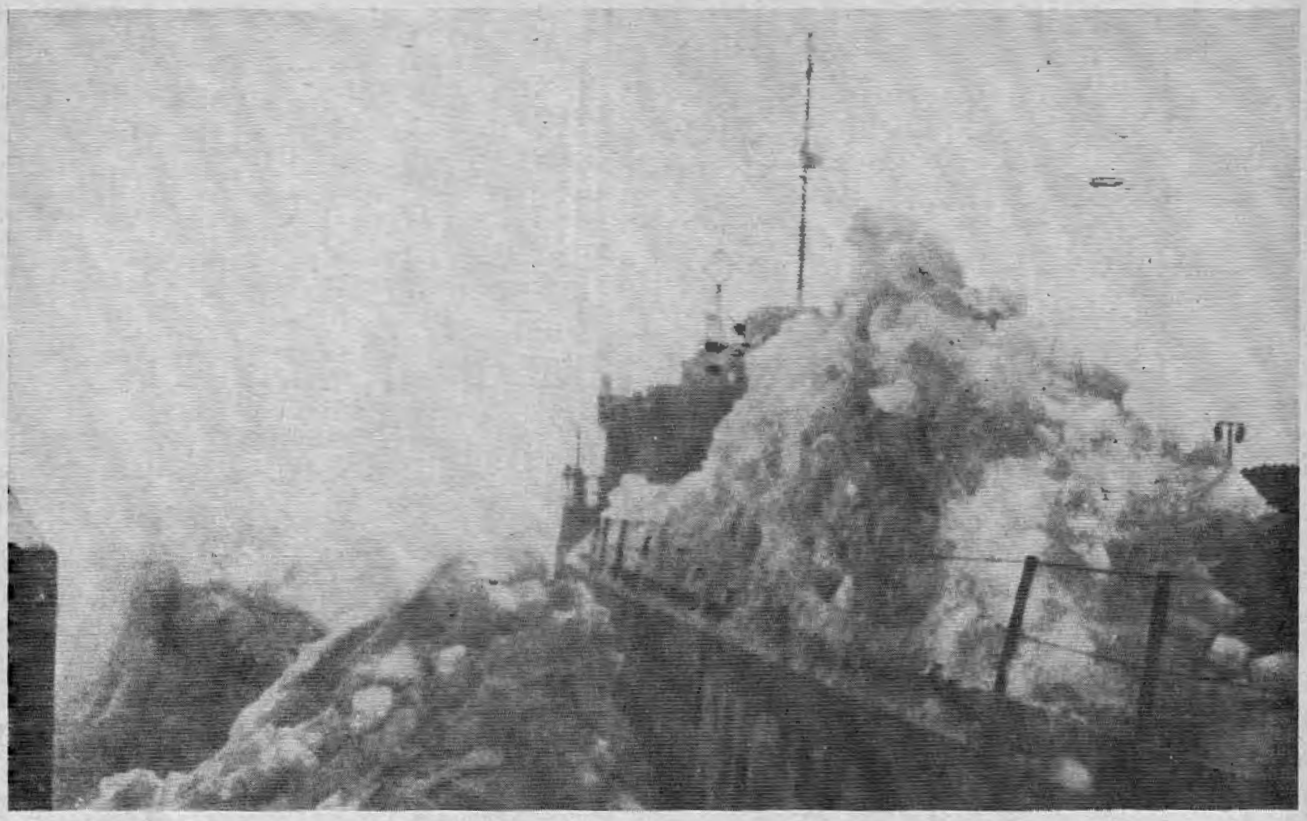
The three day examination stresses practical subjects in line with current license examinations.

Applicants must satisfy the Commandant of the Coast Guard as to their good moral character; be a United States' citizen between the ages of 21 and 40 at the time application is made; be physically sound, not less than 5 feet 4 inches, nor more than 6 feet 6 inches in height, stripped. They must also meet the specific requirements of the grade for which they are considered.

Further information may be obtained from any Coast Guard Marine Inspection Office or District Office. Application blanks may be obtained from the Commandant (PTP–2), U.S. Coast Guard, 1300 E Street NW., Washington 25, D.C.

NEED FOR ICEBREAKERS IN SUPPORT OF MARITIME COMMERCE

By Rear Admiral E. H. Thiele



ONE OF our Great Lakes vessels entrapped, pressure ridges building up and the ship seriously threatened.

I HAVE often wondered why it is that the need for icebreakers is so hard to justify in a country that gets as cold and produces as much natural ice in its navigable waters as the United States. At the time this paper was being prepared, the temperature in Washington, D.C. was in the upper 90's and Congress was sweating out a prolonged session. At this point, saving the farmers' crops, settling a steel strike and improving our productive capacity was much more pertinent than thoughts of frozen rivers, bays, and lakes.

Bills are introduced into the Congress during the midwinter months but this is the time for preliminary work by subcommittees and administrative and technical aides. Later, when the Washington climate calls for tropical wear, the few men who have researched the projects and appreciate the needs will have to sell a bill of goods that can't even be visualized by a great majority of the people who would benefit the most.

CONDITIONS OUTLINED

Let us take a look at the conditions that create this situation. The navigable waters of the United States subject to freezing are roughly bounded by a line drawn from the mouth of the Chesapeake Bay through Cairo, Ill., thence to Omaha, Nebr., and Duluth, Minn. You will note that within this area is the great industrial heart of the country and the major centers of shipping. From figures furnished by Army Engineers, on our inland waterways, excluding the Great Lakes and coastal ports within this area, moves an average of about 130 million ton miles of cargo per day during the shipping season. On the Great Lakes the average is about 480 million ton-miles per day in the open season, and through our coastal ports an average of approximately 1 million tons per day are moved into intercoastal and foreign trade.

Without going into the details of costs per ton-mile, it is obvious that every day or even every hour that shipping is stopped, on any of our navigable waters from any cause, results in a tremendous loss in revenue to our economy including producer, labor, shipper, and consumer. An idle ship means idle goods, idle labor, idle money, decreased revenue, and increased costs. Millions of dollars are spent annually by industry for idle ship time and every effort is made to reduce to a minimum all unproductive hours.

EFFECT ON NATIONAL ECONOMY

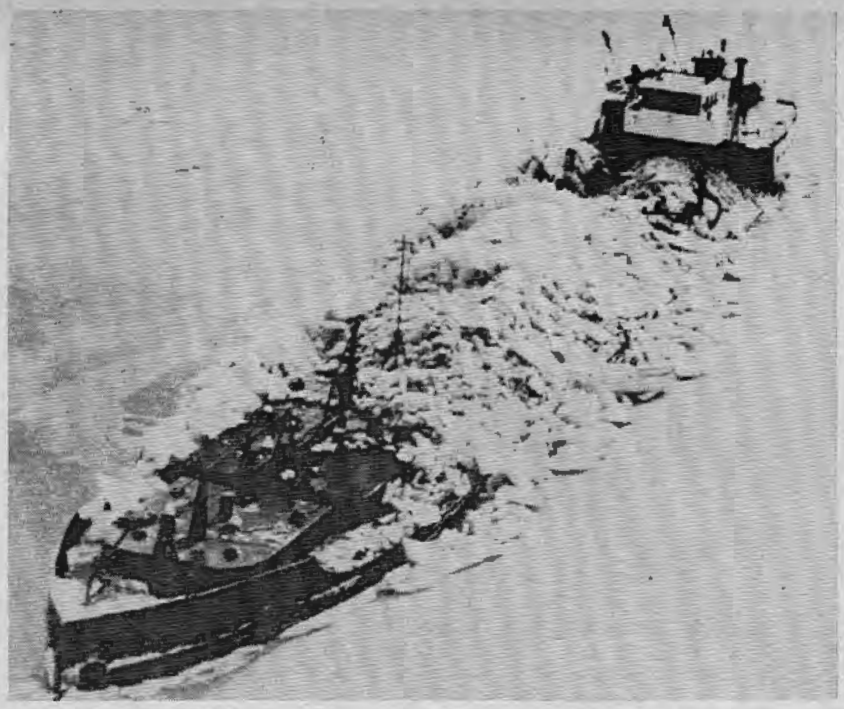
In our efforts to reduce idle time we have been relatively successful with everything except the weather. Storms at sea and in port delay ships, but ice such as found in the Great Lakes, western rivers, and coastal rivers stops ships and shipping completely. Take a look at table 1 and notice what effect the stopping of traffic has on national economy. You will note that for every day naviga-

tion is kept open in an otherwise closed season there is a potential movement of millions of ton miles of freight. I say potential movement of freight because nothing will move unless there is some assurance that a ship and cargo will get through in a reasonable time and in good condition. Only ships built for the job can operate independently in ice-filled waters. However, it is possible for any modern ship to operate all winter on a fairly good schedule with icebreaker assistance.

COAST GUARD ASSISTS

The U.S. Coast Guard is the Federal Agency charged with rendering icebreaker assistance for shipping to meet the reasonable demands of commerce. This is a free service rendered by the Federal Government in support of American ships and shipping.

Icebreakers are expensive vessels to build and maintain. Therefore, there are relatively few of them in the world. The Coast Guard, being a service with numerous tasks and responsibilities, has developed a fleet of icebreakers for dual service principally in the icebreaking aids-to-navigation field. Some of our smaller harbor-type icebreakers are also tugs for search and rescue and boarding duties. On the western rivers, the towboat *Fern* is equipped with an Amsterdam plow in the winter and an aids-to-navigation barge in the open season. Large modern buoy tenders are all designed as icebreakers below the waterline and buoy tenders above. In this manner the Coast Guard is able to use its fleet of ships 12 months of the year in productive work. Specially built true icebreaker and ice worker designs, such as the *Mackinaw* and the *Wind* class cutters are employed on the Great Lakes, in the Arctic and Antarctic regions, and on eastern rivers and harbors, such as the Hudson River and upper Chesapeake Bay, when ice conditions are bad.



A TANKER entrapped by ice. "This photo was not made in the Arctic, but in Chesapeake Bay." Courtesy *Baltimore Sun*

Many persons do not realize how severe and restrictive to shipping these ice conditions can be. A photo shown here of a tanker entrapped by ice, was not made in the Arctic or off the Labrador Coast. No . . . this took place only a few winters ago in Chesapeake Bay. Another vessel is shown, entrapped, pressure ridges building up and the vessel seriously threatened. This scene is of one of our Great Lakes ships. Many of you will be able to identify the Coast Guard icebreaker *Eastwind*, and she is clearing a channel for traffic up the Hudson River to Albany.

I mention these pictures in the hope that we can dispel two impressions commonly held. The first, that ice is not a major problem on American waterways! The second, that ice does exist, but that the economic pressure for transport is not heavy enough to cause many shippers to employ ships on these waterways during the ice seasons. Those photos show that both of these contentions are false The data of table II for vessel casualties during a recent year also indicate that many vessels are operating on our waterways during the ice seasons.

As can be seen from the statistics quoted, one of the greatest potential increases in transportation efficiency, embracing over half the population of the United States, could be effected at relatively small cost by increasing the icebreaking capabilities within the northeast quarter of the country.

Take an arbitrary figure of $0.01/ton-mile, this would produce a daily income of over 10 million dollars within this area. Apply this to the days navigation is closed due to ice and you arrive at a figure somewhere between 500 million and 1 billion dollars annually that is presently not being realized by American shipping. Of course these figures are an ultimate based on average normal operations but they also represent a goal dependent entirely on the ratio of icebreakers to ton-miles of cargo to be moved. The Baltic countries long have realized the economic advantages to be gained by providing icebreakers to keep ships moving during the ice season. The same holds true in the Low Countries where canals, rivers, and harbors are kept open.

NEED FOR ICEBREAKERS

Aside from the immediate need for icebreakers to assist shipping within the continental waters of the United

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ABOUT THE AUTHOR

REAR ADMIRAL Edward H. Thiele, U.S.C.G., was nominated to be Engineer-in-Chief of the Coast Guard by President Eisenhower on May 22, 1958, and confirmed by the Senate, effective August 1, 1958. He has served aboard various cutters and in various positions ashore since his graduation from the U.S. Coast Guard Academy in 1927. During World War II, he served as commanding officer of the Coast Guard manned USS *General D. E. Aultman* and the USS *Wakefield*.

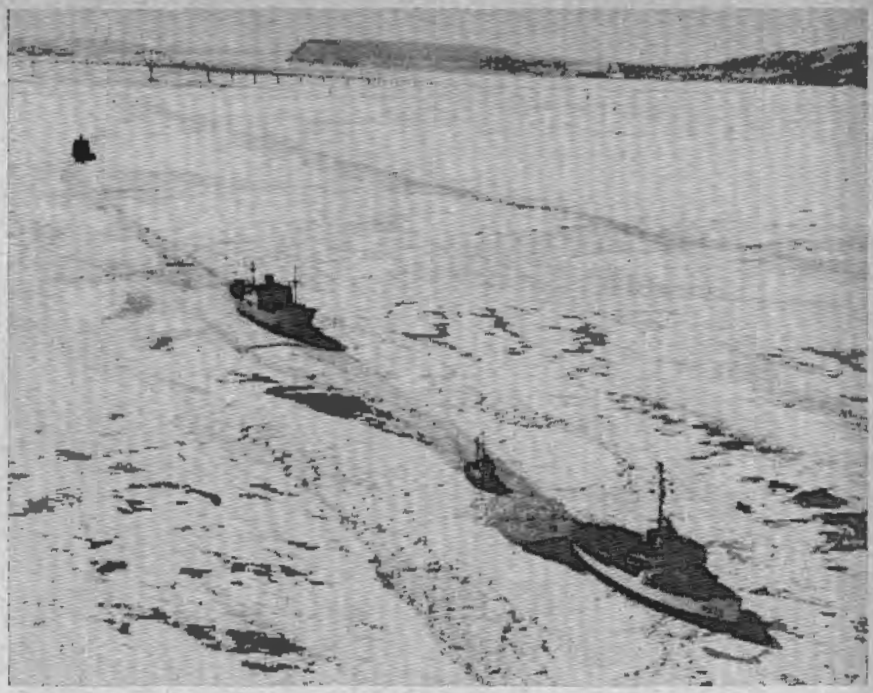
In 1937, RADM Thiele visited various countries in connection with a study of the construction of icebreakers. A fleet of Coast Guard icebreakers was constructed as a result of this study. In the early stages of World War II, he was assigned to the office of the U.S. Navy Supervisor of Shipbuilding at New York, N.Y., where he supervised the design and construction of icebreakers which included the Mackinaw for the Great Lakes, the *Wind* class for Arctic service and the 110-foot harbor icebreakers known as the *Raritan* class.

RADM Thiele is a member of the Merchant Marine Council, USCG. He is also a member of the following governmental research and advisory groups: Chairman, Ship Structure Committee; National Academy of Sciences, National Research Council; Maritime Research Advisory Committee.

This paper was presented by RADM Thiele at the American Merchant Marine Conference at Detroit, Michigan, in October 1959.

States we have branched out in our worldwide activities to the remote ends of the earth—the Arctic and the Antarctic. Alaska now has become a State. Here is a potential source of natural resources untapped because of weather and transportation problems. Before World War II the only access to northern Alaska was by dogsled or a daring dash by an occasional ship. Today there are tens of thousands of tons of cargo on the north coast, delivered by ship, but only because of icebreakers and ice workers. True, much of this cargo is in support of the military but remember, Fort Pontchartrain du Detroit was built before Detroit was a city.

In the Antarctic, the United States is pioneering on the last frontiers to be conquered. Here we have established bases that are just as untenable to us as the mosquito-infested swamps of the Everglades were to DeSoto. Today cargo is moved in to support exploration and study. Tomorrow the return trip could bring out fabulous ores as valuable to world economy as the cryolite from Greenland. None of this is possible without the icebreaker.



THE COAST GUARD Icebreaker *Eastwind* clearing a channel for traffic up the Hudson River to Albany.

SPECIFICS

Up to this point I have dealt in generalities, now let us look at the specifics. For about four months of the year, not a single cargo transits the interconnecting channels between Lake Huron and Lake Erie. During this same time The Coast Guard icebreaker *Mackinaw* (5,000 tons displacement), Coast Guard tenders such as the *Tupelo* and *Acacia* (1,000 tons displacement) and Coast Guard icebreaking tugs of the *Kaw* class (365 tons displacement) all traverse the Great Lakes and interconnecting channels at will. In recent years the coal trade between Toledo and Detroit has been maintained almost continously by standard Great Lakes self-unloading bulk carrier with the assistance of one or more of these icebreakers. On Lake Michigan the bulk oil carriers now maintain year round operations with the assistance of Coast Guard icebreakers stationed in that area. With the advent of taconite, a processed ore which can be handled and shipped without freezing, the possibility of year-round iron ore operations is apparent. The application of new developments and techniques to keep locks and dock areas ice free, together with adequate icebreaker assistance, could keep traffic moving all over the Great Lakes twelve months of the year. These possibilities are not idle dreams. They are within the state of the art and depend solely on the economics and equipment involved.

During World War II the Illinois River was used extensively for the first time when the iceplow was introduced. It was found possible to move naval craft, built in northern Illinois, down the Illinois and Mississippi Rivers irrespective of ice conditions. Winter traffic is maintained today on the Illinois but is limited by inadequate equipment.

The port of Albany on the Hudson River has become an all-year port for all practical purposes since the advent of Coast Guard icebreakers after World War II. Traffic in the upper Chesapeake Bay and on the C & D Canal is now rarely held up when icebreakers are available to assist shipping during the infrequent bad ice years.

ST. LAWRENCE SEAWAY

You will note that I have made no reference to the possibilities of the St. Lawrence Seaway. Here we have many involved factors, both political and practical. In the first place, the seaway from the Bertram Snell Lock to the sea and the Welland Canal are a Canadian problem. However, irrespective of any political considerations, the same principles apply to the seaway as to the interconnecting waterways and the western rivers. All-year operation is possible provided it is economically practical. In an operation of this type icebreakers would solve only the simplest part of the problem. Extensive engineering projects would be required, such as ice diversion jetties, compressed air bubbling systems, and additional protection for the hydroelectric powerplants. The economics of such an extensive program are questionable.

SUMMARY

To summarize the situation as regards the advantage of, and the need for icebreakers in support of U.S. maritime commerce, it is apparent that with adequate icebreaking assistance, maritime commerce can be maintained on practically all the navigable waters of the United States on a 12-month basis. Where traffic volume is sufficient to justify the equipment necessary to do the job, the Federal income from taxes on additional profits realized would be more than enough to supply and support the services rendered. Dual purpose ships can not only maintain winter operations but can provide increased services to shipping and boating throughout the year.

In the development of the Arctic

and the Antarctic both for technical and political reasons and for future commercial possibilities, a fleet of Arctic-type icebreakers is essential to insure our position in those areas where we now hold a commanding lead over our competitors.

The American economy has a potential increased annual earning capacity of up to one billion dollars, through full-time utilization of American shipping and waterways with icebreaker assistance. With our burgeoning economy, and its increasing demands upon transportation, it may not be too many years before we must realize this full capability of our maritime commerce.

TABLE I

FREIGHT MOVEMENTS—1957

	TON-MILES
Mississippi River above Cairo, Ill.	7,519,900,000
Missouri River	122,800,000
Ohio River System	19,689,900,000
Illinois Waterway	4,546,100,000
Coastal Rivers and Canals	11,411,300,000
TOTAL—Northern River Systems	43,290,000,000
Great Lakes	117,230,500,000

Cargo handled in Arctic operations during 1957:	
Dry cargo measurement tons	271,752
Petroleum products—bbls.	3,263,691
Cargo handled in or out of northeastern harbors tons	360,239,000

TABLE II

Ice Damage to U.S. Merchant Vessels, U.S. Waters, Winter 1958–1959

AREA	NO. OF CASES OF DAMAGE
1. New England Coast	1
2. Hudson River	3
3. Delaware Bay	2
4. Chesapeake & Delaware Canal	2
5. Chesapeake Bay	4
6. Ohio River	23
7. Illinois River	1
8. Great Lakes	17
9. Alaska	3
TOTAL	56

ALCOA AWARD

A CERTIFICATE of merit for their outstanding safety record was awarded the crew of the S.S. *Alcoa Roamer* by Acting Mayor Victor H. Schiro for the city of New Orleans in a recent ceremony aboard ship in that port.

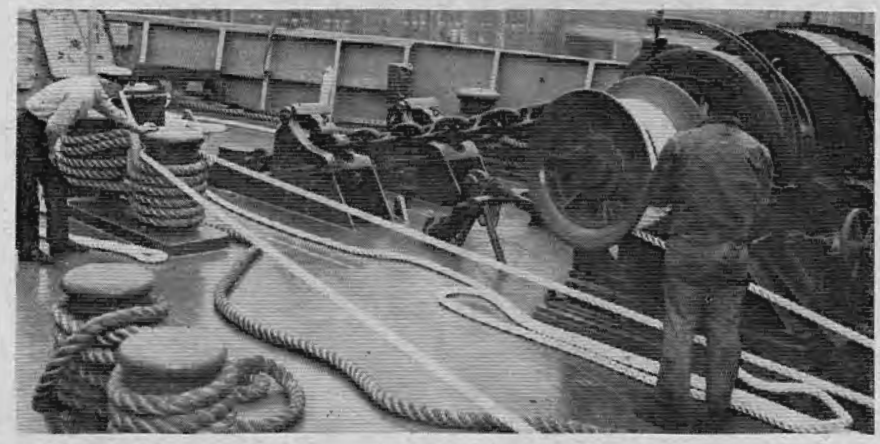
The vessel, which sails between New Orleans and Puerto Rico every 2 weeks, had just completed 1,000 consecutive days of operation with no lost time due to accidents.

This is the longest accident-free record in the Alcoa fleet and ranks among the top records in the entire American Merchant Marine.

Shown in the picture above are, from left to right: Carl Andrews, oiler; Harris H. Peterson, chief electrician; Captain Kenneth E. MacFarlane; Acting Mayor, Victor H. Schiro; Milton Robinson, bos'n; Ambrose Day, first assistant engineer.

During the past year many constructive suggestions and helpful ideas have been received from the readers of the "Proceedings." The Merchant Marine Council gratefully acknowledges this interest which assists in the improvement of our publication and takes this opportunity to wish every member of the American Merchant Marine a Merry Christmas and a Happy and Safe New Year.

HANDLING NYLON LINES



WHAT IS your estimate of the outcome of this line-handling situation? Broken bones, amputation, other injuries? Were this line to part, a report of injury would certainly be on file.

NYLON, because of its many advantages, is gradually being introduced aboard merchant vessels. Its tensile strength is approximately twice that of manila's—a real premium. Nylon lines are lighter, more flexible, less bulky, and easier to handle and stow. They resist rot, decay and marine fungus growth. Nylon's inherent properties provide the ability to stretch, absorb shocks, and resume normal length when strain is removed. Many of these advantages can be turned into liabilities, however, if the user is not familiar with some of its characteristics.

Nylon is no cure-all for the hazards involved in any line-handling situation. Dependence upon its additional strength may cause the seaman to ignore ordinary precautions. Nylon lines will part, as will manila or wire rope, when they are weakened, subjected to greater strains than they can withstand, or when given improper handling. Nylon's terrific backlash can cause serious injury or death

The use of nylon lines presents hazards unique to nylon's physical properties. This is particularly true under conditions conducive to heavy strain, such as while underway with headway while mooring or maneuvering into locks. Inexperience with nylon lines may well have been a pertinent factor in casualties in the St. Lawrence Seaway recently reported to the Coast Guard.

When nylon is stretched over 40 percent, it is likely to part. The stretch is immediately recovered with a snapback that will sound like a pistol shot. The snapback can also be as deadly as a bullet wound. It is therefore imperative that no one stand in the direct line of pull when a heavy strain is applied. This is also true for other types of lines, but overconfidence in nylon's strength may lead one to underestimate its sting. A line handler was killed when he neglected this precaution. A vessel maneuvered alongside a quay with a new 6-inch mooring line as a forward spring. The wind was from astern at 15 miles per hour, making it difficult to check the ahead motion of the vessel with the spring line already under tension. Before it could be slacked, the line parted close to the eye on the bollard. A lineman, standing in the way of the line, was struck and killed. There were many factors which could have contributed to this casualty, but the simple fact remains—if the lineman had been in the clear, there would have been a witness, rather than a statistic.

Three other casualties have occurred aboard ships in the Seaway while handling nylon lines. One seaman fractured his left hand when the uppermost turn of a stern line he had been surging on a capstan jumped off and struck him with the handling part. In this case, with a heavy strain on the line, it might have been easier and a great deal safer to have backed the line with the capstan rather than by hand. Another seaman lost control of a bow line while surging from a bitt. He was thrown to the deck and hit by the hauling part of the line. He may not have known that the coefficient of friction for nylon is lower than that for manila. Two or three round turns before figure-eighting the line would have given him better control in easing the line. A third seaman broke his leg when a bow line parted close to a chock which was not of the rolling type. Chafing gear may well have eliminated this lost-time injury.

It may be coincidental that these casualties took place in the Seaway. There have been no accidents attributed to the use of nylon lines aboard U.S. MSTS vessels, where nylon has been under test and in use for the past two years. Perhaps more experience is needed by ocean vessels in Seaway transits. In any case, it is apparent that the casualties reported here caused by inexperience or lack of knowledge rather than by the inherent properties of nylon.

The following maintenance tips were compiled by the U.S. Navy Bureau of Ships and published in the *Bureau of Ships Journal*. They are reprinted here with the belief that greater knowledge of the subject will be of assistance to the officers and men aboard ships now using nylon line. Comments by interested personnel will be appreciated and given consideration for publication in the *Proceedings* in the interest of marine safety.

MAINTENANCE

1. Nylon rope will hold a load even though a considerable number of the yarns are abraded. Ordinarily, when abrasion is localized, the rope may be made satisfactory for reuse by cutting away the chafed section and splicing the ends. Chafing and stretching do

not necessarily indicate the load-carrying ability of nylon rope.

2. Splice nylon rope as you would manila rope except that tape instead of seizing stuff should be used for whipping the strands and rope. Also, nylon rope, because of its smoothness and elasticity, requires at least one extra tuck over that for manila rope. For heavy load applications, such as towing, take an additional backtuck with each strand.

3. Should nylon rope become iced over, thaw it carefully at moderate temperature and drain before stowing.

4. Should nylon rope become slippery because of the accumulation of oil or grease, scrub it down. Isolated spots may be removed by the use of light burning oils.

GENERAL USE

5. Do not uncoil new nylon rope by pulling the end up through the eye of the coil. Unreel it as you would wire rope.

6. New cable-laid nylon hawsers tend to be stiff and difficult to handle. To alleviate this condition, tension the cables for 20 minutes at 30 percent extension (100 feet when tensioned would measure 130 feet).

7. When the stretch of nylon becomes excessive, double up the lines by passing the bight, thereby halving the elongation under load. This reduces the hazard of snapback, since the rope will usually part near the eye. For drydocking and other close control work, stretch can be reduced to one-half by doubling the lines.

8. When new cable-laid nylon hawsers are strained, sharp cracking noises will be heard. The noises are associated with readjustment of the rope strands in the stretched cable. Under normal safe-working loads, the rope will stretch one-third of its length.

9. Wet nylon hawsers under strain emit steam-like water vapor. This phenomenon is normal under safe-working loads.

10. Nylon rope can withstand repeated stretching with no serious effect. When under load it thins out; but when free of tension, it returns to its normal size. The critical point of loading is 40 percent extension; that is, a 10-foot length would stretch to 14 feet when under load. Should the stretch exceed 40 percent, the rope is in danger of parting.

11. When sets of ropes are to be used in parallel, as are boatfalls, do not pair nylon rope with low elongation rope such as wire or manila.

12. Use nylon rope stopper for holding nylon hawsers under load. Do not use manila or chain.

13. When handling nylon rope without a powered reel, avoid coiling it in the same direction all the time since this will tend to unbalance the lay.

14. Bitts, chocks, and other holding devices used with nylon rope should have smooth surfaces to reduce abrasion and minimize surging of nylon ropes under working conditions. Use chafing gear where there are sharp metal edges. During reeling or heaving-in operations, take care that thimbles and connecting links do not chafe or cut the nylon hawsers.

15. Since, normally, plain-laid nylon rope is right-laid, coil it on bitts, capstans, or reels in a clockwise direction.

16. Do not use wire or spring lay rope on the same chock or bitt with nylon rope.

17. Plain-laid nylon hawsers tend to elongate around bitts when loaded. To minimize excessive lengthening, take a turn under the horn and cross the line on itself before taking more turns.

18. When nylon hawsers are used on capstans for heavy towing or impact loading, take six turns on the capstan and two turns overlaying the last four turns. This procedure reduces the hazard of sudden surges on rendering out.

19. For mooring purposes with low freeboard vessels where the tide differentials are average, make up at half tide. No further handling should be required.

20. Nylon rope under heavy strain may develop glazed areas where it has worked against bitt and chock surfaces. This condition may be caused by the removal of paint from metal surfaces or the fusing of nylon fibers. In either case, the effect on the rope strength is negligible.

ALONGSIDE TOWING

21. Make up forward and backing tow lines as close as possible without regard to sharp bends

22. Take up slack in relaxed line while the other line is under heavy load.

23. When easing pull, the tug may have to reverse engines slightly to counteract the elastic property of nylon and thus avoid "snap-back" action.

PRECAUTIONS

24. Nylon rope on parting is stretched 50 percent. The stretch is recovered instantaneously with resulting snapback. In view of this, it is imperative that no one stand in direct line of pull when heavy loads are applied.

25. Do not use a single part of plain-laid rope for hauling or hoisting any load that is free to rotate. If one part of rope is essential, use cable-laid nylon hawsers.

26. Do not stow nylon rope in strong sunlight for long periods. Cover it with tarpaulins. During stowage, keep it away from heat and strong chemicals.

27. Be extremely careful when easing out nylon rope around bitts and cleats under heavy load. Because its coefficient of friction is lower than that of manila, the nylon rope may slip when eased out and cause injury to personnel unfamiliar with its oddities.

28. For control in easing out, take two or three round turns on the bitt before figure-eighting the line. Use of the round turns provides a means for closer control in easing out or surging. Always stand well clear of the bitts during these operations.

LIFE EXPECTANCY

Nylon rope properly handled and maintained should remain serviceable more than five times longer than manila rope subjected to the same use. Adherence to the foregoing instructions combined with the usual safe practices followed for manila rope will give all the advantages of nylon rope plus savings in cordage allowances.

The chemicals listed here have a permanent effect on nylon yarn. Action takes place at various temperatures and concentrations according to the chemical involved.

- Concentrated formic acid.
- Benzyl alcohol (at a boil).
- Phenol.
- Cresols.
- Xylenols.
- Chlorinated phenols.
- Concentrated nitric acid.
- Concentrated sulfuric acid.
- Calcium chloride (in methanol).
- Calcium chloride (in glacial acetic acid; ethylene chlorohydrin; ethylene glycol).
- Zinc chloride in methanol.
- Concentrated hydrochloric acid.

December 1959

To: The Crews of U. S. Merchant Vessels

Gentlemen:

By this time I trust you have had an opportunity to read the pollution material included in the October issue of this publication. We hope you found the article and letter to be of interest and that they served to better acquaint you with the domestic and international aspects of the pollution problem. Additionally, we hope that the poster, which was also included, is on the ship's bulletin board as a constant reminder of this problem.

One of the regular items in the Oil Pollution Bulletins originally distributed to U. S. flag tankers was a breakdown of oil pollution violations investigated by the U. S. Coast Guard. For your information, a similar listing follows, which emphasizes the need for continued pollution abatement effort on the part of all U. S. owned merchant vessels.

Pollution Violations
Period- January 1, 1956 through September 22, 1959

Vessel Class	Number of Violations	% of total
U. S. Dry Cargo and Passenger	53	20.7
U. S. Tanker	25	9.8
	78	30.5
Foreign Freighter and Passenger	77	30.1
Foreign Tanker	47	18.4
	124	48.5
Barges	21	8.1
Other*	33	12.9
Total	256	100.0

*Includes shoreside establishments, tugs, fishing vessels, etc.

Where sufficient information was provided, the causes of these violations were analyzed, with the following results:

A.	Bunkering Operations, All type vessels	
	1. Overflows from negligence or "so-called" air pockets	39 cases
	2. Valves improperly set	5 "
	3. Other causes	9 "
		53 "
B.	Pumping Bilges, All type vessels	16 "
C.	Hull leaks, All type vessels	22 "
D.	Handling Cargo and Ballast, Tankers	
	1. Hose ruptured due to speed of passing vessel	2 "
	2. Wrong line-up of valves	4 "
	3. Overflowed while "topping off"	2 "
	4. Opening sea cock before starting pump for ballast	3 "
	5. Discharing cleaning water or dirty ballast	5 "
	6. Faulty pumps, piping or valves	6 "
		22 "

From this tabulation it will be seen that bunkering operations provide the greatest potential for causing pollution, and incidentally, account for the subject matter of the October pollution poster. These, and many other of the cases reported, could have been avoided by those in charge of the operation making sure that the men under them had a full understanding of the job to be done. A rigid equipment inspection and maintenance schedule could also have avoided many of the citations. Prevent your ship from appearing on the above listings and you will be doing yourself, your company and your Government a great service.

In 1958, the American Petroleum Institute, in cooperation with the Panel, conducted an oil pollution survey of the U. S. Atlantic Coast. This survey encompassed coastal and harbor areas from Boston to Key West, with considerable effort being devoted to the east coast of Florida. Through the courtesy of the API, the Panel plans to abstract pertinent portions of the survey report and present them to you serially in these Proceedings. By this means, it is hoped to familiarize you with pollution conditions and the multitude of factors influencing them. With such information, concentrated efforts toward further pollution abatement can more intelligently be made.

On behalf of the Panel, I wish to thank all of you for your past cooperation and tell you that we look forward to our future activities with you. Our best wishes for an enjoyable Christmas and a fruitful New Year.

Very truly yours,

E. W. Fiske, Jr.
Chairman

THE AMVER PROGRAM

IT IS A known fact that when a vessel becomes distressed upon the high seas, and it sends out a message requesting help, merchant ships are the most likely to render assistance.

The message requesting assistance is usually picked up by the U.S. Coast Guard radio network and becomes a problem of Search and Rescue. How this problem is solved involves many facets of Coast Guard operation. First off—the Coast Guard wants to know—where is the closest ship which can render assistance?

To answer this question, a versatile electronic computer has been placed into operation in the office of the Commander, Eastern Area, U.S. Coast Guard, New York, N.Y. This machine is used primarily to compute and update information received from merchant vessels making a voluntary, daily report of their positions in the Atlantic Ocean. The Coast Guard calls this new system the "Atlantic Merchant Vessel Reporting System."

THE IMPORTANCE OF AMVER

The idea of a Ships Plot is nothing new. The Coast Guard has always been interested to a certain extent in knowing the whereabout of all vessels on the oceans; and particularly, those within a few hundred miles of our coasts. For years, the Coast Guard plotted manually the positions of various ships in both the Atlantic and Pacific when these positions became known through various sources. This manual process was necessarily selective. It was not accurate and not complete. Now, in the Atlantic Maritime Region, by means of electronic computers, we are able to tabulate very accurate data on literally hundreds of vessels. We know position, course, speed, destination, and much other information.

The main purpose of this electronic tabulation is readiness for assistance work, or search and rescue operations. By knowing immediately the actual positions of vessels within a distress area, the Coast Guard is able to request specific vessels to proceed and assist, and to release many other vessels which otherwise would undoubtedly proceed to the scene of disaster. The long-standing sea tradition of all possible aid to those in distress certainly continues, but with the Atlantic Merchant Vessel Report System (known as AMVER), it has been made more efficient in the North Atlantic for all concerned.

EXAMPLES OF SUCCESSFUL OPERATIONS

During the month of September 1959, the Eastern Area, Coast Guard which operates the AMVER system at its office in New York City, had eighteen instances of operational use of the position reporting system. For example, when hurricanes Gracie and Hannah were raging off the southeast Atlantic coast, the New York Rescue Coordination Center was keeping careful plots on all known vessels which were within the predicted tracks of these storms. By this means, the Coast Guard knew the identities of vessels in the path of the storm. In case of distress developments from any of these vessels, immediate rescue ships could have been dispatched to the most probable areas with some positive information on best search areas.

On 5 September 1959 a passing ship reported the possibility of a sunken derelict southeast of Nantucket Light Vessel near the steamer lanes. A quick check of the ship's plot showed eight vessels which might pass near the derelict. Queries directed specifically to these ships greatly aided the Coast Guard in a thorough search of this area to insure removal of this menace to navigation on the high seas.

On 10 September 1959 a Navy vessel had a serious medico for offshore, but no doctor was on board. By means of the Ships Plot, a doctor was located, a ship diverted to make rendezvous, the patient was removed, and another life was saved as a direct result of careful use of the Ships Plot and its available facilities.

The Ships Plot does not always produce a favorable solution. On 13 September 1959, a Dutch merchantman had an acute appendicitis case. Ships Plot could not locate any ship with a doctor within 400 miles. The only solution to save this seaman's life was to divert the CGC *Ingham*, with a doctor aboard, from Ocean Station BRAVO to remove the man. The man's life was saved by an emergency operation, but the important duties of the Ocean Station Vessel were neglected for a few days. If all vessels were participating in AMVER, the chances would be greatly increased for finding a doctor for cases such as this one.

HOW TO PARTICIPATE

The effectiveness of the AMVER program depends upon the number of vessels which regularly participate. The greater the number of ships in the reporting system, the greater the probability of success in the saving of life and property at sea. Masters of vessels or their owners and agents should contact the Commander, Eastern Area, U.S. Coast Guard, Customhouse, New York 4, N.Y. by mail or phone HAnover 2-5700 for information on how to participate in the program.

COAST GUARD PERSONNEL, in the picture above, use the IBM 305 RAMAC equipment to "search" for a ship with a doctor on board. In minutes they will be able to give their findings to Search and Rescue.

MARITIME SIDELIGHTS

The *AMMI Bulletin* reports that the Atomic Energy Commission has awarded a contract to Combustion Engineering Inc., Windsor, Conn., for a design and engineering study of a prototype pressurized water reactor to propel a tanker. Estimated cost of the study which is to be completed by the end of the year is $150,000. The study is being conducted with the cooperation of the Maritime Administration.

⚓ ⚓ ⚓

The Welland Canal of the St. Lawrence Seaway system will be improved next year to increase its ships' passage capacity by about 25 percent. At present the canal's capacity is 27 or 28 vessels a day, 13 or 14 each way. Study will also be made of the possibility of reducing lockage time by improvement in the hydraulic characteristics of the lock-filling and emptying system according to reports in the Canadian press.

⚓ ⚓ ⚓

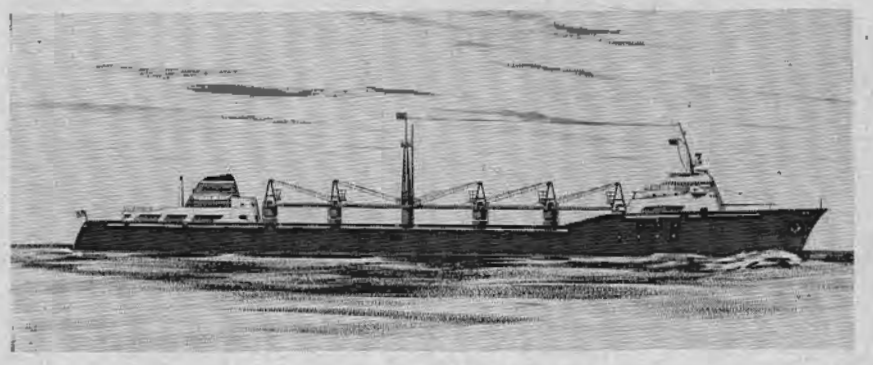
The day may not be far off, according to an article in the *Pacific Shipper*, when virtually all common carriers, shippers and receivers, and the Armed Forces will be using the same container—when cargo-handling gear will be standardized.

This potentially important development to American sea, land, and air transportation neared reality when a "crash subcommittee" of the National Defense Transportation Association agreed to adopt a "universal container" of 20- and 40-foot lengths, 8 feet high, and 8 feet wide.

Containers of this type are adaptable for use singly or in multiples aboard the latest 85-foot rail flatcars, in ships now on the drawing boards, in cargo planes now in use, and by the armed services.

Among the studies examined by the NDTA committee was a survey by American President Lines and another by United States Freight Corp. showing a $6-per-ton saving on limited experiments with 20-foot containers in California.

NEW DELTA LINE FREIGHTERS



The Maritime Administration announced that a $30 million contract for the construction of three new freight ships of unique cargo-hatch design was signed by Delta Line, New Orleans, and the Federal Maritime Board with Avondale Marine Ways, New Orleans, La.

The total contract price of $29,408,154 for the three ships, subject to escalation, includes various alternate price items to provide extra power, speed and increased cargo-handling capacity. Most important of the added national defense features is a "Stuelcken mast," first ever constructed in the United States, which will serve Nos. 4 and 5 hatches. Cost of the complete heavy-lift Stuelcken rig, with 60-ton boom in lieu of a 30-ton "jumbo" boom, winches and gear will be $119,703.

The three new freighters of the C3–S–43a type (Delta Line's C2–D–M1 design) are the first to be ordered by Delta Line in its 20-year, 14-ship replacement program, which is expected to bring $180 million in contracts to American shipyards.

The three new cargo liners are to be operated in the Delta Line's service on U.S. Essential Trade Route 14, between U.S. Gulf ports and West Africa. Length overall will be 506′ 3″; beam, 70′. They will have a total carrying capacity of 10,760 long tons each and a cargo deadweight of 8,780 tons, at the design draft of 28 feet. Service speed will be 18 knots. Navigating bridge, quarters for 12 passengers and the crew, exclusive of engineering personnel, galley and messing facilities will be located all the way forward. Only the machinery and those concerned with it will be situated aft.

The ships have a unique triple-hatch layout, replacing the conventional single opening over the "square" of the hatch with less free access to the covered "wings" at either side. The connecting hatches which open almost completely to the air when automatic patent hatch covers have been rolled back, permit five 5-ton rotating cranes to "spot" cargo at almost any point, eliminating manual shifting of cargo within the holds. A pair of 10-ton conventional booms will be provided, also, for emergency use, together with the 60-ton Stuelcken heavy-lift rig.

Negotiations are progressing for the building of two new superliners which will eventually replace the *Queen Mary* and *Queen Elizabeth*, but Cunard officials point out it would take a minimum of five years before the first of the new ships would be ready for service.

Mariner type vessels have claimed speed records in recent press reports. American President Lines claimed that their SS *President Garfield* reached Los Angeles from Hong Kong in 12 days 22 hours. The United States Lines has also claimed the speed crown for one of their mariners for a New York-Orient run.

nautical queries

Q. (a) Gyrocompass rotors generally operate on alternating current. If a vessel's generators provide direct current, state briefly how alternating current is provided for the gyrocompass.

(b) If the ship's power supply is 110 volts d.c., how is 70 volts d.c. input voltage provided for the gyrocompass?

A. (a) If a ship's generators provide direct current, it is converted into alternating current by a motor alternator or rotary converter to operate the gyrocompass.

(b) If the ship's power supply is 110 volts d.c., it is reduced to 70 volts d.c. for the gyrocompass input by means of resistors.

Q. (a) On the surface of the earth, where do gyrocompasses have the greatest directional power?

(b) On the surface of the earth, where do gyrocompasses have the least directional power?

A. (a) Gyrocompasses have the greatest directional power at the Equator.

(b) Gyrocompasses have the least directional power at the poles.

Q. When a gyrocompass is operating properly, in what direction is its rotor shaft alined?

A. When a gyrocompass is operating properly, its rotor shaft is alined in a north-south direction.

Q. In Sperry gyrocompasses, the sensitive element consisting of the rotor and its case are suspended by a wire. What prevents twists in the wire as the ship changes its heading when the gyrocompass is operating?

A. The wire supporting the sensitive element is secured to the phantom element which follows the sensitive element by means of the followup system. The sensitive and phantom element are kept in alinement in this manner, preventing twists in the suspension wire.

Q. *Given:* Desired true course, 175°.
Variation, 018° East.
Deviation, 003° West.
Required: The compass course.

A. 160°.

Q. *Given:* Desired true course, 337°.
Variation, 010° West.
Deviation, 004° West.
Required: The compass course.

A. 351°.

Q. (a) Explain why boilers require extra feed.

(b) What is indicated by a constantly rising water level in a manually fed boiler?

A. (a) Extra feed is required to make up the losses of steam or condensate throughout the vessel. These losses may come from leaking glands, joints, steam relief or safety valves, and boiler tubes; also by overflowing of open heaters and the use of the steam whistle.

(b) A constantly rising water level would indicate a leaking condenser tube or plate, a leaking or stuck open extra feed valve, a jammed or excessively open check valve, or excessive pressure or speed of the feed pumps.

BLOCKS AND TACKLES

Q. A seaman weighs 150 lbs. In Case 1, two men on deck pull him aloft, each pulling an amount equal to the other. In Case 2, one seaman and the man aloft pull, each pulling equal amounts. How much is pulled by each man in Case 1 and Case 2 neglecting friction?

Case 1.

Case 2.

A. In Case 1 each man pulls 75 lbs.

In Case 2, each man pulls 50 lbs. When the man aloft pulls, he transfers weight from the standing part to the hauling part. Expressed as an equation, noting that each pulls an equal weight, this may be expressed:

$$2X=150-X, \text{ or } 3X=150,\ X=50$$

The man aloft must pull twice as much rope, as the man on deck, so it is not a a case of obtaining something for nothing. A slight excess over the required pulls given is necessary for acceleration.

DELAWARE RIVER SHIP SAFETY PROGRAM INSTITUTED

Shipping interests trading to the Philadelphia Port Area have put into motion a program for the use and evaluation of short distance radiotelephone for navigational safety. The industry-sponsored program is responsive to a recommendation made by the House Merchant Marine and Fisheries Committee, following the *Stockholm-Andrea Doria* collision, that bridge-to-bridge direct radiotelephone communication should be included in any program for a long-range study of safety of life at sea. Participants in the program are steamship companies, the local Pilots' Association, the U.S. Army Corps of Engineers, the Military Sea Transportation Service, and other vessel operators in the Delaware River and Bay Area. The Federal Communications Commission and U.S. Coast Guard have worked closely in the development of the program.

The ship-to-ship communication system is a navigational aid designed to prevent collisions by allowing navigators to talk to each other and make known their positions and the courses they plan to follow. The system will be especially helpful during periods of poor visibility in restricted waters.

It is expected that there will be a period of three to six months involved in working out final details and regulations, acquiring and installing equipment, and obtaining the necessary licenses from the Federal Communications Commission. Users will submit a series of reports to interested governmental agencies to record the value and usage of the system. Such reports will substantiate renewal of Federal Communications Commission licensing and will supply data for other interested maritime and communications groups.

Courtesy Maritime Reporter

MERCHANT MARINE PERSONNEL STATISTICS

MERCHANT MARINE OFFICER LICENSES ISSUED

QUARTER ENDING 30 SEPTEMBER 1959

DECK

Grade	Original	Renewal
Master:		
Ocean	37	552
Coastwise	9	48
Great Lakes	19	45
B. S. & L.	15	111
Rivers	57	81
Radio Officer Licenses issued	11	370
Chief mate:		
Ocean	27	114
Coastwise		4
Mate:		
Great Lakes		
B. S. & L.		
Rivers		
Second mate:		
Ocean	38	101
Coastwise		1
Third mate:		
Ocean	180	118
Coastwise	1	1
Pilots:		
Great Lakes	23	21
B. S. & L.	130	39
Rivers	102	24
Master: Uninspected Vessels	13	23
Mate: Uninspected Vessels	29	44
Motorboat	277	601
Total	968	2,298
Grand Total	3,266	

ENGINEER

Grade	Original	Renewal
STEAM		
Chief engineer:		
Unlimited	42	548
Limited	7	127
First assistant engineer:		
Unlimited	44	207
Limited	3	22
Second assistant engineer:		
Unlimited	55	315
Limited	2	4
Third assistant engineer:		
Unlimited	247	289
Limited	2	1
MOTOR		
Chief engineer:		
Unlimited	10	112
Limited	27	139
First assistant engineer:		
Unlimited	7	14
Limited	10	24
Second assistant engineer:		
Unlimited	3	20
Limited	2	4
Third assistant engineer:		
Unlimited	221	442
Limited	2	3
Chief engineer: Uninspected Vessels	9	9
Assistant engineer: Uninspected Vessels	6	5
Total	699	2,285
Grand Total	2,984	

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
Ordinary seamen for able seamen	1				1
Wiper or coalpassers for qualified member engine dept					
Total waivers	1		1		2
Number of vessels	1		1		2

INVESTIGATING UNITS

Coast Guard Merchant Marine Investigating Units and Merchant Marine Details investigated a total of 3,645 cases during the third quarter of 1959. From this number, hearings before examiners resulted involving 46 officers and 186 unlicensed men. In the case of officers, 2 licenses were revoked, 4 were suspended without probation granted, 15 were suspended with probation granted, 9 cases were dismissed after hearing, and 2 hearings were closed with admonitions. Of the unlicensed personnel, 14 documents were revoked, 8 were suspended without probation, 60 were suspended with probation granted, 11 cases were dismissed after hearing, and 11 hearings were closed with admonitions. Seven licenses and 93 documents were voluntarily surrendered.

ORIGINAL SEAMAN'S DOCUMENTS ISSUED

Type of document	Atlantic Coast	Gulf Coast	Pacific Coast	Great Lakes and rivers	Total
Staff Officer	45	6	27	4	82
Continuous Discharge Book	234	27			261
Merchant Mariner's Documents	1,504	529	626	1,347	4,006
AB any waters unlimited	144	39	58	34	275
AB any waters, 12 months	49	29	12	67	157
AB Great Lakes, 18 months	4		4	35	43
AB Tugs and Towboats, any waters			2		2
AB Bays and Sounds		1			1
AB Seagoing Barges		2			2
Lifeboatman	391	7	75	19	492
QMED	130	49	84	90	353
Radio Officer	5	2	2		9
Certificate of Service	1,378	479	587	1,296	3,740
Tankerman	26	62	12	49	149
Total	3,910	1,232	1,489	2,941	9,572

MERCHANT MARINE STATISTICS

There were 916 vessels of 1,000 gross tons and over in the active oceangoing U.S. merchant fleet on October 1, 1959, according to the Maritime Administration. This was 21 fewer than the number active on September 1, 1959.

There were 32 Government-owned and 884 privately owned ships in active service. These figures did not include privately owned vessels temporarily inactive, or Government-owned vessels employed in loading grain for storage. They also exclude 26 vessels in the custody of the Departments of Defense, State, and Interior.

There was a decrease of 18 active vessels and an increase of 21 inactive vessels in the privately owned fleet. One freighter, the *Pacific Thunder*, and a tanker, the *Naece*, were returned from foreign to U.S.-flag. The tanker *Gulfpride* was delivered from new construction. This increased the total privately owned fleet by 3 to 1,020.

Of the 136 privately owned inactive vessels, 53 dry cargo ships and 64 tankers were laid up for lack of employment, 16 more than on October 1. The others were undergoing repair or conversion.

The Maritime Administration's active fleet decreased by 3, while its inactive fleet decreased by 10. Fourteen Liberty ships were sold for scrap. One vessel was turned over by the Navy to the Administration for layup in the National Defense Reserve Fleet making a net loss of 13 in the Administration's fleet, or a total of 2,067. The total U.S. merchant fleet, active and inactive, decreased by 10 to 3,087.

Two new cargo ships were ordered by Pacific Far East Line. One new tanker and one tanker conversion were delivered for U.S.-flag operation, and two tankers were delivered for foreign flag registry. The total of large merchant ships on order or under construction in U.S. shipyards decreased by 2 to 72.

Seafaring jobs on active oceangoing U.S.-flag ships of 1,000 gross tons and over, excluding seamen manning Military Sea Transportation ships were 50,097. Prospective officers in training in Federal and State nautical schools numbered 2,218.

AMENDMENTS TO REGULATIONS

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

[CGFR 59-41]

SUBCHAPTER P—MANNING OF VESSELS

PART 157—MANNING REQUIREMENTS

Subpart 157.20—Computations

LOOKOUTS ON SHIPS

The provisions regarding proper lookouts on ships are in the various "Rules of the Road," i.e., Rule 29 of the "International Rules" (33 U.S.C. 147a), Article 29 of the "Inland Rules" (33 U.S.C. 221), Rule 28 of the "Great Lakes Rules" (33 U.S.C. 293) and Rule Numbered 26 of the "Western Rivers Rules" (33 U.S.C. 351). The amendment to 46 CFR 157.20–45 brings up-to-date references to requirements for lookouts.

It is hereby found that compliance with the Administrative Procedure Act (respecting notice of proposed rule making, public rule making procedures thereon, and effective date requirements thereof) is deemed to be unnecessary.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Order No. 120, dated July 31, 1950 (15 F.R. 6521), Treasury Department Order 167–14, dated November 26, 1954 (19 F.R. 8026), and Treasury Department Order CGFR 56–28, dated July 24, 1956 (21 F.R. 5659) to promulgate regulations in accordance with the statutes cited with the regulations below, § 157.20–45 is amended to read as follows, and shall become effective on the date of publication of this document in the FEDERAL REGISTER.

§ 157.20–45 Lookouts.

(a) The requirements for proper lookouts are in the various "Rules of the Road," i.e., Rule 29 of the "International Rules" (33 U.S.C. 147a), Article 29 of the "Inland Rules" (33 U.S.C. 221), Rule 28 of the "Great Lakes Rules" (33 U.S.C. 293) and Rule Numbered 26 of the "Western Rivers Rules" (33 U.S.C. 351).

(R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416)

Dated: September 25, 1959.

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

[F.R. Doc. 59-8301; Filed, Oct. 1, 1959; 8:51 a.m.]

NUMBERED AND UNDOCUMENTED VESSELS

The table below gives the cumulative total of undocumented vessels numbered under the provisions of the Act of June 7, 1918, as amended (46 U.S.C. 288), for the quarter ended September 30, 1959. Generally speaking, undocumented vessels are those machinery-propelled vessels of less than 5 net tons engaged in trade which by reason of tonnage are exempt from documentation. They also include all other vessels propelled in whole or in part by machinery which have not been issued marine documents by the Customs, owned in the United States and found on the navigable waters thereof.

Alabama	7,001	Kentucky	3,955	Ohio	20,939
Alaska	8,607	Louisiana	28,730	Oklahoma	413
Arizona	396	Maine	10,195	Oregon	9,172
Arkansas	1,175	Maryland	25,807	Pennsylvania	15,097
California	49,225	Massachusetts	21,709	Puerto Rico	638
Colorado	71	Michigan	29,307	Rhode Island	6,068
Connecticut	12,931	Minnesota*	5,675	South Carolina	2,180
Delaware	3,213	Mississippi	4,490	South Dakota	272
District of Columbia	2,947	Missouri	6,629	Tennessee	6,114
Florida*	39,457	Montana*	121	Texas	18,453
Georgia	3,717	Nebraska	647	Utah*	244
Guam	64	Nevada	1,009	Vermont	1,462
Hawaii	4,321	New Hampshire	713	Virginia	19,925
Idaho	819	New Jersey	30,527	Virgin Islands	162
Illinois	17,282	New Mexico	48	Washington	29,290
Indiana	4,040	New York	64,346	West Virginia	1,172
Iowa	3,395	North Carolina	10,069	Wisconsin	6,783
Kansas	415	North Dakota	114	Wyoming	20
TOTAL					541,571

*The numbering of motorboats by the Coast Guard was discontinued in the following States which assumed the numbering functions on the dates indicated: Florida (July 20, 1959); Minnesota (August 24, 1959); Montana (July 20, 1959); Utah (July 20, 1959).

SUBCHAPTER S—NUMBERING OF UNDOCUMENTED VESSELS, STATISTICS ON NUMBERING, AND "BOATING ACCIDENT REPORTS" AND ACCIDENT STATISTICS

[CGFR 59–40]

PART 172—NUMBERING REQUIREMENTS UNDER ACT OF JUNE 7, 1918

Subpart 172.25—Termination Requirements

WEST VIRGINIA SYSTEM OF NUMBERING APPROVED

Acting under the authority delegated by Treasury Department Order 167–32, dated September 23, 1958 (23 F.R. 7605), the Commandant, United States Coast Guard, on August 31, 1959, approved the West Virginia system for the numbering of motorboats, which was established pursuant to the Federal Boating Act of 1958.

As provided in this approval, the West Virginia system shall be operative on and after Thursday, October 1, 1959. On that date the authority to number motorboats principally used in the State of West Virginia will pass to that State and simultaneously the Coast Guard will discontinue numbering such motorboats. Those motorboats presently numbered should continue to display the Coast Guard number until renumbered by West Virginia. On and after October 1, 1959, all reports of "boating accidents" which involve motorboats numbered in West Virginia will he required to be reported to the Motorboat Safety Section, Conservation Commission of West Virginia, Charleston, West Virginia, pursuant to the West Virginia boating law (Chapter 20, Article 13, Code of West Virginia).

Because § 172.25–15(a)(7), as set forth in this document, is an informative rule about official actions performed by the Commandant, it is hereby found that compliance with the Administrative Procedure Act (respecting notice of proposed rule making, public rule making procedures, thereon, and effective date requirements thereof) is unnecessary.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Orders 120, dated July 31, 1950 (15 F.R. 6521), and 167–17, dated June 29, 1955 (20 F.R. 4976), to promulgate rules in accordance with the statutes cited with the informative rule below, the following § 172.25–15(a)(7) is prescribed and shall be in effect on and after the date set forth therein:

§ 172.25–15 Effective dates for approved State systems of numbering.

(a) * * *

(7) West Virginia—October 1, 1959.

(Sec. 3, 60 Stat. 238, and sec. 633, 63 Stat. 545; 5 U.S.C. 1002, 14 U.S.C. 633)

Dated: September 25, 1959.

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

[FR. Doc. 59–8300; Filed, Oct. 1, 1959; 8:51 a.m.]

[CGFR 59–42]

PART 172—NUMBERING REQUIREMENTS UNDER ACT OF JUNE 7, 1918

Subpart 172.25—Termination Requirements

TEXAS SYSTEM OF NUMBERING APPROVED

Acting under the authority delegated by Treasury Department Order 167–32, dated September 23, 1958 (23 F.R. 7605), the Commandant, United States Coast Guard, on September 11, 1959, approved the Texas system for the numbering of motorboats, which was established pursuant to the Federal Boating Act of 1958.

As provided in this approval, the Texas system shall be operative on and after Friday, April 1, 1960. On that date the authority to number motorboats principally used in the State of Texas will pass to that State and simultaneously the Coast Guard will discontinue numbering such motorboats. Those motorboats presently numbered should continue to display the Coast Guard number until renumbered by Texas. On and after April 1, 1960, all reports of "boating accidents" which involve motorboats numbered in Texas will be required to be reported to the Motor Vehicle Division, Texas Highway Department, Austin 14, Texas, pursuant to the requirements of the Texas Water Safety Act (House Bill No. 11, 56th Legislature, regular session, 1959 as amended by House Bill No 79, Second Called Session, 56th Legislature, 1959).

Because § 172.25–15(a)(8), as set forth in this document, is an informative rule about official actions performed by the Commandant, it is hereby found that compliance with the Administrative Procedure Act (respecting notice of proposed rule making, public rule making procedures thereon, and effective date requirements thereof) is unnecessary.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Orders 120, dated July 31, 1950 (15 F.R. 6521), and 167–17, dated June 29, 1955 (20 F.R. 4976), to promulgate rules in accordance with the statutes cited with the informative rule below, the following § 172.25–15(a)(8) is prescribed and shall be in effect on and after the date set forth therein:

§ 172.25–15 Effective dates for approved State systems of numbering.

(a) * * *

(8) Texas—April 1, 1960.

(Sec. 3, 60 Stat. 238, and sec. 633, 63 Stat. 545; 5 U.S.C. 1002, 14 U.S.C. 633)

Dated: September 25, 1959.

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

[F.R. Doc. 59–8302; Filed, Oct. 1, 1959; 8:51 a.m.]

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

SUBCHAPTER S—NUMBERING OF UNDOCUMENTED VESSELS, STATISTICS ON NUMBERING, AND "BOATING ACCIDENT REPORTS" AND ACCIDENT STATISTICS

[CGFR 59–43]

PART 172—NUMBERING REQUIREMENTS UNDER ACT OF JUNE 7, 1918

Subpart 172.25—Termination Requirements

MICHIGAN SYSTEM OF NUMBERING APPROVED

Acting under the authority delegated by Treasury Department Order 167–32, dated September 23, 1958 (23 F.R. 7605), the Commandant, United States Coast Guard, on September 30, 1959, approved the Michigan system for the numbering of motorboats, which was established pursuant to the Federal Boating Act of 1958.

As provided in this approval, the Michigan system shall be operative on and after Tuesday, March 1, 1960. On that date the authority to number motorboats principally used in the State of Michigan will pass to that State and simultaneously the Coast Guard will discontinue numbering such motorboats. Those motorboats presently numbered should continue to display the Coast Guard number until renumbered by Michigan. On and after March 1, 1960, all reports of "boating accidents" which involve motorboats numbered in Michigan will be required to be reported to the nearest peace officer, State police post, or to the sheriff of the county in which the accident occurred who shall submit a complete report thereof to the Commissioner of State Police, pursuant to the pertinent provisions of Act No. 245 of the Public Acts of Michigan of 1959.

Because § 172.25–15(a)(9), as set forth in this document, is an informative rule about official actions performed by the Commandant, it is

hereby found that compliance with the Administrative Procedure Act (respecting notice of proposed rule making, public rule making procedures thereon, and effective date requirements thereof) is unnecessary.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by Treasury Department Orders 120, dated July 31, 1950 (15 F.R. 6521), and 167–17, dated June 29, 1955 (20 F.R. 4976), to promulgate rules in accordance with the statutes cited with the informative rule below, the following § 172.25–15(a)(9) is prescribed and shall be in effect on and after the date set forth therein:

§ 172.25–15 Effective dates for approved State systems of numbering.

(a) * * *

(9) Michigan—March 1, 1960.

(Sec. 3, 60 Stat. 238, and sec. 633, 63 Stat. 545; 5 U.S.C. 1002, 14 U.S.C 633)

Dated: October 12, 1959.

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

[F.R. Doc. 59–8969; Filed, Oct. 22, 1959; 8:49 a.m.]

AFFIDAVITS

The following affidavits were accepted during the period from 15 September 1959 to 15 October 1959:

Mechanical Equipment Co., Inc., 861 Carondelet St., New Orleans 12, La., VALVES.

Associated Valve Co., 337 West Walnut St., North Wales, Pa. (Formerly Associated Valve & Engineering Co., 1150 W. Marquette Rd., Chicago, Ill.), VALVES.

American Forge Co., Niles, Calif., FLANGES

Double A. Products Co., Manchester, Mich., VALVES.

George W. Dahl Co., Inc., 86 Tupelo St., Bristol, R.I., VALVES.

Kure Shipbuilding & Engineering, Ltd., 1–2 Chome Showa-dori, Kure City, Japan, VALVES.

FUSIBLE PLUGS

The regulations prescribed in Subpart 162.014, Subchapter Q Specifications, require that manufacturers submit samples from each heat of fusible plugs for test prior to plugs manufactured from the heat being used on vessels subject to inspection by the Coast Guard. A list of approved heats which have been tested and found acceptable during the period from 15 September 1959 to 15 October 1959 is as follows:

The Lunkenheimer Co., Cincinnati 14, Ohio. Heat No. 606.

MARINE SAFETY PUBLICATIONS AND PAMPHLETS

The following publications and pamphlets are available and may be obtained upon request from the nearest Marine Inspection Office of the United States Coast Guard. Date of each publication is indicated following title.

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

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

Changes Published During October 1959

The following have been modified by Federal Register:

CG–267 and CG–268 Federal Register, October 2, 1959.
CG–267 Federal Register, October 23, 1959.

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