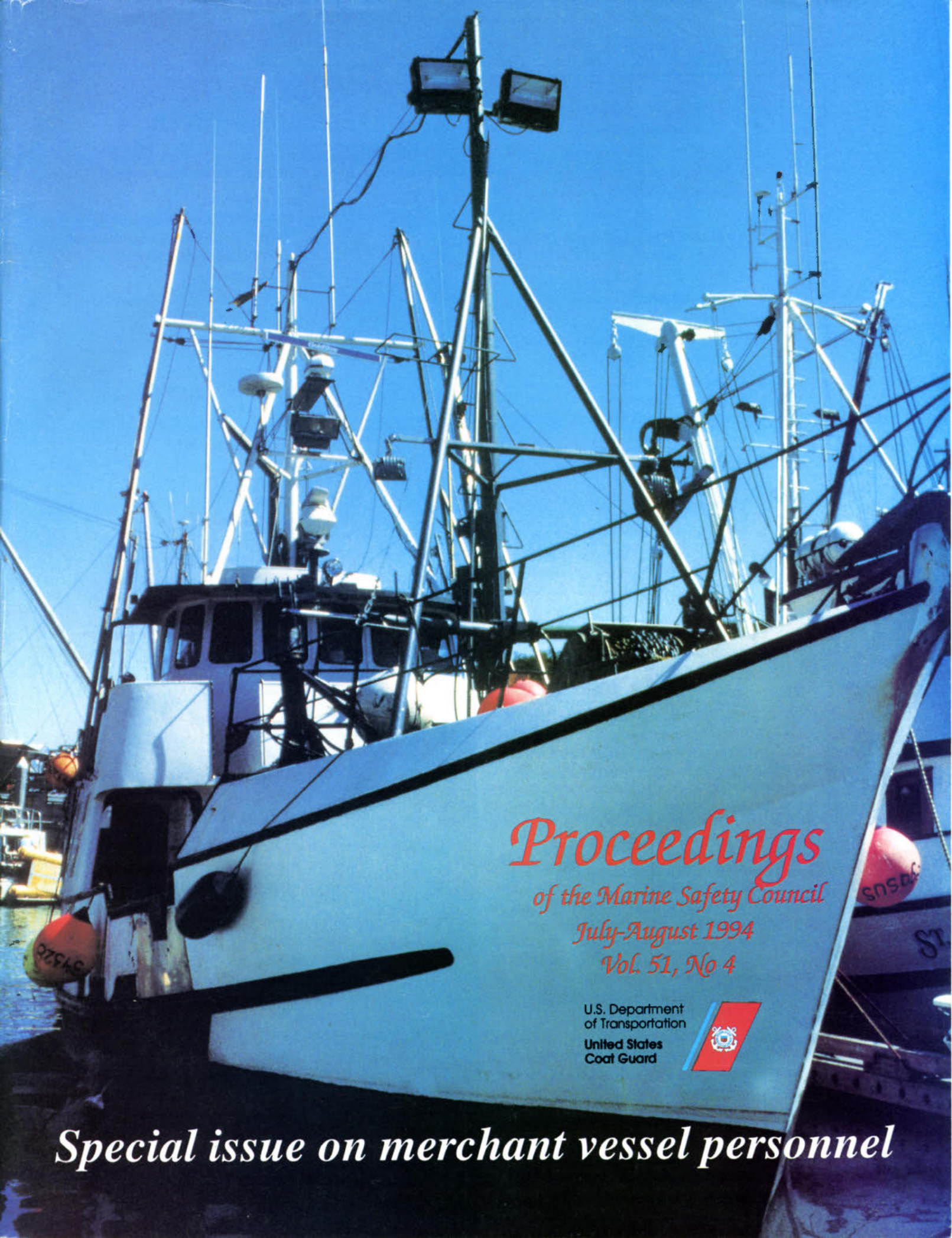

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of the Marine Safety Council

July-August 1994
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Special issue on merchant vessel personnel

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Proceedings
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Special issue on merchant vessel personnel

Attention marine industry members! Your *Proceedings* issue is coming up. See page 36 to learn how to prepare and submit an article.

Coast Guard has new leaders

ADM Robert E. Kramek is commandant

Former Coast Guard Chief of Staff RADM Robert E. Kramek became the 20th commandant on June 1, 1994. As the senior officer, under the direction of the secretary of the Department of Transportation, ADM Kramek oversees the Coast Guard in carrying out assigned missions, programs and functions.

During 33 years of Coast Guard service, ADM Kramek has specialized in both surface operations and naval engineering. He has served in many capacities in all Coast Guard regions, including the Atlantic, Pacific, Caribbean and Alaska.

His assignments include the command of the 13th Coast Guard District in the Pacific Northwest and the 7th District in the Southeast and Caribbean. He was in charge of the Haitian Migration Task Force, leading to the interdiction and rescue of 37,000 Haitians. At the same time, he coordinated the war on drugs in the Southeast United States and Caribbean.

A native of New York City and currently a resident of California, ADM Kramek graduated with honors from the Coast Guard Academy in New London, Connecticut, with a bachelor of science degree in engineering in 1961.

He later received master of science degrees in naval architecture and marine engineering, mechanical engineering and engineering management. He attended post graduate schools at the University of Michigan, Johns Hopkins University and the University of Alaska. He graduated with highest distinction from the Naval War College in Newport, Rhode Island.

After his selection for flag rank in 1986, ADM Kramek completed the Capstone Program at the National Defense University Institute of Higher Defense Studies.

His awards include the Distinguished Service Medal, two Legion of Merits, the Meritorious Service Medal, four Coast Guard Commendation Medals, the Coast Guard Achievement Medal, Coast Guard Unit Commendations and Meritorious Unit Commendation.

ADM Kramek is a physical fitness enthusiast. He participates in road races, biathlons and triathlons, and is an avid tennis player, golfer and skier.

He is married to the former Patricia Harvard of Washington, D.C. They have four children: Tracy, Joseph, Suzanne and Nancy.

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VADM A. E. "Gene" Henn is vice commandant

VADM Arthur Eugene Henn became vice commandant of the Coast Guard on June 17, 1994. In this capacity, he assists the commandant in the administration of the Coast Guard and acts for him in his absence. Previously, he was chief of the Office of Marine Safety, Security and Environmental Protection for three years.

Earlier assignments included that of commander of the Maintenance and Logistics Command, Atlantic; and chief of staff, 8th Coast Guard District, New Orleans, Louisiana.

A 1962 graduate of the Coast Guard Academy, VADM Henn earned combined master of science degrees in naval architecture, marine and metallurgical engineering from the University of Michigan in 1968. He is also a 1982 graduate of the Army War College.

During the past 23 years, he represented the Coast Guard as a member of delegations to the International Maritime Organization. He led United States delegations to meetings of the Maritime Safety and Marine Environmental Protection Committees of the IMO.

VADM Henn's decorations include the Distinguished Service Medal, the Legion of Merit and two Meritorious Service Medals.

VADM Kent H. Williams is chief of staff

VADM Kent H. Williams reported for duty as chief of staff and commanding officer of Coast Guard headquarters on May 17, 1994. He had commanded the First Coast Guard District headquartered in Boston, Massachusetts, for one year.

Previous flag level assignments at headquarters were as chief, Office of Acquisition, and resource director/comptroller. Staff assignments included chief of operations and chief of staff, 8th Coast Guard District, New Orleans, Louisiana; comptroller of the 11th Coast Guard District, Long Beach, California; and chief, Supply Branch, 12th Coast Guard District, San Francisco, California.

VADM Williams received a bachelor of science degree from the Coast Guard Academy in 1965. He is a graduate of the Naval Post Graduate School in Monterey, California, with a master's degree in financial management, and the Naval War College in Newport, Rhode Island. He also graduated from Massachusetts Institute of Technology as a Sloan Fellow with a master's degree in management administration.

His awards include three Legion of Merits, Bronze Star and three Meritorious Service Medals.

Concerns rise for towing safety

Coal barges are towed on the Ohio River by Wm. H. Zimmer, Cincinnati, Ohio.

By Mr. Perry Stutman

The striking of the Judge Roy Beeber Bridge in New Orleans, Louisiana, the Amtrak train casualty near Mobile, Alabama, and the loss of tows by two tugs off Puerto Rico are a few of the recent accidents involving uninspected towing vessels.

Notably, the most tragic of these incidents occurred in Bayou Canot near Mobile on September 22, 1993. A barge under tow struck a railroad bridge, damaging the tracks. Shortly afterwards, the Amtrak Sunset Limited derailed as it proceeded across the bridge, plunging it into the water. The deaths of 47 passengers and crew resulted.

Immediately following the casualty, the secretary of the Department of Transportation directed the commandant of the Coast Guard to review safety issues involved in operating uninspected towing vessels.

Review

Representatives of three Coast Guard offices formed a review team which met with members of the towing industry. The latter provided insightful background information on the specialized nature of the industry.

The team reviewed casualty statistics, researched applicable regulations and contacted other knowledgeable sources for a well-rounded understanding of the issues. The review was completed on December 1, 1993.

Casualty statistics from 1980 to 1991 revealed that more than 60 percent of the nearly 13,000 casualties studied resulted from human error. For the same period, only 15 percent of the casualties were caused by mechanical or material problems.

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Towboat operators face tremendous challenges maneuvering multi-barge units like the Wm. H. Zimmer (below) up busy rivers.

Continued from page 3

These statistics clearly demonstrated that to achieve substantial improvements in towing vessel safety, the efforts must focus on human factor elements rather than physical inspections of vessels.

Towing industry

There are a variety of towing trades including long haul ocean, near coastal, Great Lakes, inland and western rivers. Each has specialized techniques for towing, maneuvering and handling.

While the nature of the operation differs, there is one common denominator. The towboat or tug is the propelling and controlling unit, separate from the barges, which carry the cargo. This distinction is blurred in integrated tug/barge combinations, but they can still operate separately.

The towing industry can move enormous quantities of cargo economically. A large tow on the lower Mississippi often has the capacity for more cargo than a large self-propelled, ocean-going vessel. Tows may exceed 30 barges, each carrying 1,500 tons. The ability to add or drop off barges at different locations provides flexibility in operation not found in self-propelled vessels.

Through the mid-1940s, most towing vessels were propelled by steam, and had to be inspected. The number and qualifications of wheelhouse and engineering personnel were regulated and subject to inspection.

By the late 1940s, diesel-propelled towing vessels began to dominate the industry, relegating steam-driven vessels to museums. The change in propulsion resulted in the loss of federal oversight of manning qualifications and requirements.

Growth

After World War II, a towing boom, particularly on western rivers, increased the demand for operators. At the same time, many experienced licensed masters and pilots, veterans of the steamboat days, were retiring. This resulted in marginally qualified operators on some vessels. The number of towing vessel casualties began to escalate.

During the same period of time, the number and size of the tows began to multiply. The size and power of the towing vessels increased correspondingly. By the middle 1960s, two 10,000-horsepower towboats, the *United States* and *America*, were heralded as the most powerful vessels on the western rivers. Today, 15 towboats of more than 10,000 horsepower and many others with more than 7,000 horsepower ply the rivers.

Barge sizes also increased. The traditional standard river barge measured 175 X 26 X 9 feet. By the early 1950s, the standard barge was rapidly replaced by the jumbo, measuring 195 X 35 X 12 feet, with nearly 50 percent more capacity. Many dam locks had to be enlarged to facilitate transportation of the jumbo barges, which in turn spurred further growth in both barge sizes and traffic. Now, jumbo barges are being replaced with super barges, measuring 250 X 52 X 12 feet.

The demand for waterborne transport of chemicals, such as chlorine, sulfuric acid and ammonia, also accelerated. Likewise, the growth in petrochemicals brought about many new products, adding to the traffic on the waterways.

Operators

Concern was mounting over the risk of a major catastrophe involving a large tow of hazardous chemicals. The "greening of America" movement in the 1960s also voiced concern about the potential danger to the ecology and water resources.

In an effort to ensure that individuals in charge of navigation and operation of towing vessels was qualified, legislation was introduced in congress in 1972 to require the licensing of towing vessel operators. The legislation was passed the same year.

Following this rulemaking, the Coast Guard developed the current license for operators of uninspected towing vessels. To qualify for this license, an applicant must have at least three years of experience, with six months in the wheelhouse and three months in each geographic area for which applied.

The regulations also provided for a second-class license for younger, less experienced applicants. A 19-year-old applicant may qualify for this license with only 18-months experience and only three months in the wheelhouse. A holder of a second-class license may only operate a vessel if a fully licensed operator is present.

Applicants for either license must have formal training in first aid and CPR. And applicants for ocean routes, are also required to be qualified as able seamen and radar observers, as well as fire fighters.

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River barge traffic can be too close for comfort.

Traffic above and below -- the Ohio is a busy river.

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Regulation gaps

The Coast Guard review team determined through its study that there were few regulations prescribing necessary safety equipment for uninspected towing vessels. Also, vessels were not required to carry navigational bulletins, such as *Tide and Tidal Current Tables* or navigational charts of the rivers.

Limited requirements for fire-fighting, lifesaving and other safety equipment are contained in the Regulations for Uninspected Vessels (46 CFR part 26).

Towing vessels are required to comply with radio requirements of the Bridge-to-Bridge Radio Act, and to carry lights and signals mandated by the Rules of the Road.

Recommendations

Based on these and other observations, the review team produced a final report containing 19 recommendations to improve towing vessel safety. The report is entitled *"Review of Marine Safety Issues Relating to Uninspected Towing Vessels."* A public meeting held in April 1994 solicited comments on the report.

The group recommended substantial revisions of the current license for operators of uninspected towing vessels. One suggested change is to establish qualification levels based on training and experience.

Another recommendation proposed that all operators of uninspected towing vessels be qualified as radar observers. Although towing vessels do not have to carry radar equipment, the vast majority of them do.

Other recommendations concerned the reporting of casualties, required equipment on towing vessels, aids to navigation systems, and the fendering and lighting of bridges.

A Coast Guard regulatory development team is completing the initial stages of rulemaking on these recommendations. These proposed regulations will be published in the summer of 1994 in the *Federal Register,* soliciting public comment on their validity and potential effectiveness.

Copies of the review are available through the Merchant Marine Examination Branch (G-MVP-5) of the Merchant Vessel Personnel Division.

Mr. Perry Stutman is a staff member of the Merchant Marine Examination Branch of the Merchant Vessel Personnel Division.

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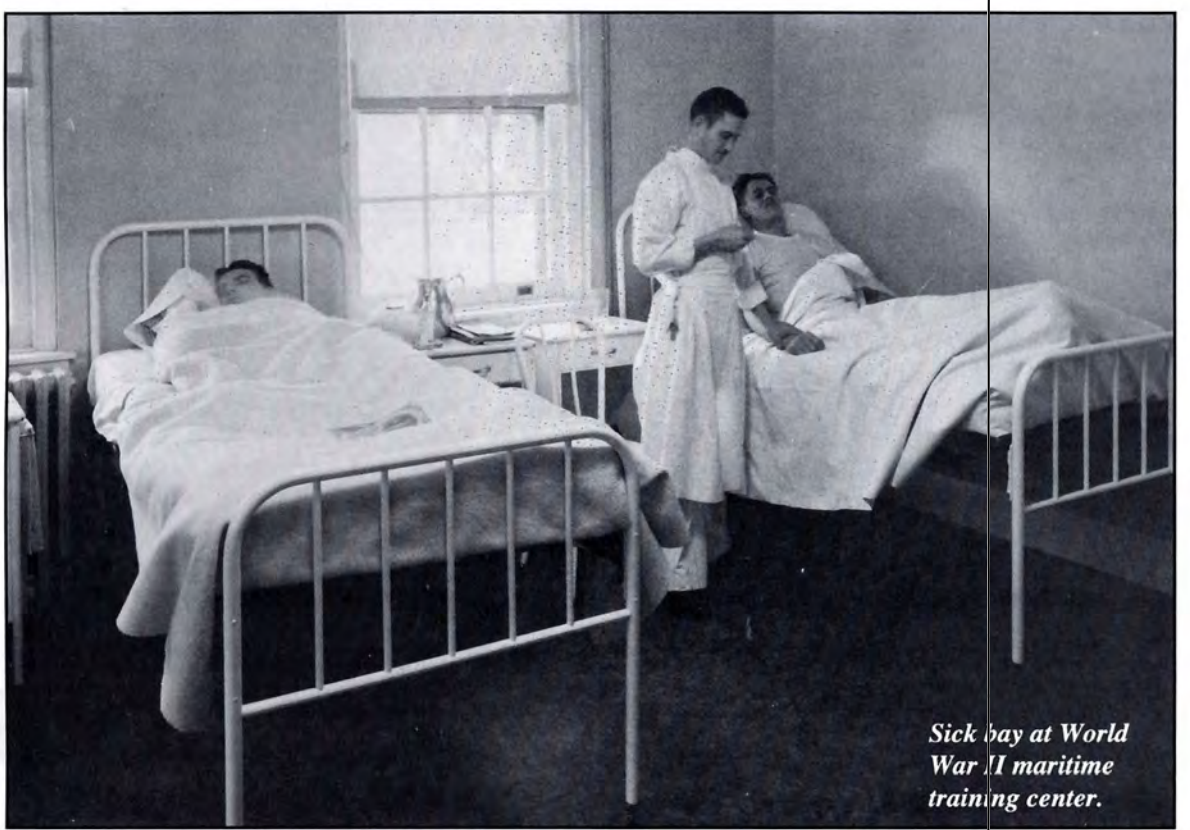

Sick bay at World War II maritime training center.

Taking a close look at physical standards

Will my diabetes keep me from being able to renew my masters license this year? The answer is, "No — not if you don't want it to."

By LT Cyndi Stowe

New and old merchant mariners alike are learning that the Coast Guard looks at their physical status before issuing or renewing their licenses or documents. Your doctor's recommendation is taken into consideration as well as your medical condition, the medications prescribed, your control over the condition and your ability to function safely in the capacity of the license or merchant mariner's document for which you have applied.

The licensed mariner is, by far, the most essential element in a safe marine environment. It is the responsibility of the Coast Guard to ensure that mariners are qualified in all respects. They must not only have the necessary knowledge and skills, but they must be physically capable of performing their duties in a reliable manner. When considering a mariner's physical condition, the Coast Guard's objective is to verify that the individual is able to stand an alert watch without being subject to a sudden onset of an incapacitating condition. The individual must also be capable of functioning in an emergency and not be a risk to passengers or fellow crew members. These standards apply to mariners in inland as well as in ocean service.

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Applicable rules

Federal regulations require that all new and renewal license applicants, and unlicensed seamen applying for qualified ratings must have physical examinations. The exam must document a mariner's visual acuity, color sense and general physical condition. (The only physical standards specified by the regulations are visual acuity and color sense.)

Regional examination centers screen physicals using Navigation and Vessel Inspection Circular (NVIC) No. 6-89, *"Physical Evaluation Guidelines for Merchant Mariner's Documents and Licenses,"* published by the Coast Guard in 1989. These guidelines list medical conditions that may be disqualifying.

The guidelines, however, are just that - guidelines. They are not intended to be absolute or all encompassing. Some mariners may have a condition not on the list which would render them unable to perform their duties aboard a vessel. Others might be very capable of working at sea without posing any risk to passengers, shipmates or the ship, even though they have a listed condition.

If an applicant has a condition which might be disqualifying, the officer in charge of marine inspection can refer the case to Coast Guard headquarters where a physician can make a medical evaluation. The doctor can determine whether the applicant meets the established standard and, if not, recommend whether a medical waiver is appropriate or not.

Medical waivers

Waivers are considered on a case-by-case basis and are essentially based on performance. Can the applicant reliably perform the duties associated with the license or qualified rating? There are several aspects to consider:

A) the ability to perform routine duties;

B) the susceptibility to sudden onset of an incapacitating condition; and

C) the ability to respond to emergency conditions.

A good example of performance-based standards is the evaluation method used for applicants with paralysis, missing limbs or extreme obesity. They demonstrate their ability to perform necessary routine and emergency tasks before an evaluator under as realistic conditions as possible, usually underway.

In some cases, the applicants can perform the tasks unassisted. In others, special vessel arrangements or modifications may be necessary. An applicant's license or document may be limited to a particular vessel where the necessary modifications have been made.

Within the last several years, the commandant has delegated additional responsibility to the officer in charge of marine inspection to issue waivers for visual acuity and hearing, which are within certain parameters. Other cases that the officer in charge feels should be considered for a waiver are referred to Coast Guard headquarters for consideration.

The right of appeal is present in all cases. Mariners wishing to appeal their cases to the commandant for medical review may do so.

Sick call

Out of 23,000 licenses issued in 1993, there were 184 requests for physical waivers referred to the Merchant Vessel Personnel Division. These waivers requested special consideration for cardiac conditions, diabetes, vision, hearing, use of psychotropic medications, hypertension and seizure disorders.

The two most common conditions were cardiac problems and diabetes. For both of these, the Coast Guard will request specific tests for the physicians to review. In 85 percent of the cases of both conditions, the mariners were able to document good control over them and waivers were granted. In the other 15 percent, the Coast Guard identified poor control which could lead to the inability to function safely in the marine environment, presenting a risk for the vessel. These individuals were given the opportunity to gain better control of their conditions, usually through diet and exercise, and then submit their applications again.

These conclusions were drawn from the number of waiver requests by license type. Operators of uninspected towing vessels account for 30 percent of all waiver requests, although they only account for eight percent of the total licenses issued. Operators of uninspected passenger vessels take a close second.

Policy changes

Numerous appeals have prompted a closer look at visual acuity standards. In these appeals, the mariners' corrected vision met the standard in the regulations although their uncorrected vision was below the 20/400 limit for Coast Guard waivers. In the past, these appeals were denied based on concerns about how well a person with uncorrected vision below 20/400 could function if his or her glasses were broken or lost.

In certain circumstances, the Coast Guard will issue waivers to individuals with uncorrected eyesight below 20/400 if their corrected vision is satisfactory. (The Navy has granted waivers to personnel with uncorrected vision up to 20/800.) Such individuals will be required to wear sports-type unbreakable glasses with a fixed restraining strap. All individuals with vision waivers must carry spare glasses on the vessel.

In the past, the Coast Guard regarded conditions that were treated with psychotropic medications as disqualifying. However, there has been an increase in the number of mariners who are prescribed such medications for mild cases of anxiety or depression. These individuals have documentation from attending physicians and psychologists strongly recommending them

Mariners are trained in artificial respiration during World War II.

for continued employment on the basis of their ability to function safely with or without medication. The Coast Guard is taking a fresh look at these individuals case-by-case.

Advice

The best advice is to *"take care of yourself."* The majority of medical problems dealt with by the Coast Guard come about over a long period of time. Early action on your part may slow or reverse their development.

Get your employer involved. Look closely at your diet and exercise. Start a medical monitoring program to identify potential problems early and make the necessary life—style changes now, before your career and health are in jeopardy.

If you are in doubt about your physical condition, start the renewal process early. You may apply up to one year before your license expires.

Whether you have diabetes or a heart problem, you can take more control of your condition . . . and your destiny.

Photographs accompanying this article are of merchant marines at a training center on Hoffman Island, New York, during World War II.

LT Cyndi Stowe is a staff member of the Licensing and Evaluation Branch of the Merchant Vessel Personnel Division.

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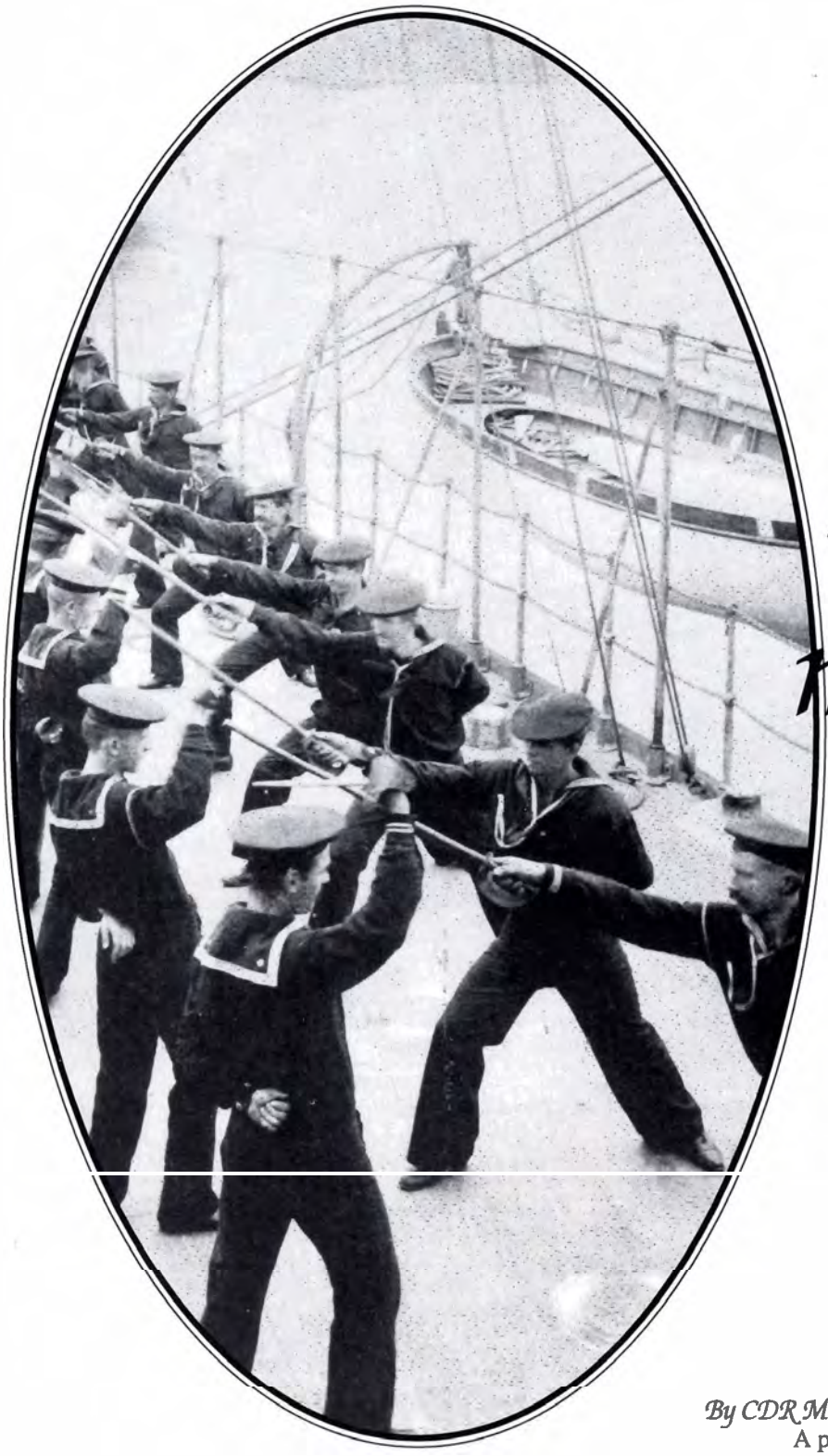
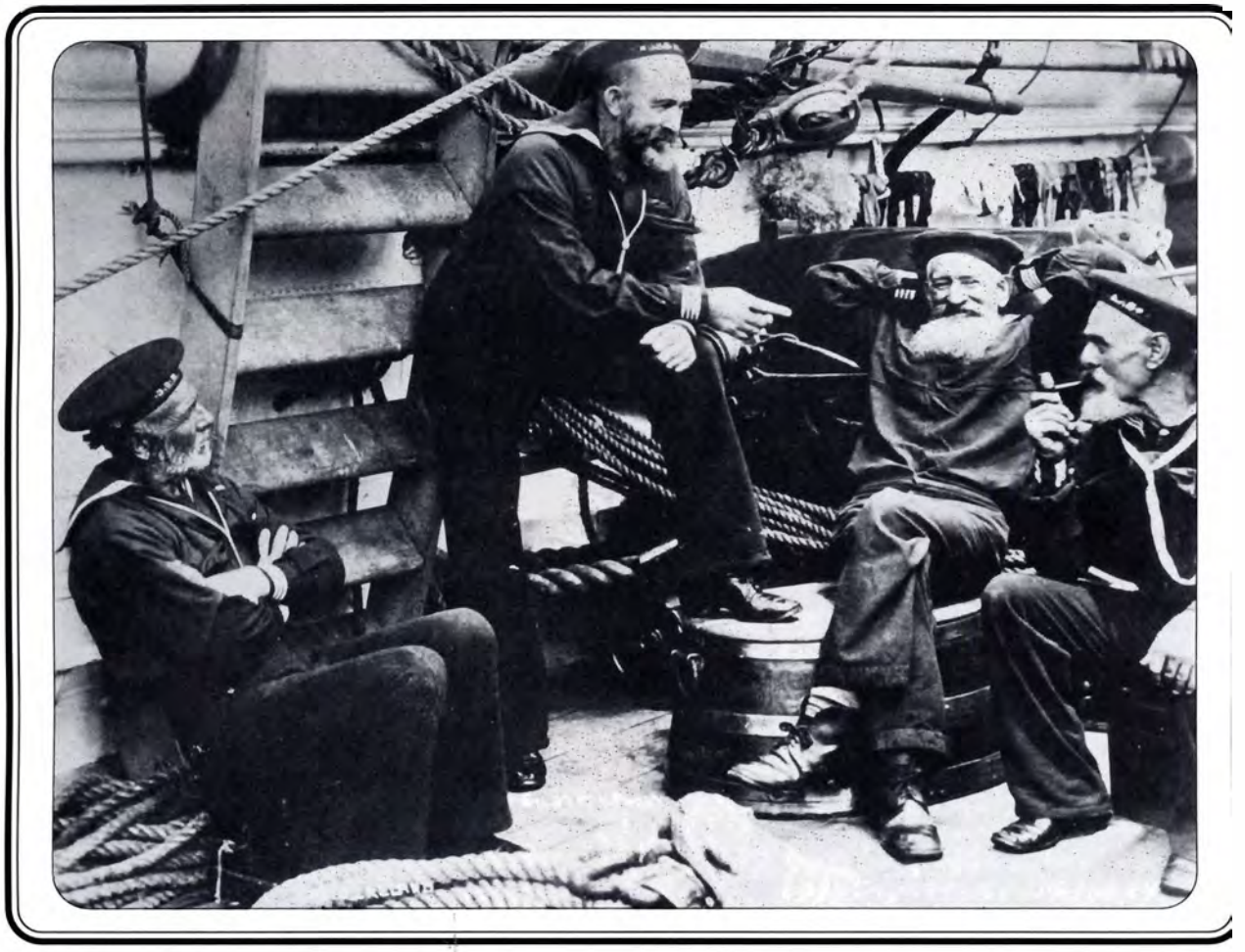


Sword practice in 1888 aboard U.S.S Boston.

Ancient manning laws may be revised

By CDR Mike DeCesare

A proposal is being developed to revise a number of ancient maritime personnel laws to improve the efficient and safe operation of United States merchant vessels. The proposed reforms would allow vessel owners broader operating flexibility, and provide seafarers with greater training opportunities and job satisfaction while providing essential safeguards.



Old salts of the square-rigger Navy photographed at sea in 1888 aboard the USS Mohican.

Old laws

A number of restrictive manning requirements inhibit United States vessels from taking full advantage of modern technology and management practices. Rules that were considered necessary for safety at sea when vessels were powered by steam may now be outdated.

Under current manning laws, crews on United States vessels must be divided into a specific number of watches, and cannot work alternately in deck and engine departments. Also, these vessels must carry a specific minimum number of licensed individuals, whether they are necessary for safe ship operation or not.

Some of these requirements may not be appropriate for modern vessels with diesel propulsion controlled by sophisticated automation and other labor-saving devices.

Reform

Reform of the manning statutes should promote United States shipping industry interests in competing with foreign vessels. Crew members of foreign vessels are not confined to a rigid department structure and the masters have broad flexibility in assigning crews to watches. These vessels can also take full advantage of the reliability of modern technology, which translates to minimum shipboard maintenance and innovative watchkeeping requirements.

The elimination of rules and regulations which are not needed for safety, and would prevent United States vessels from taking advantage of modern automation, would enhance their ability to compete effectively with foreign flag vessels in maritime trade.

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Safeguards

While increasing flexibility, the proposal being developed would nevertheless provide vital safeguards to protect life, property and the marine environment. Six basic elements would ensure that the pressure to operate competitively would not result in a degradation of safety of life at sea or increase the risk of damage to the marine environment.

Comprehensive criteria, including emergency shipboard duties and performance limitations, would be evaluated to determine the qualifications and sizes of crews for individual vessels and their intended operations.

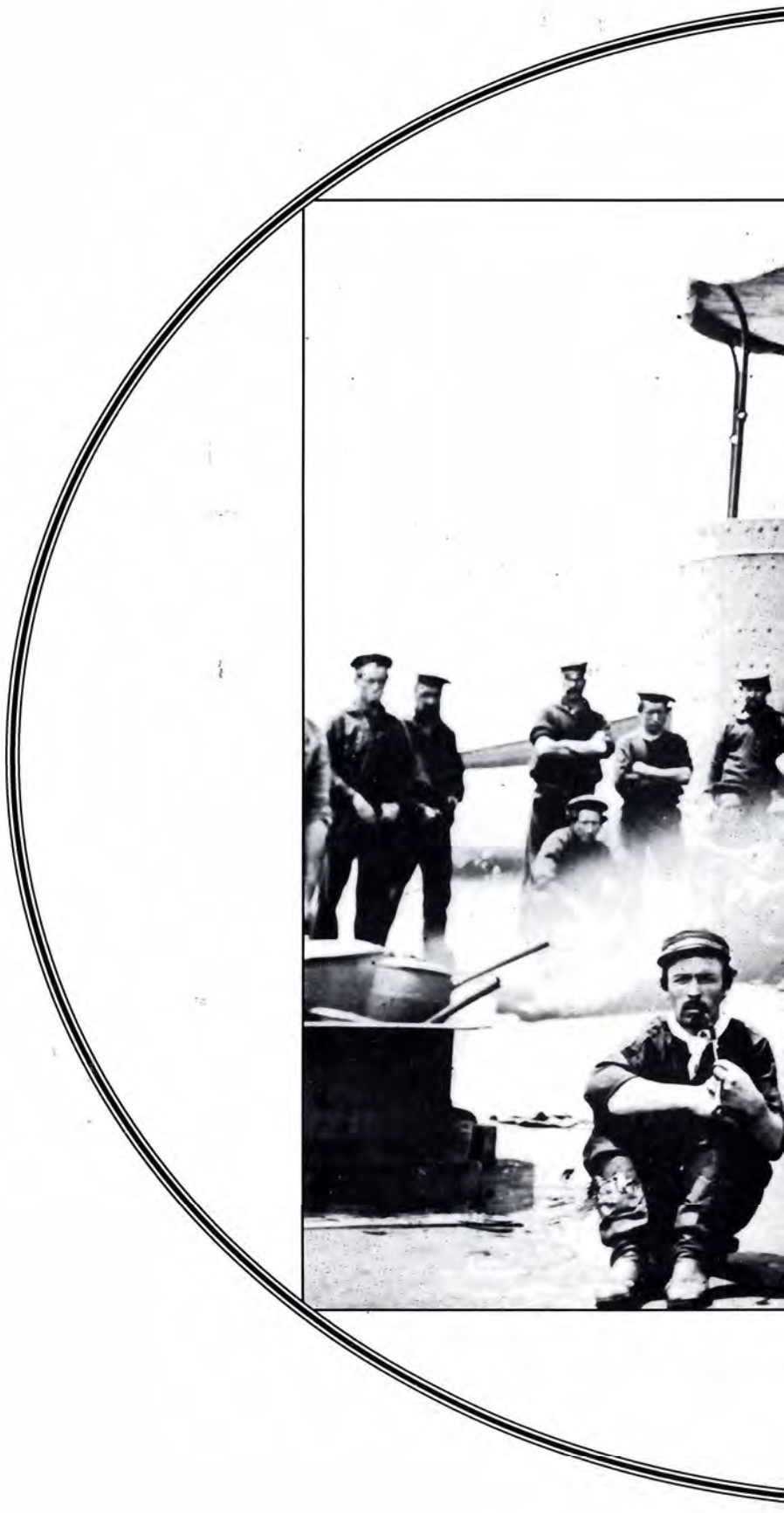
The total number of hours a crew member could work each day would be limited (reflecting the work hour limits imposed on tankers under the Oil Pollution Act of 1990 [OPA 90]).

Each crew member would have a minimum period of uninterrupted rest each day.

Crew members assigned to watchkeeping duties would be divided into successive watches, with the length of a single watch period limited.

A civil penalty would be assessed against the owner, operator or other person in authority when a master fails to comply with these provisions.

The Coast Guard would have access to mariner work-hour records prepared in the ordinary course of business to determine if the vessel is sufficiently manned.



Crew cooks on deck of the USS Monitor in 1862.

Fatigue

There is widespread concern about the role of fatigue in shipboard operations. At the same time, there is international agreement that fatigue is a very complex condition influenced by individual behavior, local environment, labor-management relations and other factors which are difficult to regulate.

Recent studies of shipboard fatigue also suggest that while it should be a major concern, the results are insufficient to determine definitive limits on human performance under shipboard conditions. There is a need for more research into fatigue and other influences on crew fitness and performance.

Current reform status

At this time, representatives of the Merchant Vessel Personnel Division are meeting with vessel operators and maritime union members to discuss proposals for revising the manning statutes. After a consensus is reached, a final proposal will be placed on the agenda of both the Merchant Marine Personnel Advisory Committee and the Towing Safety Advisory Committee for their review.

Photographs accompanying this article are courtesy of the United States Naval Historical Center.

CDR Mike DeCesare was the chief of the Vessel Manning Branch of the Merchant Vessel Personnel Division until he retired in June after 22 years of service in the Coast Guard.

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Evaluators bone up on licensing standards

By Mr. Randy DeKroney

The merchant marine applications' evaluators at all 17 Coast Guard regional examination centers will undergo thorough training in 1994. Thirty-four of these evaluators will take a comprehensive one-week training course at the Coast Guard's Reserve Training Center at Yorktown, Virginia.

Training reasons

In the past few years, there have been a number of developments affecting the licensing and documenting of mariners. The most significant are:

complete revision of the licensing system in 1987 to satisfy the Port and Tanker Safety Act of 1978, and the International Convention on Standards for Training, Certification and Watchkeeping for Seafarers of 1978;

testing applicants for illegal drug use;

licensing and documenting fees;

- stricter physical standards for license renewal; and
- access to applicant records in the National Drivers' Register.

Along with the steady number of licenses and merchant mariners' documents issued annually, these additional factors make the evaluation process more complex and time-consuming. The new five-year renewal requirement for merchant mariners' documents and certificates of registry will increase the workload at the exam centers. The evaluators must be well trained to provide quality service in a timely manner.

Course development

Several methods including correspondence courses and on-the-job training were considered, but the amount of complex information to be taught supported the decision to conduct a five-day resident course.

A group of experienced field personnel was assembled to develop the course. Assisted by education specialists at the training center, the group worked for more than nine months writing lesson plans and gathering material for the course. Members of the group will also be the instructors.

Course description

Rather than a series of dry lectures, the teaching techniques will fully involve the students in the learning process.

One method is a self-instructional text consisting of a series of lessons taking from 10 to 30 minutes to complete. Each lesson contains information previously learned, new data, examples of how to use it and a few self-test questions. The instructors will answer questions and assist the students with problems.

Another technique is to pattern the training after the day-to-day work of an evaluator. Actual license and document applications will be used in this method.

Once all portions of the evaluation process are covered during many classroom sessions, the students will evaluate actual license and document applications from start to finish. The elements under review will include professional qualifications, physical waivers, user fees, appropriate examination selection and proper issuance of the document.

The course will cover a vast amount of information through both day and evening courses. Upon completion, the evaluators should be extremely familiar with regulations and policies, and will be able to apply them in actual practice in the evaluation process. In addition, they will take the teaching materials back with them to train other exam center employees.

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This comprehensive training is expected to improve evaluator performance throughout the licensing and documentation process.

Going automatic . . .

Mariners' ID card gets face-lift

By Mr. Ed Tate

The cardboard merchant mariner's document in use since the early 1950s is about to get a long overdue face-lift. A new plastic "credit card-type" identification will gradually replace the old piece of paper starting this summer. By the end of 1994, the Coast Guard plans to issue only the new card, and, if all goes well, all mariners should have them by the year 2000.

The new ID card will look like the current document and directly replace it so shipping companies can use it right away without retraining or disrupting normal business operations.

The old method

For nearly half a century, ship masters have manually copied information from the merchant mariner's document to shipping records, logging service at sea. The masters also manually copy the data onto certificates of discharge that serve as mariners' permanent record of employment at sea.

The Coast Guard is forwarded copies of the certificates of discharge for data-entry personnel to log. Since 1981, this information has been manually entered into a computerized data base established to maintain mariners' sea service records.

These manual efforts to collect, report and file sea service information are labor intensive and time-consuming activities, which are susceptible to human error at each transfer point. Validating and correcting errors cause further delays in the whole process.

The new method

Manual recording efforts will be history when the new ID card starts automating the whole process. The Coast Guard Authorization Act of 1993 paved the way for shipping companies to transfer sea service information to Coast Guard headquarters electronically.

The Coast Guard worked closely with several shipping companies to determine what the new system would do and how it would do it. The consensus was that it would have to be easy to use and inexpensive enough for small companies to afford it. It would also have to move seamlessly into operation without disrupting business as usual.

The Coast Guard also wanted to improve the manner in which mariner information was collected and reported. For the first time, sea service records will be available in a timely manner.

The new mariner identification system is patterned after the credit card most people carry in their purse or pocket. The card has a magnetic strip containing the mariner's name and social security number. This data can be transferred electronically to a computer when reporting aboard or being discharged from a vessel, or when conducting business at a Coast Guard regional examination center, saving much valuable time in the process.

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Time frames

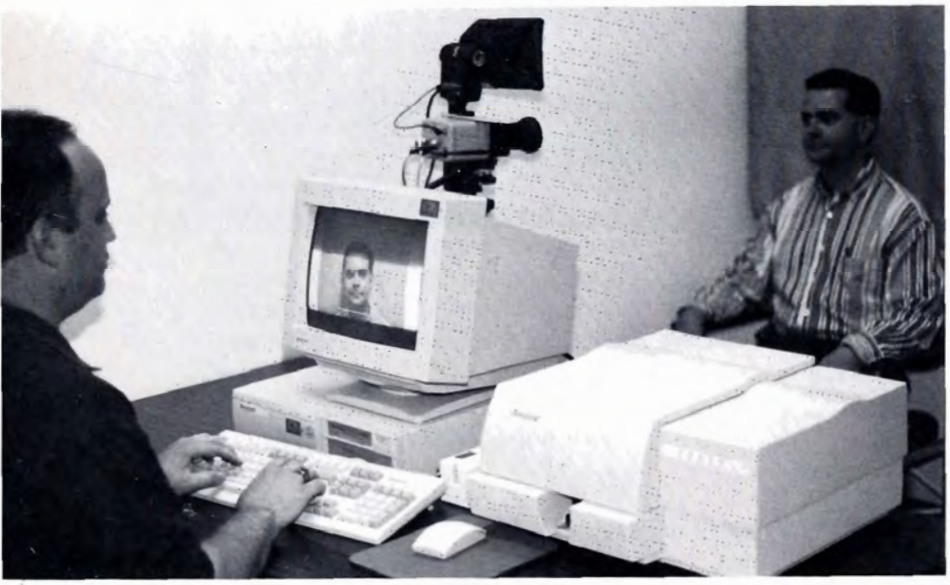
The regional exam centers are now preparing to pass out the new ID cards while processing normal issue and renewal requests. (They will then cease distribution on the old cards.) Because of the five-year renewal cycle and one-year's grace, there will be a transition period of five to six years when both the new and old ID cards will be in circulation. Either card is valid during this period. Computers read data off the new cards electronically, while data off the old ones is typed into the system.

"For the first time, sea service records will be available in a timely manner."

Shipping companies can collect and report mariner sea service information electronically using modems connected to standard phone lines anytime of the day or night. The Coast Guard then validates the data and transfers it to service records in the central data base.

This process will reduce data errors and current turn-around time from months to days, thereby saving shipping companies and the Coast Guard valuable time and labor, plus improving security as questionable data can be addressed more quickly.

The system will also produce new ID cards to replace current pilot ID and registration cards used by the Great Lakes registered pilot program.



The new identification system uses the same camera to capture the mariner's picture, thumbprint and signature. . . saving time and money.

Into the 21st century

Computer software based on MS-DOS compatible systems has been developed to automate the new mariner's identification card. The data base is accessible by standard computer software, including word processors and spread sheets.

The new mariner identification system will bring the miracles of modern technology to the shipping companies and the Coast Guard. They will both move into the 21st century, communicating with one another by computer.

It will also pilot a cost-saving innovation by not using scanners, matrix pads or digitizers to capture fingerprints and signatures like other ID card systems on the market. Instead, the mariner identification system will use the same camera that captures the mariner's picture. This feature is expected to save more than $30,000 in equipment and maintenance costs alone during the next five years.

Mr. Ed Tate is a project manager in the Merchant Vessel Personnel Division.
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Going automatic . . .

Records enter new world

By Mrs. Justine Bunnell

By statute, the Coast Guard must maintain a record of virtually each day each mariner has sailed since 1937. This was when it took over the function of collecting and storing data from the Steamship Division of the Department of Commerce.

Records

Mariners receive certificates of discharge at the end of each voyage or when they leave the ship. These certificates include name, rating, date and place of discharge, name and official number of the vessel, operating company and type of voyage. The mariner gets the original certificate, and copies are forwarded to the shipping company and the Merchant Vessel Personnel Division of the Coast Guard's Office of Marine Safety, Security and Environmental Protection.

The same information is provided in shipping articles, the contract between the mariner and the master of the vessel for each voyage. The Coast Guard maintains copies of shipping articles for all foreign and coastwise voyages of vessels over 100 gross tons.

The maintenance of these records is a laborious, time-consuming process.

Maintenance

There is no flexibility whatsoever in the legally mandated data collection process. Shipping articles are oversized, archaic documents which must be prepared manually by the ship operating companies. The smaller discharge certificates are also done by hand.

The manual preparation of these documents is redundant, labor intensive and costly for most shipping companies with automated personnel systems.

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The Coast Guard maintains approximately 125,000 active and 1,800,000 inactive records.

Merchant mariner records will no longer be archaic and cumbersome to retrieve.

The world of automation is right around the corner.

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The Coast Guard has a contracting staff to file and maintain shipping articles and discharge certificates. One individual files and retrieves shipping articles, and another enters data from certificates into a data base permitting easy access for headquarters personnel. Six people file certificates of discharge into mariners' records.

Legislative change

In September 1993, the Coast Guard prepared a legislative change cutting out the manual maintenance of mariner employment records and eliminating the duties of shipping commissioners. The latter were Coast Guard officers who went aboard vessels requiring shipping articles. They administered the signing of these articles on and off the vessel, ensuring that every seaman had the proper documentation, the articles were signed correctly and the seaman was properly paid.

Actually the duties of shipping commissioners have not been performed by the Coast Guard since FY 1978, when funding was discontinued. This proposed change became part of the 1994 Coast Guard authorization bill, passed in December 1993.

The Coast Guard will now oversee record maintenance by the shipping companies. To ensure ready access to the sea service records for review and license evaluation, a computer program has been designed to allow data to be electronically transmitted to the Coast Guard directly from ship operating companies.

Shipping companies without electronic transmission capabilities will continue to submit paper copies of certificates of discharge for entry into the sea service data base. These paper documents will not be maintained after the data is entered into the computer system.

October 1, 1994 is the target date for implementation of the new regulations.

The elimination of manual record keeping will save the Coast Guard about $360,000 in administrative costs. Shipping companies should realize savings of about $1,200,000 in preparation and mailing costs.

Photographs accompanying this article are by PA2 Don Wagner.

Mrs. Justine Bunnell is the chief of the Seamen Documentation and Records Branch of the Merchant Vessel Personnel Division. Telephone: (202) 267-0238.

Going automatic . . .

What happens to mariner records?

By Ms. Betty Garner

Since 1937, the Coast Guard has maintained license, document and employment records for all merchant mariners in the United States. By law, these records are maintained in a central location, which is Coast Guard headquarters.

Mariner records

A mariner's record is established with the issuance of an original merchant mariner document. The record continues throughout the person's entire career at sea. Three years after the last transaction, the record is retired to the Federal Records Center in Suitland, Maryland, for 60 years' storage before it is destroyed.

In 1981, a data base was created to maintain electronic records of all sea service. The information is entered from certificates of discharge received at Coast Guard headquarters.

Another data base was developed in 1991 to maintain personnel information on all individuals holding merchant mariner documents. That same year, the sea service and personnel data bases were merged into one merchant mariner documentation system.

Licenses

License files are maintained at the regional examination center where a mariner receives his or her license. In addition, records are maintained at all exam centers where transactions are conducted.

A license file remains at an exam center for six years after the last transaction, unless the mariner requests that it be transferred to another center. If a mariner conducts business at more than one office, more than one file exists.

There is a tremendous loss of time in conducting license transactions when waiting for a file to be transferred from one center to another.

In 1981, a data base was developed at Coast Guard headquarters for all licenses issued. Personnel and license type data is received at headquarters and entered into the data base.

In 1992, the license information was merged into the merchant mariner documentation system to provide a complete document, license and sea service record on all merchant mariners. This data, however, is available only to Coast Guard headquarters personnel.

Data sharing system

In 1990, the Coast Guard started a project to provide all regional examination center personnel access to merchant mariner records maintained at headquarters, and to automate licensing and documentation steps. This project resulted in a merchant mariner licensing and documentation system.

This national centralized data-sharing system was developed under the direction of the Coast Guard Research and Development Center in Groton, Connecti-

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cut. Initially, it was to include only licensing data. Subsequently, it was determined that document data and sea service records should be incorporated to provide a complete record on each merchant mariner.

By December 1994, Coast Guard headquarters will be providing all 17 exam centers and three monitoring units immediate access to more than 1.8 million mariner records. Exam center personnel will have access to the previous 12 years of sea service for mariners wishing to test for an original or upgrade of their documents or licenses. There will be no need to wait for copies of discharges from mariners or the Coast Guard.

The computerized merchant marine licensing and documentation system is a major step toward automation of all merchant mariner records.

Verification process

Time will also be saved by a new process of verifying ratings and duplicate numbers for lost documents or licenses. The information will be available in the data sharing system, eliminating the requirement for verification by Coast Guard headquarters. However, if no duplicate document transactions have occurred since 1991, headquarters personnel will have to verify the information, because it will not be in the data base.

All pending applications and completed transactions will be in the data base. Regional examination center personnel will know if a mariner has an application pending in another port before the evaluation and testing process begins. License and document test information, such as exam type, date, module number and score will also be available.

Prototype

A prototype was installed and tested at regional exam centers in Seattle, Washington, and New Orleans, Louisiana, from July 1993 through February 1994. Some major problems were identified and solved, and the data sharing system is operational at both centers.

Enhancements to the system will be made when needed to improve its effectiveness and efficiency.

Ms. Betty Garner is a section chief with the Seaman Documentation and Records Branch of the Merchant Vessel Personnel Division.

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Fishermen to be trained in accident prevention

By LCDR David Paxton

Improving the safety record of the commercial fishing industry has been a long-standing objective of the Coast Guard. It was hoped that commercial fishing vessel casualties and personnel accidents would be reduced in 1988 when operators were encouraged to attend voluntary safety education programs. This didn't happen because too few fishing vessel owners and operators took the courses.

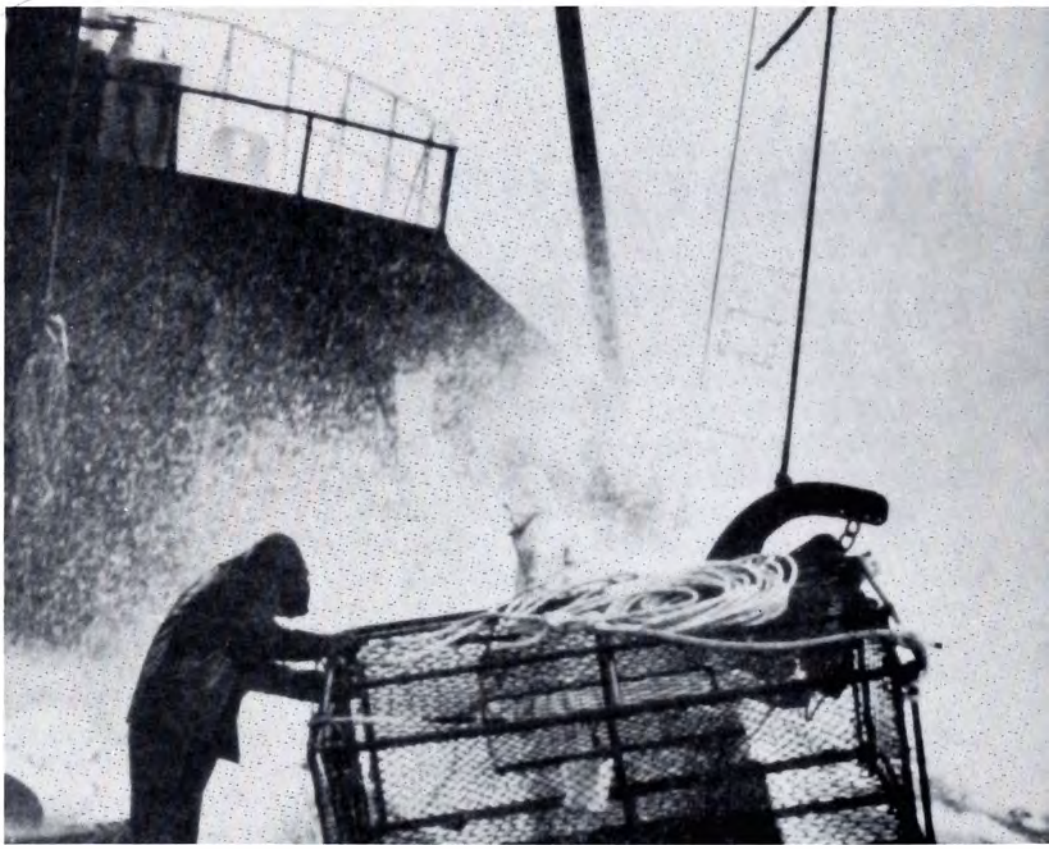
The frequency of vessel casualties and personnel accidents remained high, so the Commercial Fishing Industry Vessel Safety Act of 1988 required the Coast Guard to submit a plan to Congress for licensing operators of federally-documented commercial fishing vessels. The plan was submitted on January 13, 1992.

On May 19, 1993, the secretary of the Department of Transportation submitted a legislative proposal to amend title 46 U.S.C. 89 to require all federally-documented uninspected commercial fishing industry vessels to be operated by an individual licensed by the Coast Guard.

Under this proposal, fishing vessel operators will be required to be licensed as masters of fishing industry vessels less than 79 feet or less than 200 gross tons. (Presently, only fishing vessels of at least 200 gross tons need to be operated by a licensed individual.)

Continued on page 22

Preventing groundings such as this is an objective of safety training for commercial fishermen.



Safe working conditions and proper survival gear should be emphasized in accident prevention.

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Human error

Despite the variety of fishing vessel casualties, there is one item that is common to most — human error. This may be failure to plot a proper course, failure to check on vessel position with wind and tidal drift, reliance on autopilots and electronic plotters, and a failure to maintain proper lookout.

Frequently, some required or prudent maintenance was delayed or never done. In the cases of fire, often vessel cleanliness had not been maintained, or hazardous and combustible substances had been improperly stored.

An analysis of the causes of these casualties indicates that a majority of them could have been prevented, or their severity greatly diminished, if the operators had taken a few basic precautions. Reducing casualties caused by human error is a primary purpose of the Coast Guard/Commercial Fishing Industry Vessel Advisory Committee licensing plan.

Training

Raising the professional competency level of commercial fishermen through specially tailored training is the most effective way to improve safety in the industry.

Increased awareness of situations which can cause casualties should be a vital part of all fishermen training. Courses in accident prevention should emphasize hands-on practical training that would be applicable to most fishermen. An example of stability training would be nonmathematical explanations of capsizings caused by vessel alterations, improper stowage of gear and equipment, and external forces beyond the immediate control of the fisherman.

There would be no formal examination, but rather Coast Guard-approved private sector training facilities would be responsible for certifying that operators completing their course comply with federal professional competency standards. As a minimum, masters would be required to attend training courses, and show knowledge of and proficiency in stability, navigation, collision-prevention rules and seamanship, plus personal survival methods, first-aid and CPR.

Once a school has been approved for a course by the Coast Guard, the authority to conduct classes is retained for five years unless rescinded. The Coast Guard makes periodic visits to review the quality of instruction. If deviations from approved curricula are detected, the course approval can be revoked.

Greater awareness of accident prevention is crucial, if there is to be a reduction in fishing industry vessel casualties.

Video

The Coast Guard recently produced an eight-minute video illustrating the dangers of the fishing industry, and promoting the safety benefits of the licensing plan.

The video provides a basic explanation of how the licensing plan will be implemented, and how the Coast Guard is working with the fishing industry by using third party training, allowing applications by mail and encouraging remote training.

The video clearly explains how the plan would allow approved private sector training facilities to be responsible for certifying satisfactory performance of technical skills required of safe seamanship. This would substitute for formal Coast Guard examinations.

Conclusion

This legislative proposal will minimize the burden on the fishing industry and licensing individuals, but most importantly will improve fishing vessel safety by increasing professional competency among the operators. The Coast Guard will continue working with representatives of the commercial fishing industry to minimize vessel casualties by applying human factor considerations into the safety precautions.

Contact LCDR Paxton for copies of the video tape and licensing plan.

LCDR David Paxton is a staff member of the Merchant Vessel Personnel Qualifications Branch of the Merchant Vessel Personnel Division.
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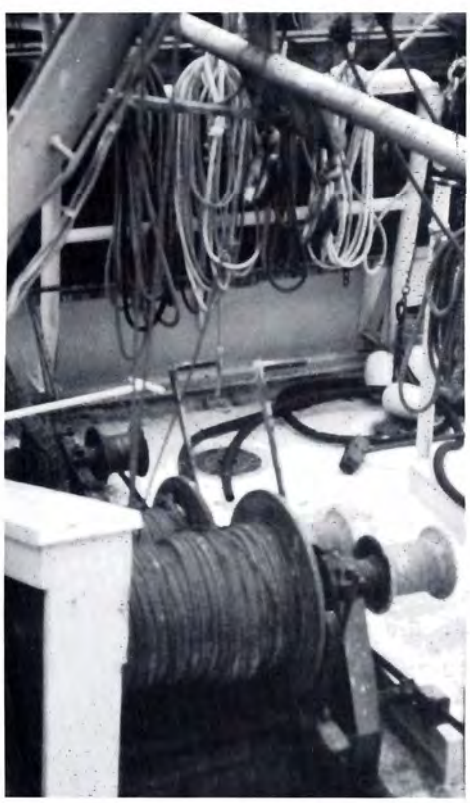

This is no way to operate fishing gear and the lines are in sorry shape (below), but in both cases, machinery without guards is an accident waiting to happen.

Drill

to survive

Fishing is and always has been one of the most dangerous professions in the world.

Most crew members on commercial fishing vessels simply accept high risks as occupational hazards. This need not be.

Fishing vessel crews can reduce the hazards of their profession by knowing instinctively how to use safety and survival equipment.

By LCDR David Paxton

Two cases

In September 1992, the fishing vessel *Majestic* went down in ten-foot seas 60 miles south of St. Paul Island, Alaska. All five crew members survived.

The skipper of the vessel remarked, *"I'd like to stress for all fishermen: **have your drills.** There's even a technique for getting in your survival suit. I'll bet you a lot of fishermen don't even know how to get into a survival suit and have never had drills."*

In sharp contrast, in January 1993, the fishing vessel *Massacre Bay* rammed a rock and rolled over only about 250 yards from shore near Kodiak Island, Alaska. The lone survivor of four crew members noted, *"If we had a drill, we might have all been alive. We had talked about it that night at dinner."* He added, *"We hadn't practiced the drill like we should have."*

A tragic ending for a fishing trip -- this need not be.

Drills

To improve the emergency response action of fishing vessel crews, the Coast Guard has required drills to be conducted on all commercial fishing industry vessels operating outside the boundary line defined in 46 CFR part 7 since September 1, 1993.

As of September 1, 1994, drills must be conducted at least once a month by an individual who is either licensed to operate an inspected vessel of at least 100 gross tons, or has been trained by a local fire department, a liferaft servicing facility or a Coast Guard-approved instructor.

To meet minimum Coast Guard training requirements, fishing vessel drill conductors not licensed to operate inspected vessels of 100 gross tons or more must be trained by a fishing vessel safety instructor who has been accepted by the Coast Guard.

Navigation Vessel Inspection Circular (NVIC) 7-93 establishes minimum standards for formal training, including the acceptance of instructors and course curricula. If a course meets these minimum standards, it will cover all of the necessary material for an individual to gain the required skills to conduct drills on fishing industry vessels.

Instructions

Specific instructions must cover techniques in abandoning the vessel, fire fighting, recovering an individual from the water, minimizing the effects of accidental flooding, launching survival craft, recovering lifeboats, donning immersion suits and personal flotation devices, donning a fireman's outfit and a self-contained breathing apparatus, making radio and visual distress calls and signals, activating the general alarm, reporting all inoperative alarms and conducting a drill.

Conclusion

Fishermen successfully completing a Coast Guard-approved safety and survival course are better prepared to handle an emergency, assist others and use available equipment appropriately. They are also prepared to share this knowledge and skill with other crew members through monthly drills aboard their vessels.

Fishermen and their local organizations should develop safety curriculum or invite approved outside fishing vessel safety instructors to train their crews. This is a wonderful opportunity for local fishing communities to work together to promote training and improve the industry's safety record.

LCDR David Paxton is a staff member of the Merchant Vessel Personnel Qualifications Branch of the Merchant Vessel Personnel Division.
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The late RADM Charles P. Murphy.

RADM Charles P. Murphy award is presented for lasting safety contributions

From left to right: CAPT Archibald H. McComb, Jr., Mrs. James B. McCarty, Jr. and CAPT McCarty, Mrs. Edward M. MacCutcheon and Mr. MacCutcheon, Mrs. James B. Robertson, Jr., Mr. Charles P. Murphy, Jr., Mr. Robertson, Ms. Patricia A. Hughes (RADM Murphy's daughter), CAPT Edward F. Murphy USCG (RADM Murphy's son) and Mrs. Charles P. Murphy (RADM Murphy's widow).

The Coast Guard established the RADM Charles P. Murphy award for sustained contributions to national and international marine safety and pollution prevention. The first awards were given to men who helped RADM Murphy set the course for the Coast Guard's marine safety and environmental protection program as it is today.

On May 3, 1994, Coast Guard Commandant J. William Kime presented the RADM Murphy award to CAPT James B. McCarty, Jr., USCG (ret.), CAPT Archibald H. McComb, Jr., USCG (ret.), Mr. Edward M. MacCutcheon and Mr. James B. Robertson, Jr.

RADM Murphy

After graduating from the Webb Institute of Naval Architecture, Glen Cove, New York, in 1935, RADM Murphy launched his career in marine safety with the former Bureau of Marine Inspection and Navigation under the Department of Commerce.

He headed a technical staff created by Congress to improve passenger vessel safety following two disasters with heavy loss of life in the mid-1930s. This staff supported 1936-1937 legislation regulating the structure, equipment, materials and manning for passenger ships.

In 1942, during World War II, he transferred with the bureau to the Coast Guard. By the time he retired in 1970, he had reached the rank of rear admiral and served as the chief of the Office of Merchant Marine Safety. He was awarded the Legion of Merit twice for outstanding performance.

RADM Murphy is remembered for laying the foundation upon which the modern marine safety program is built. His achievements in domestic legislation concerning bridge-to-bridge radio communication between vessels and the unification of the rules of the road are particularly noteworthy.

Honorees

When CAPT James B. McCarty, Jr., USCG (ret.), was chief of the Merchant Marine Technical Division, he directed technical initiatives that served as the basis for sound United States positions at the Intergovernmental Maritime Consultative Organization, the forerunner of the International Maritime Organization.

As assistant chief of the Merchant Marine Technical Division, CAPT Archibald H. McComb, Jr., USCG (ret.), developed the basic Coast Guard approval program for lifesaving equipment and structural fire protection materials.

Mr. Edward M. MacCutcheon was co-inventor of the riveted crack arrestor and co-organizer of the Ship Structure Committee, sponsored by the Coast Guard, Navy, Maritime Administration and the American Bureau of Shipping.

Mr. James B. Robertson, Jr., helped solve hull failure problems experienced by early Liberty ships during World War II, and also established loading and ballasting procedures for converted passenger ships to serve as troop carriers. In 1985, he was awarded the RADM Halert C. Shepheard Award for his achievements in merchant marine safety.

VADM William F. Rea III, USCG (ret.) receives coveted ABS "Shep Award"

VADM William F. Rea III, USCG (ret.), was presented the RADM Halert C. Shepheard Award by the American Bureau of Shipping (ABS) on April 19, 1994. The award, established by the American Institute of Merchant Shipping in 1975, is given annually by ABS to recognize outstanding achievements in merchant marine safety.

Coast Guard service

VADM "Bill" Rea graduated from the Coast Guard Academy with a bachelors degree in marine engineering in December 1941. This launched a half century of service to the sea and the maritime community.

With 37 years of active service under his belt, VADM Rea retired from the Coast Guard in June 1978. His last post was that of commander both of the Atlantic area and the 3rd Coast Guard district, New York. Previously, he was chief, Office of Merchant Marine Safety, the forerunner of the Office of Marine Safety, Security and Environmental Protection. Then as a rear admiral, "Bill" Rea assumed this post in July 1970, filling the vacancy left by RADM Charles P. Murphy.

During four years as chief of merchant marine safety, his work with the International Maritime Organization led to the establishment of the gas code for liquid natural gas (LNG) transport. One thing he instituted was the requirement that LNG ships be inspected before they arrive at port, so that unsafe vessels are not admitted. To this day, LNG ships are inspected outside the harbor, and enjoy an exemplary safety record.

VADM Rea served as chairman of the marine casualty board investigating the capsizing and sinking of the mobile offshore drilling unit, *Ocean Express*, in April 1976. During the investigation of the loss of 13 lives, he identified shortcomings in early survival capsule designs. His recommendations significantly improved enclosed lifeboat designs for the entire international maritime community, and called attention to the design and operation of drilling rigs.

Continued safety service

Since his retirement, "Bill" Rea has been called upon many times to lend his expertise to improve conditions and safety margins in the maritime industry. He participated in four investigations of major marine casualties, serving as chairman of three of the committees. The casualties included the collision between the merchant vessels *Burma Agate* and *Mimosa*, the sinking of the *VLCC Mycene*, the grounding of the *Pacific Charger*, and the collision of merchant vessels *Pacbaroness* and *Atlantic Wing*.

"Bill" Rea continues to contribute to maritime safety. He has had a strong influence in developing rules for building, classing and maintaining ships through his association with the ABS.

Industry standards for ships' crews bear his mark through his work with the Marine Index Bureau. He helped identify commercial fishing vessel casualty statistics and insurance data to improve safety in this hazardous industry.

The safety conditions under which ships' cargoes are loaded and carried improved as a result of his work with the National Cargo Bureau.

His expert no-nonsense approach to the safety of ships, their crews and cargoes has benefited the maritime industry, as well as our nation, ports and environment for more than 50 years.

VADM Rea looks back on his career with satisfaction. "I haven't worried about trying to make a lot of money," he notes. "The fact that I've been useful is really the motivation for me."

Chemical of the month

1/C Tanya Jeitz

Carbaryl

Used widely as an insecticide, carbaryl can be found as either a solid powder or liquid solution. Ranging in color from white to gray, it has a weak odor.

Solid carbaryl is not flammable. However, it is easily dissolved in combustible liquids, making it a special fire hazard. Even though it tends to react with polar solvents, the chemical is insoluble in water. As a solid, it sinks in water and as a solution, it may form a sheen much like petroleum products.

Insecticide

Widely used in agriculture, carbaryl was the first truly successful carbamate insecticide. It is considered biodegradable or a "soft" insecticide, because small amounts are quickly worked through the metabolic system of mammals and exit the body through the urine stream.

Carbaryl turned out to be extremely effective, becoming the primary substitute insecticide for DDT. It is used extensively on foliar (leaf) pests and as a homeowners insecticide to fight garden pests and lawn bugs, including Japanese beetles, gypsy moths, chinch bugs and some species of caterpillar. It is also used for parasite control on livestock and pets.

Hazards

Carbaryl is both an environmental and physical hazard. It is poisonous to birds, mammals, earthworms and honey bees. Ingestion of the insecticide by humans causes peripheral nerve and muscle weakness.

The chemical also exhibits possible effects on the reproductive systems of larger mammals, and animal carcinogenic data has been reported. Very low concentrations of carbaryl are harmful to aquatic life.

Carbaryl can be absorbed into the body by many routes, although skin absorption is slow. A carbamate insecticide and parasiticide, it is a potent toxic agent whose effects are easily reversible when treated with antedotes. It has a particularly low toxicity from dermal absorption.

Symptoms that an infected individual might exhibit include vomiting, headache, stomach pains and blurred vision.

Classifications

Carbaryl is listed as an OSHA air contaminant and a CERCLA hazardous substance included in section 311(b)(4) of the Clean Water Act, with a reportable quantity of 100 pounds (45.4 kg).

It is classified either as a class 3.2 flammable liquid or class 6.1 poisonous material (based on the properties of the solution) in the Code of Federal Regulations and the IMO IMDG Code. When shipped, it must be labeled according to the hazard class and marked with a proper shipping name followed in parenthesis by the name "carbaryl" and its concentration in solution. The proper shipping names and U.N. numbers are:

Class.	UN#	Description
3.2	2758	Carbamate pesticides, liquid, flammable, toxic, n.o.s.
6.1	2991	Carbamate pesticides, liquid, toxic, flammable, n.o.s.
6.1	2992	Carbamate pesticides, liquid, toxic, n.o.s.
6.1	2757	Carbamate pesticides, solid, toxic, n.o.s.

Carbaryl

Chemical name:	Carbaryl
Formula:	$C_{12}H_{11}NO_2$
Synonyms:	1-Naphthalenol, methylcarbamate and 1-Naphthyl N-methylcarbamate
Description:	White to gray solid powder or liquid solution with a weak phenolic odor

Physical properties:	80%	41.2%
Boiling point:	N/A	98.8 to 103.3°C
Melting point:	Not known	N/A
Vapor pressure:	N/A	**17 to 18 mm Hg at 20°C**

Threshold limit values:	
Time-weighted average:	5 mg/m^3
Short-term exposure limit:	None

Combustion properties:	80%	41.2%
Flash point:	380°F (193°C)	>200°F
Autoignition temperature:	1157°F (625°C)	Not known

Densities:		
Bulk density:	16-18lb/fl^3	N/A
Specific gravity at 20°C:	N/A	1.09 to 1.11

Identifiers:	
CHRIS code:	CBY
CAS registry number:	63-25-2
DOT ID number:	2758, 2991, 2992 and 2757
IMDG Code:	See "Pesticides table"

NFPA:	80%	41.2%
Health Hazard:	3	2
Flammability:	1	1
Reactivity:	1	1

Tanya Jeitz was a first class cadet at the Coast Guard Academy when this article was written under the direction of LCDR Richard B. Gaines for a class on hazardous materials.

This article was reviewed by the Hazardous Materials Branch, Marine Technical and Hazardous Materials Division, Office of Safety, Security and Environmental Protection. Telephone: (202) 267-1577.

The following deck questions should be answered using chart number 13205TR, Block Island Sound and approaches, and supporting publications.

Deck

You are steering a westerly course and approaching Block Island Sound. The area's variation is 15° W. The gyro error is 2° E. The deviation table is:

HDG. MAG	DEV.	HDG. MAG	DEV.
000°	0°	180°	0°
030°	1.0° W	210°	1.0° E
060°	3.0° W	240°	2.0° E
090°	2.0° W	270°	1.5° E
120°	1.0° W	300°	1.0° E
150°	0°	330°	0°

1. You are underway in the vicinity of Block Island and obtain the following lines of position:

Montauk Point Light	263° pgc
Block Island Southeast Light	026° pgc
Radar bearing to Block Island Southwest Point	348° pgc

What is your position at the time of these sightings?

A. LAT 41°05.0' N, LONG 71°36.2' W.
B. LAT 41°05.3' N, LONG 71°36.0' W.
C. LAT 41°05.3' N, LONG 71°35.8' W.
D. LAT 41°05.4' N, LONG 71°35.5' W.

2. Which of the following statements concerning the radiobeacon at Montauk Point Light is TRUE?

A. It transmits its signal at 286 MHz.
B. It transmits a Morse code signal for the letters NP.
C. The antenna which transmits the signal bears 227° T from the light at a range of 690 yards.
D. Transmission of the radiobeacon signal is accompanied by the sounding of a horn.

3. What course should you steer by your standard magnetic compass to make good a course of 280° T?

A. 266° psc.
B. 272° psc.
C. 290° psc.
D. 294° psc.

4. At 1800, your position is LAT 41°06.5' N, LONG 71°43.5' W. How would the buoy which bears 030° T from your position at a range of approximately one half mile be painted?

A. Horizontally banded, green over red.
B. Horizontally banded, red over green.
C. Vertically striped, red and green.
D. Solid green with red letters "BIS."

5. From your 1800 position, you steer a course of 350° psc at a speed of 10 knots. At 1830, your position is LAT 41°11.7' N, LONG 71°45.8' W. What are the set and drift of the current?

A. 020° T, 0.7 knot.
B. 029° T, 1.4 knots.
C. 200° T, 0.7 knot.
D. 208° T, 1.4 knots.

6. From your 1830 fix, you come left to a course of 290° T. Which of the following statements concerning Watch Hill Light is FALSE?

A. The normal range of its white light is 15 miles.
B. It displays both red and white lights.
C. Its horn blasts every 30 seconds in fog.
D. Its geographic range is 18.5 miles at a 10.7 meter (35 feet) height of eye.

7. At 1850, you obtain the following bearings and distances:

Montauk Point	189° pgc	8.7 miles
Watch Hill Light	340° pgc	5.7 miles

What true course did you make good between 1830 and 1850?

A. 286° T.
B. 293° T.
C. 299° T.
D. 307° T.

8. If your height of eye is 10.7 meters (35 feet), what is the approximate geographic range of Block Island North Light?

A. 7.4 nm.
B. 13.0 nm.
C. 14.3 nm.
D. 15.8 nm.

9. From your 1850 fix, you come left to a course of 280° T, while maintaining a speed of 10 knots. Which of these combinations of available Loran-C lines would be best for position determination?

A. 9960-Y and 9960-W.
B. 9960-X and 9960-Y.
C. 9960-W and 9960-X.
D. All are equally good.

10. You decide to use the 9960-Y and 9960-W rates. At 1915, you obtain the following readings:

9960-Y-43936.0
9960-W-14653.3

What is your 1915 position?

A. LAT 41°13.0' N, LONG 71°54.0' W.
B. LAT 41°13.1' N, LONG 71°53.9' W.
C. LAT 41°13.2' N, LONG 71°54.3' W.
D. LAT 41°13.2' N, LONG 71°53.7' W.

11. If you were to head into Fishers Island Sound, which chart would you switch to for better detail of Mystic and Mystic Harbor?

A. 13209.
B. 13212.
C. 13213.
D. 13214.

12. At 1930, your position is LAT 41°12.7' N, LONG 71°56.8' W. What type of bottom is charted at this position?

A. Blue mud, gritty shells.
B. Buried mussels, gritty shells.
C. Blue mud, gray sand.
D. Bumpy muck with grainy surface.

13. From your 1930 position, you plot a course to pass 0.5 mile due south of Race Rock Light. If your speed is 10 knots, the current's set and drift are 040° T at 1.8 knots, and a north wind produces a 3° leeway, what true course should you steer to make your desired course good?

A. 275° T.
B. 280° T.
C. 290° T.
D. 294° T.

14. Instead of heading into Long Island Sound, you anchor near Gardiners Point Ruins at the north end of Gardiners Island. What is the minimum recommended distance from the ruins for fishing, trawling or anchoring?

A. 300 yards (91 meters).
B. 1.0 mile.
C. 0.5 mile.
D. No distance is prescribed since any such activities in the area are prohibited.

15. NOAA VHF-FM weather broadcasts from New London, CT, are on _____

A. 162.25 MHz
B. 162.30 MHz
C. 162.40 MHz
D. 162.55 MHz

ANSWERS

1-C, 2-C, 3-D, 4-A, 5-B, 6-D, 7-B, 8-D, 9-A, 10-D, 11-D, 12-C, 13-B, 14-A, 15-D.

If you have any questions concerning Nautical Queries, please contact G-MVP-5. Telephone: (202) 267-2705.

Mariner's Seabag

Module profile -- rules of the road

The rules of the road modules are part of most examinations for deck licenses. There are three different module types:

50-question international and inland rules;

30-question international and inland rules; and

30-question inland only rules.

The 50-question module tests applicants for licenses to operate a wide range of vessels, and includes the ocean and near coastal licenses for vessels over 200 gross tons, inland and Great Lakes licenses for vessels of any gross tons, and first class pilots.

Many inland routes, such as Block Island Sound, certain rivers in Maine and Alaskan waters, for example, extend into waters governed by the international rules. An applicant testing with the inland rules only will have a restriction placed on the license limiting service to waters governed by the inland rules.

Because of the importance of this subject to the safety of vessel operation, mastering of the rules is required. The passing score for testing on the rules of the road is 90 percent. The questions on the exam are based on the rules themselves, annexes II, IV and V; the interpretive rules; applicable court decisions; and the implementing rules indicating application of the rules.

The particular set of rules to be used is noted at the beginning of each question. If a question should be answered based on information found in inland rules only, it will lead off, "INLAND ONLY." Other lead-ins are, "INTERNATIONAL ONLY" and "BOTH INTERNATIONAL AND INLAND." The last statement means that the rules are the same for each category.

Rules of the road questions are in several other test sections, including the Sail Addendum, the western rivers general modules and the AB examinations. This ensures that applicants are tested on rules applicable to particular licenses or documents.

Merchant marine deck exams

Each merchant marine examination is comprised of one or more modules. Modules specific to an examination may be complemented by "generic" modules to be used on several exams. Each examination is developed according to the guidelines set in 46 CFR.

By regulation, all candidates are required to take a full exam, EXCEPT for second mate endorsed as master 1600 GT, operator uninspected passenger vessel advanced to mate 100 GT, any 100 GT license increased to 200 GT, and operator uninspected towing vessel advancing to master. These candidates are the only ones permitted to take partial examinations.

Before the licensing regulation changes in 1987, each exam had dedicated modules for rules of the road, navigation general and navigation problems. The changes caused the total number of required exam modules to be extensive and repetitive. Therefore, the generic module was created for use when the material in individual modules is obtained from the same databank.

Generic modules are as important to an exam as those that are specifically titled. Unfortunately, some candidates feel that once they have been tested on a generic module, it is unnecessary to be reexamined on it. General modules, however, are replaced regularly and cover many subjects. In addition, generic modules with similar titles may not be alike and require demonstration of very different skills.

The overall purpose of the generic module is to eliminate duplication of testing materials, not testing requirements. It is not unreasonable to require applicants to demonstrate continued knowledge of critical subjects covered by generic modules. Candidates having previously tested with a generic module are NOT excused from future exams with generic modules. Successful applicants are responsible for the safety of lives, property and vessels under their charge.

Metrication

The Coast Guard is adding metric measurements to exam questions as part of a government-wide push to change the national measuring system. However, commonly used non-metric measurements will also be included. For example, a question may read, "Your height of eye is 32 feet (9.7 meters)..." The possible choices for a correct answer will use both systems.

Some of the familiar measurements used in the maritime profession will not change. These include the nautical mile, the degrees in a circle and the measurements of time.

The National Oceanographic and Atmospheric Administration (NOAA) has also begun a long-range program to change their charts to metric measurements.

Interim final rule

CGD 93-079, Simplified alternative procedure for resolving civil penalty cases (33 CFR part 1) RIN 2115-AE68 (April 7).

The Coast Guard is issuing an interim final rule to allow for greater delegation by the district commander and to allow for a simplified alternative procedure for resolving civil penalty cases to be tested in three pilot ports for a period of six months. This procedure should streamline the civil penalty process for certain oil discharge and pollution prevention cases by allowing a Coast Guard official to present a notice of violation and proposed penalty to a party in the field. Results of the pilot program will be used in determining whether the program should be implemented nationally and amending the final rule, if appropriate.

DATES: The rule was effective on April 7, 1994. Comments must be received by October 7, 1994.

Addresses: Comments may be mailed to the executive secretary, Marine Safety Council (G-LRA/3406) (CGD 93-079), Coast Guard headquarters, 2100 Second Street, S.W., Washington, D.C. 20593-0001, or may be delivered to room 3406 between 8 a.m. and 3 p.m., Monday through Friday, except federal holidays. Telephone: (202) 267-1477.

The executive secretary, Marine Safety Council, maintains the public docket for this rulemaking. Comments will become part of this docket and will be available for inspection or copying at room 3406, Coast Guard headquarters.

For further information, contact: LCDR Richard Gaudiosi, project manager, Marine Environmental Protection Division. Telephone: (202) 267-6714.

Final rule

CGD 91-023, Authorization for NTSB officials to be allowed in the pilothouse or on the navigation bridge of merchant vessels while underway (46 CFR parts 35, 78 and 97) RIN 2115-AE38 (April 8).

At the request of the National Transportation Safety Board (NTSB), the Coast Guard is amending its regulations prescribing officials who may be allowed in the pilothouse or on the navigation bridge of vessels while underway to include NTSB personnel. This action is necessary for marine accident investigations and familiarization of vessels, navigation procedures and waterways.

EFFECTIVE DATE: May 9, 1994.

Addresses: Unless otherwise indicated, documents referenced in this preamble are available for inspection or copying at the office of the executive secretary, Marine Safety Council (G-LRA/3406), Coast Guard headquarters, room 3406 between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477.

For further information, contact: Mrs. Justine Bunnell, Merchant Vessel Personnel Division. Telephone: (202) 267-0238.

Notice of proposed rulemaking

CGD 92-050, Classifying and handling class 1 (explosive) materials (33 CFR parts 110, 126 and 160) (46 CFR parts 38, 78, 97 and 194) RIN 2115-AE27 (April 8).

The Coast Guard proposes to amend its regulations concerning the carriage and handling of explosives. These amendments are necessary because the United States has adopted a new system for classifying and labeling explosives. The amendments would align terminology in existing Coast Guard regulations with that used in the new system and update references to address the new system.

DATE: Comments were due June 7, 1994.

Addresses: The executive secretary, Marine Safety Council, maintains the public docket for this rulemaking. Comments are part of this docket and are available for inspection or copying at room 3406, Coast Guard headquarters.

For further information, contact: LCDR Mark O'Malley, Port Safety and Security Division. Telephone: (202) 267-0493.

Notice of proposed rulemaking

CGD 93-072, Vessel bridge-to-bridge radiotelephone regulations: inland waterways navigation regulations (33 CFR parts 26 and 162) RIN 2115-AE66 (April 8).

The Coast Guard proposes to amend the vessel bridge-to-bridge radiotelephone regulations to correct an inconsistency between the statutory and regulatory language; and to amend the inland waterways navigation regulations to remove regulatory language that contradicts the inland navigation rules.

Continued on page 34

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DATE: Comments must have been received by June 7

Addresses: The executive secretary maintains the public docket for this rulemaking. Comments will be part of this docket and will be available for inspection or copying at room 3406, Coast Guard headquarters.

For further information, contact: Mr. Jonathan Epstein, Navigation Rules and Information Branch, Office of Navigation Safety and Waterway Services. Telephone: (202) 267-0352 or 0357.

Final rule

CGD 92-100, Bulk hazardous materials (46 CFR parts 30, 40, 98, 147, 150, 151 and 153) RIN 2115-AE35 (April 11).

The Coast Guard is amending its regulations on the carriage of bulk hazardous materials by adding cargoes recently authorized for carriage by the Coast Guard or added to the IMO Chemical Codes and by making minor technical and editorial changes and corrections. This action updates the bulk hazardous materials tables and better informs persons shipping a bulk hazardous material of that material's compatibility and special handling requirements.

EFFECTIVE DATE: May 11, 1994.

Addresses: Unless otherwise indicated, documents referenced in this preamble are available for inspection or copying at the office of the executive secretary, Marine Safety Council (G-LRA/3406), Coast Guard headquarters, room 3406 between 8 a.m. and 3 p.m., Monday through Friday, except federal holidays. Telephone: (202) 267-1477.

For further information, contact: Mr. Curtis Payne, Hazardous Materials Branch, Marine Technical and Hazardous Materials Division.
Telephone: (202) 267-1577.

Final rule

CGD 92-100a, Noxious liquid substances list (33 CFR part 151) RIN 2115-AE35 (April 11).

The Coast Guard is amending its noxious liquid substances regulations to include substances recently authorized for carriage by the Coast Guard or added to the IMO chemical codes, and is making minor technical and editorial changes and corrections. This action updates the current list of oil-like and non-oil-like noxious liquid substances allowed for carriage.

EFFECTIVE DATE: May 11, 1994.

Addresses: Unless otherwise indicated, documents referenced in this preamble are available for inspection or copying at the office of the executive secretary, Marine Safety Council (G-LRA/3406), Coast Guard headquarters, room 3406 between 8 a.m. and 3 p.m., Monday through Friday, except federal holidays. Telephone: (202) 267-1477.

For further information, contact: Mr. Curtis Payne, Hazardous Materials Branch, Marine Technical and Hazardous Materials Division.
Telephone: (202) 267-1577.

Notice of proposed rulemaking and hearing

CGD 92-072, Great Lakes pilotage rate methodology (46 CFR parts 401, 403 and 404) RIN 2115-AE45 (April 12).

The Coast Guard proposes to amend the Great Lakes Pilotage Regulations by establishing new procedures for determining pilotage rates, and revising the financial reporting requirements mandated for Great Lakes pilot associations. The proposed methodology would adopt methods which have proven effective in ratemaking methodologies used by regulators of other public service industries. This notice does not propose a change to existing Great Lakes pilotage rates and charges, but proposes to standardize the methodology by which those rates would be determined in the future.

DATE: Comments must be received by July 11, 1994.

Addresses: Comments may be mailed to the executive secretary, Marine Safety Council (G-LRA/3406) (CGD 92-072), Coast Guard headquarters or may be delivered to room 3406 between 8 a.m. and 3 p.m., Monday through Friday, except federal holidays.
Telephone: (202) 267-1477.

Comments on collection of information requirements must be mailed also to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, N.W., Washington, D.C. 20503. Attn.: Desk officer, U.S. Coast Guard.

The executive secretary maintains the public docket for this rulemaking. Comments will be part of this docket and will be available for inspection or copying at room 3406, Coast Guard headquarters.

For further information, contact: Mr. Scott A. Poyer, project manager, Merchant Vessel Pilotage Branch, Merchant Vessel Personnel Division.
Telephone: (202) 267-6249.

Notice of proposed rulemaking

CGD 87-069, Carriage of bulk solid materials requiring special handling (46 CFR parts 97 and 148) RIN 2115-AD02 (April 12).

The Coast Guard proposes to amend its regulations for the carriage of certain bulk solid materials by adding materials carried under Coast Guard special permits issued pursuant to this regulation and other materials contained in the IMO Bulk Solid Code, including coal, to the list of materials permitted under the regulations. The special handling procedures associated with these materials would also be included in the regulations. The proposed revisions would harmonize United States regulations with recommended international practice and eliminate the need to apply for special permits except for newly classified hazardous materials.

DATE: Comments must be received by July 11, 1994.

Addresses: Comments may be mailed to the executive secretary, Marine Safety Council (G-LRA/3406) (CGD 87-069), Coast Guard headquarters or may be delivered to room 3406 between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477.

Comments on collection of information requirements must be mailed also to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, N.W., Washington, D.C. 20503. Attn.: Desk officer, U.S. Coast Guard.

The executive secretary maintains the public docket for this rulemaking. Comments will be part of this docket and will be available for inspection or copying at room 3406, Coast Guard headquarters.

A copy of the material listed in "Incorporation by Reference" of this preamble is in room 1218.

For further information, contact: Mr. Frank K. Thompson, Hazardous Materials Branch. Telephone: (202) 267-1217.

Final rule

CGD 92-71, Recordkeeping of refuse discharges from ships (33 CFR part 151) RIN 2115-AE17 (April 19).

The Coast Guard is issuing regulations requiring all manned, oceangoing United States vessels 12.2 meters (about 40 feet) or more in length engaged in commerce and all manned fixed or floating platforms subject to the jurisdiction of the United States keep records of garbage discharges and disposals. Regulations specifying the vessels and platforms required to maintain these records are mandated by law. Use of shipboard garbage discharge and disposal records will promote compliance, facilitate enforcement, and reduce the amount of plastics discharged into the environment.

EFFECTIVE DATE: May 19, 1994.

Addresses: Unless otherwise indicated, documents referenced in this preamble are available for inspection or copying at the office of the executive secretary, Marine Safety Council (G-LRA/3406), Coast Guard headquarters, room 3406 between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477.

For further information, contact: LT Jonathan Burton, project manager, Marine Environmental Protection Division. Telephone: (202) 267-6714.

Adoption of interim rule as final

CGD 92-066, Recreation vessel fees (33 CFR part 1) RIN 2115-AE32 (April 29).

This rule adopts as final the changes to recreational vessel fee regulations published as an interim final rule on February 17, 1993. The interim final rule changed the length categories of recreational vessels subject to the fee for 1993 and 1994, as required by the High Seas Driftnet Fisheries Enforcement Act of 1992. This rule also removes Lake Roosevelt, WA, from the list of specific waters where the Coast Guard is present.

EFFECTIVE DATE: April 29, 1994.

Addresses: Unless otherwise indicated, documents referenced in this preamble are available for inspection or copying at the office of the executive secretary, Marine Safety Council (G-LRA/3406), Coast Guard headquarters, room 3406 between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477.

For further information, contact: Ms. Nancy Campbell Jones, Auxiliary Boating and Consumer Affairs Division. Telephone: (202) 267-6717.

Request for applications

CGD 94-033, Merchant Marine Personnel Advisory Committee (May 2).

The Coast Guard is seeking additional applicants for appointment to membership on the Merchant Marine Personnel Advisory Committee (MERPAC). This is a 19-member federal advisory committee that ad-vises the Coast Guard on matters relating to training, qualification, licensing, certification and fitness of seamen serving in the United States merchant marine.

DATE: Applications must be received by July 1, 1994.

Addresses: Persons wanting to apply should write to Commandant (G-MVP-3), Coast Guard headquarters.

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For further information, contact: Ms. Barbara Miller, assistant to the executive director, MERPAC, room 1210, Coast Guard headquarters.
Telephone: (202) 267-0224.

Notice of proposed rulemaking

CGD 92-065, Expanded hull identification number and new requirements for certificates of origin (33 CFR part 181) RIN 2115-AE37 (May 6).

The Coast Guard proposes amending the regulations concerning vessel hull identification numbers and establishing new regulations requiring certificates of origin for new vessels offered for sale in the United States. The Coast Guard is proposing the regulations to provide additional information identifying vessels and establishing evidence of vessel ownership to aid in marine investigations, deter theft and provide a more useful vessel identifier for the purposes of developing the vessel identification system, as required by legislation.

DATE: Comments must be in by September 6, 1994.

Addresses: Comments may be mailed to the executive secretary, Marine Safety Council (G-LRA/3406) (CGD 92-065), Coast Guard headquarters or may be delivered to room 3406 between 8 a.m. and 3 p.m., Monday through Friday, except federal holidays.
Telephone: (202) 267-1477.

Comments on collection of information requirements must be mailed also to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, N.W., Washington, D.C. 20503. Attn.: Desk officer, U.S. Coast Guard.

The executive secretary maintains the public docket for this rulemaking. Comments will be part of this docket and will be available for inspection or copying at room 3406, Coast Guard headquarters.

A copy of the material listed in "Incorporation by Reference" of this preamble is available for inspection at Room 1505, Coast Guard headquarters.

For further information, contact: Mr. Alston Colihan, Auxiliary, Boating and Consumer Affairs Division, Telephone: (202) 267-0981.

Policy statement

CGD 93-063, Vessel rebuild standards (46 CFR part 67) (May 10).

The Coast Guard is planning to undertake rulemaking to develop standards for vessel rebuild determinations. In order to help it determine the scope of the issues involved, the Coast Guard conducted two public meetings, the first on November 16, 1993, and the second on February 15, 1994. At the meetings, attendees discussed problems encountered under existing procedures and expressed confusion concerning the Coast Guard's current rebuild standard. This notice states the Coast Guard's regulatory standard for rebuild determinations and related practices and procedures.

EFFECTIVE DATE: May 10, 1994.

For further information, contact: Ms. Laura Burley, Vessel Documentation and Tonnage Survey Branch. Telephone: (202) 267-1492.

MEMBERS OF MARITIME INDUSTRIES

Whether you are a fishing vessel captain or a retired admiral -- river pilot, ocean scientist, marine engineer, tug or tow boat operator -- shipping executive, insurance underwriter, oil company rep, cruise line president or ship builder -- whatever your maritime position or expertise, we want to hear from you.

The November-December 1994 issue of Proceedings will be yours to fill with your views, issues, programs and policies regarding marine safety, security and/or environmental protection. Call the editor, Betty Murphy, at (202) 267-1408 to reserve space by July l, 1994. The deadline for submission of articles is August 5, 1994. Please submit photographs -- color or black and white -- preferably 5 x 7 or 8 x 10 inches -- with your articles. (All photos will be returned.)

If you need any assistance in the preparation of material, the editor will gladly comply. Contact her by phone or write c/o G-MP-4, Coast Guard headquarters, 2100 Second Street, S.W., Washington, D.C. 20593-0001.

Let us hear from you soon.

New advisory group focuses on mariners

By Mr. Paul Eulitt

A major responsibility of the Coast Guard is to issue licenses, certificates and documents to individuals employed on United States vessels, ensuring they have the necessary knowledge and skills to perform job tasks required for safe vessel operation.

Activities

Since 1978, when the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers was adopted by the International Maritime Organization (IMO), the Coast Guard has issued regulations to ensure that United States mariners meet or exceed all international standards. The convention was ratified on July 1, 1991, and put in force in the United States on October 1, 1991.

At the same time, major regulations on drug and alcohol use have been issued. Also regulatory efforts are underway to implement sections of the Oil Pollution Act of 1990 (OPA 90) concerning crew-member qualifications.

The Coast Guard has completed a congressionally-mandated plan for licensing crews on commercial fishing vessels. Physical standards also are being reviewed as well as criteria for assessing an individual's conduct and character in issuing licenses and merchant mariners' documents, particularly when ships are being operated with more automation. Also, there is a rising interest in the role of human factors in ship operations.

The Coast Guard's effectiveness in these activities will be greatly enhanced by the expert advice of a newly-established Merchant Marine Personnel Advisory Committee (MERPAC), the first group of its kind.

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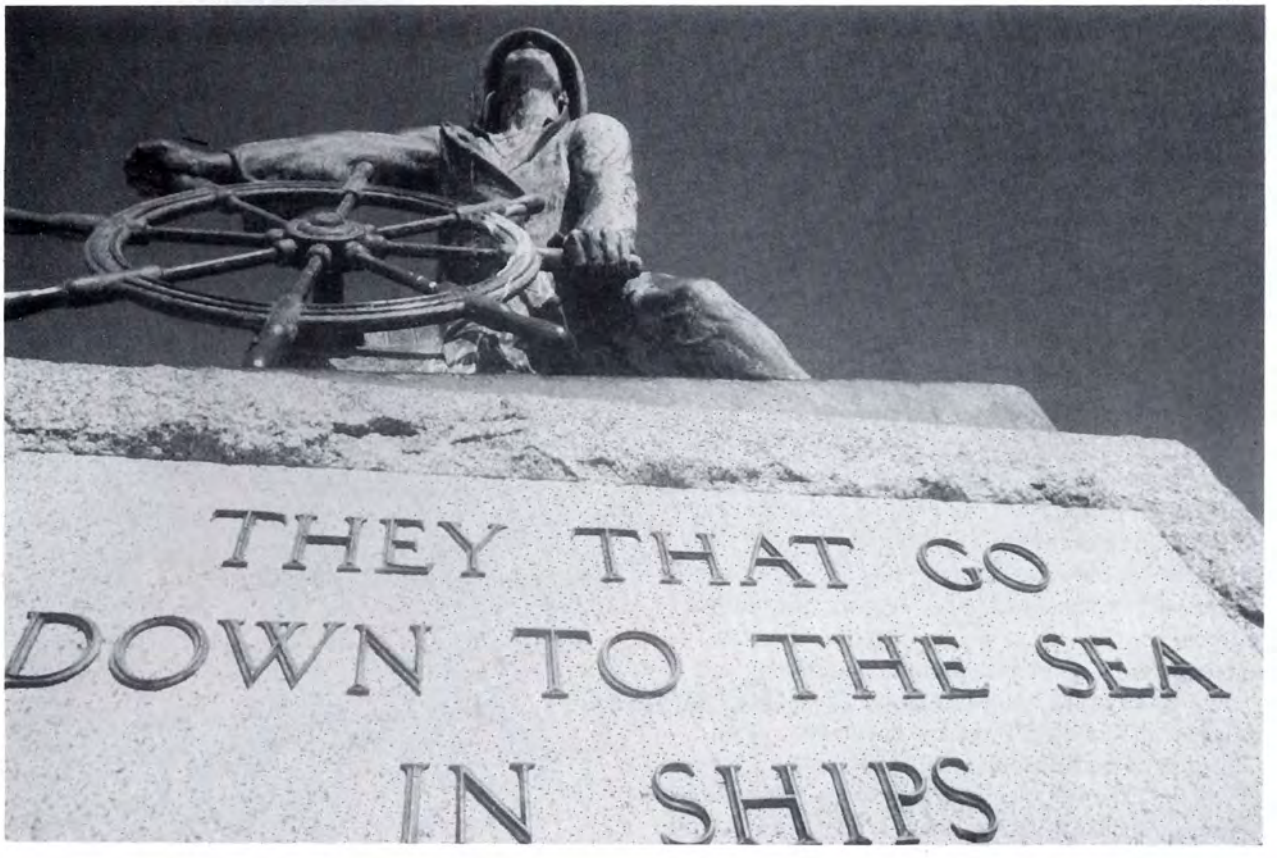

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MERPAC

On January 23, 1992, the Coast Guard's request for the new advisory committee was approved by the secretary of the Department of Transportation. Solicitation for members began immediately through the *Federal Register*.

The 19-member committee serves as a deliberative body and acts solely in an advisory capacity on matters relating to the training, qualifications, licensing, certification and fitness of seafarers serving as United States merchant mariners.

Coast Guard inspectors conduct an initial control verification exam on the bridge of the passenger vessel ~~Fantasy~~.

The committee also provides a public forum for receiving advice on matters relating to Coast Guard regulation of merchant vessel personnel. Such matters include minimum entry-rating requirements, the amount and quality of training for mariners acquiring sea service, the use of simulators in training, certification of instructors, examination requirements, demonstrated practical testing, implementation of drug-testing and alcohol-abuse programs, physical standards for acquiring and maintaining licenses and documents, implementation of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, and the issuance of rules to implement OPA 90.

Membership

Appointed by the secretary of the Department of Transportation, the 19 members of MERPAC were drawn from the broad population involved in merchant marine personnel. There are ten active United States merchant mariners including three deck officers, three engineering officers, two unlicensed seamen, one staff officer and one pilot; five educators from maritime training institutions; two shipping company managers and two individuals from the general public.

The Coast Guard is currently seeking applicants for seven membership terms that are expiring. They are:

- one deck officer,
- one engineering officer,
- one certified staff officer,
- two marine educators,
- ~~one shipping company manager, and~~
- one from the general public.

To achieve the membership balance mandated by the Federal Advisory Committee Act, the Coast Guard especially wants applications from minorities and women. The Coast Guard is also interested in receiving applications from members of the inland, river and near coastal industries.

Applicants for membership in MERPAC should contact Ms. Barbara Miller, assistant to the executive director of MERPAC, Room 1210, Coast Guard headquarters, 2100 Second Street, S.W., Washington, D.C. 20593-0001. Telephone: (202) 267-0224.

The committee meets at least once a year in Washington, D.C., or in another location selected by the Coast Guard. Working groups for specific problems meet on an as-required basis. The members serve without compensation from the federal government, although travel expenses and per diem may be provided.

Conclusion

As the new advisory committee struggles to get a grip on the many issues surrounding merchant marine personnel, the Coast Guard is encouraged by the enthusiasm and professionalism exhibited thus far by MERPAC members.

Mr. Paul Eulitt is acting chief of the Merchant Vessel Personnel Qualifications Branch of the Merchant Vessel Personnel Division.

Telephone: (202) 267-0224.

Over 73,000 W.W.II veterans recognized by Coast Guard

By ENS Timothy Whalen

On January 18, 1988, the then Secretary of the Air Force Edward C. Aldridge ordered that the *"American merchant marine in oceangoing service during the period of armed conflict, December 7, 1941, to August 15, 1945,"* be considered on *"active duty"* under the provisions of Public Law 95-202 for the purposes of all laws administered by the Veterans Administration.

Since that time, more than 90,000 applications for veterans' status have been processed and more than 73,000 mariners have met the service requirements established by the secretary of the Air Force. Applications under this program are still being received and processed at a rate of about 250 per month.

To qualify, mariners applying under the program must have served outside the protected waters of the United States and on vessels under the control of the United States government. Also, the service must have taken place during the period of armed conflict specified by the secretary of the Air Force.

Case histories

To establish service credit under the program, the Coast Guard reviews each mariner's personal merchant seaman's file jacket on their career at sea. These records contain fascinating accounts of valiant deeds by many mariners in service to their country.

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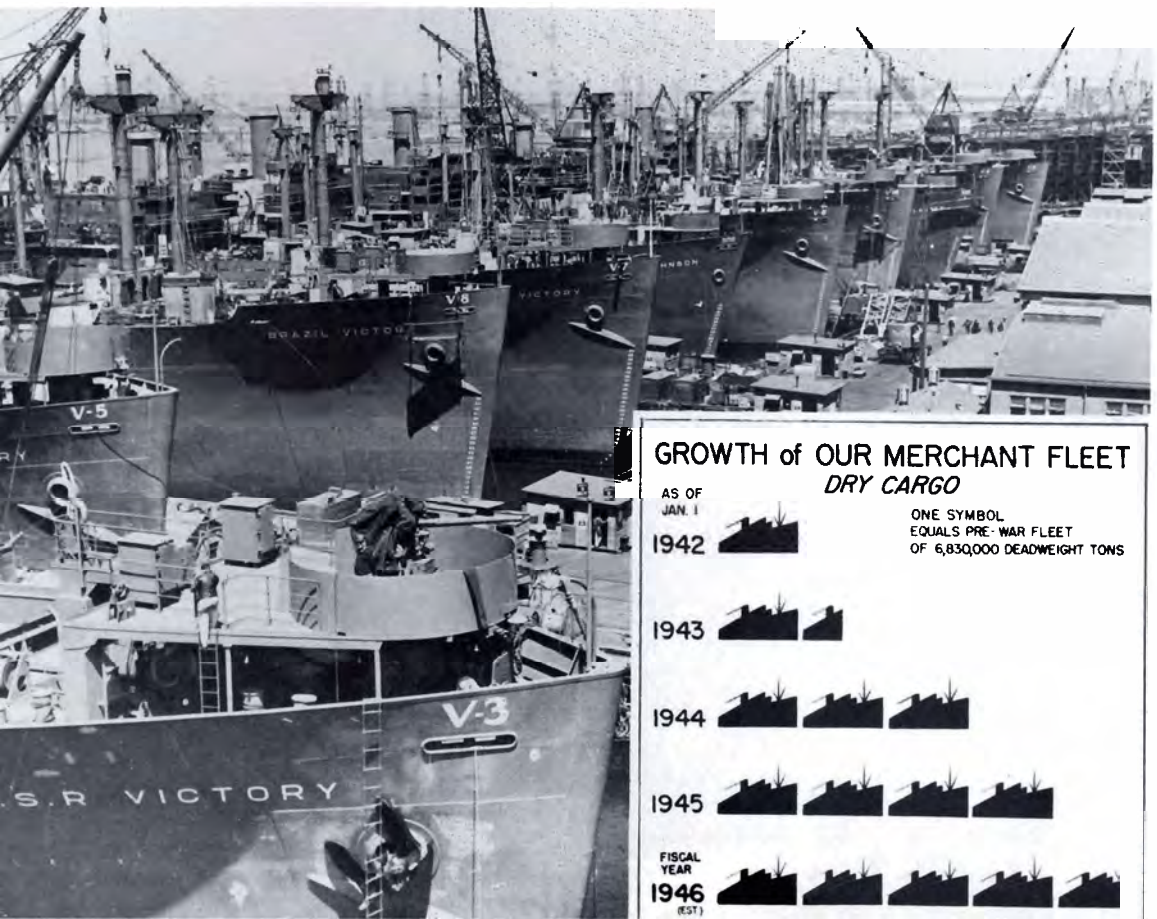
Merchant mariners fight fire in World War II.



The American merchant fleet of Liberty, Victory, C-type and other ships included more than 3,500 dry cargo vessels at its peak.

Photo courtesy of the Maritime Administration.

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As an example, a request was recently submitted by the grandnephew of two merchant mariners who served during World War II. His great uncles had been lost during the war, and their service had thus far been unrecognized. Details of their deaths were sketchy.

Coast Guard research brought the tragic circumstances surrounding their deaths to the surface.

One brother served as an ordinary seaman on board the *SS Swiftsure,* a tanker which was torpedoed and sunk by the German submarine *U-68* on October 8, 1942. The tanker crew was rescued and brought to Capetown, South Africa, and 31 of them boarded the Dutch vessel *SS Zaandam* for repatriation. Shortly thereafter, the *SS Zaandam* was also torpedoed and sunk. The brother and 15 other *SS Swiftsure* crew members were lost with the vessel.

The other brother served as a member of the steward's department on board the *SS Sumner I Kimball.* The vessel straggled from its convoy and was attacked by *U-960.* The *SS Sumner I Kimball* sank on January 16, 1944, and all 39 crew members were lost.

After these events were verified, the family of these brave men received a letter from the Coast Guard commandant and honorable service certificates signed by the secretary of the Department of Transportation.

This is one of thousands of stories about the tragic events befalling merchant mariners in World War II. It is only fitting that their service be recognized.

Further efforts

There have been efforts to extend the period of eligibility beyond August 15, 1945. This would recognize the contributions of thousands of additional mariners who served their country during its time of need.

In addition to processing applications for merchant mariners and their next of kin, the Merchant Marine Veterans Branch of the Merchant Vessel Personnel Division assists mariners in verifying their service and responds to Freedom of Information Act inquiries on the program. The branch also contacts other organizations involved in merchant marine veterans issues, such as the Maritime Administration, the Veteran's Administration and various Department of Defense agencies.

Conclusion

Not only do many recognized mariners hold key positions in the maritime industry, but the overall image of the Coast Guard is enhanced. Every day, mariners and their families are notified that their World War II service has not and will not be forgotten, leaving them with a strong positive image of the Coast Guard.

ENS Timothy Whalen is the chief of the Merchant Marine Veterans Branch of the Merchant Vessel Personnel Division.

Telephone: (202) 267-2641.

Merchant mariners help keep supplies flowing in the "Mulberry" operation -- a floating harbor at Omaha Beach.

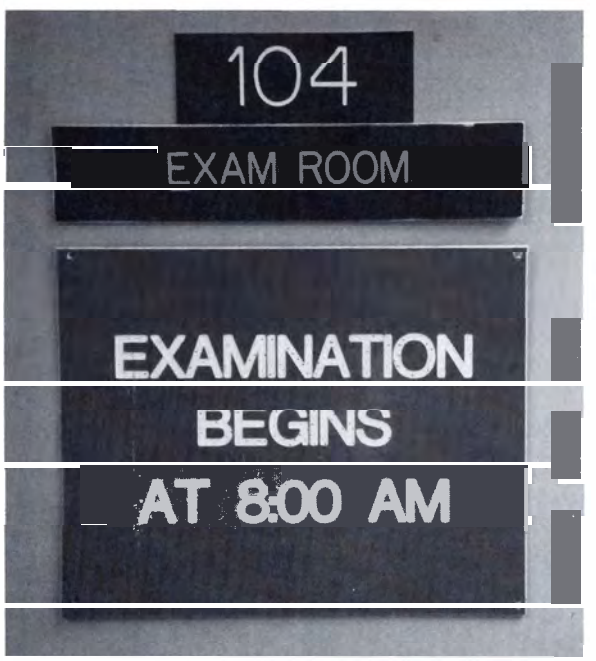
Photo courtesy of the Maritime Administration.

Licensing procedures . . .
one man's opinion

By LT Gerard Achenbach

I am a lieutenant in the Coast Guard with average intelligence - no genius. Last January, after two and one half years of procrastinating, I finally sat for the unlimited chief mate/1600-ton master exam.

The exam consisted of six parts, three of them divided in two, making a total of nine modules. The whole test was multiple choice. Even though it was nearly five years since I had set foot on a merchant ship that wasn't anchored or tied to a pier, I scored 90 percent on safety and navigation. This was my lowest score. My highest was 100 percent on rules of the road.



Preparation

Before taking the exam, I was advised by a fellow mariner that if I studied "Murphy," and the "yellow books," I should be OK. Commercially published license study guides, "Murphy" consists of five volumes of questions arranged by subject. They are edited by Captain Joseph S. Murphy, II. Issued by the Coast Guard, the "yellow books" are actual questions in the merchant marine examination. They have bright yellow covers. These "guides" demonstrate my first point:

I believe that in our attempts to be fair, we have created a system where the exam has become a series of questions. The best way to prepare for it is to memorize questions, rather than study theory or gain first hand experience.

Is this how we want to license professional mariners?

To prepare for the exam, I paid $900 for a license preparatory course, consisting of several study guides and a set of computer discs. The latter tracked the questions I got wrong, so I could bone up on them.

By studying questions rather than theory, I did very well on the exams. However, I wonder if I learned anything that would make me a better mariner.

I was also given an 800 number for advice. In addition to explanations of several questions, I was told what chartwork problems were found by other students on the chief mate exam. I concentrated on those problems, and was able to answer every chartwork question correctly — something I was unable to do on the chartwork section of my second or third mate exams. I was so familiar with one particular problem that I could have answered the question without making a trackline.

In a world of unlimited budgets and resources, I believe it would be in everyone's best interest to incorporate essay questions into the license exams. Unfortunately, the money is not there to overhaul the entire system. What we could do is create new multiple choice questions at a quicker pace. This would cause license candidates to rely less on previously published questions.

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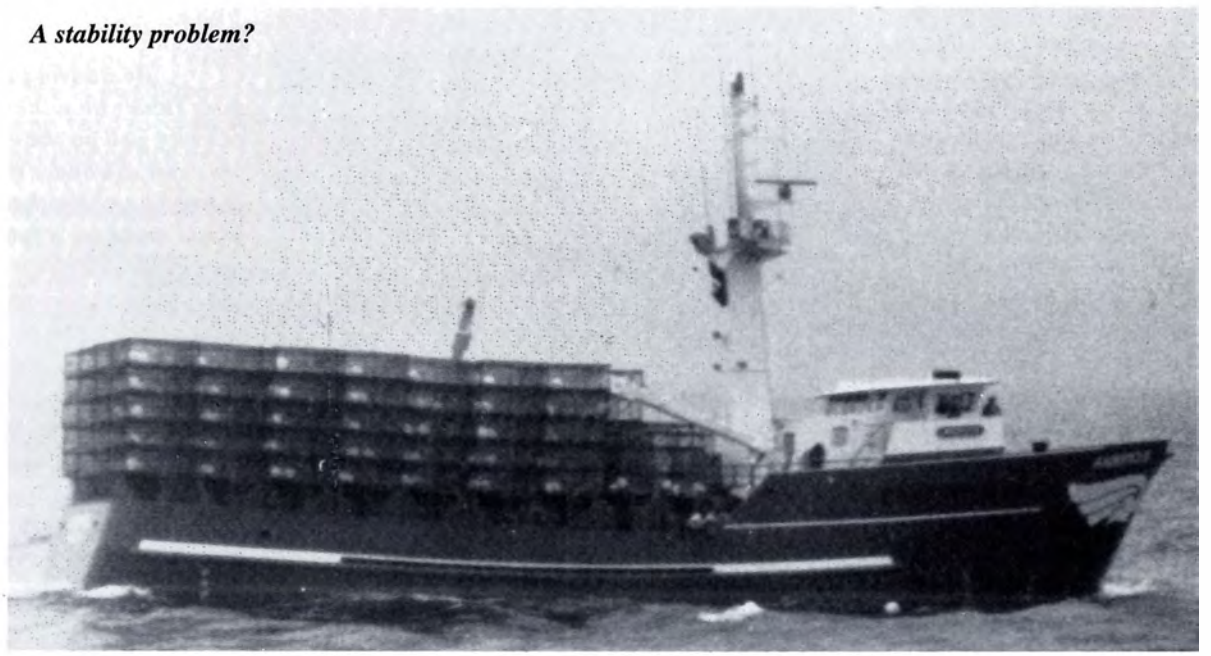
Chartwork

I feel that chartwork is the most valuable section of a navigation exam. In today's world of electronic navigation, a mariner can choose from several methods of making an accurate fix. However, as accurate as they are, the fixes still need to be plotted.

I propose that chartwork have a "fill-in-the-blank" section.

This is currently done for the translation of the final five-word groups of the Morse code exam. I believe it could be done for the nine questions on chartwork. A separate fill-in-the-blank section could be designed independently from the rest of the navigation problems, and, just by changing a loran line a few digits, new questions could be created quickly. I feel this would cause student mariners to study plotting methods and not just review already published problems.

A stability problem?



Stability problems

The chief mate exam has a module (safety "B") consisting of 15 stability questions, each worth two points. Totaled with safety "A," which has 70 questions worth one point each, it represents the final grade for safety.

Since safety is drilled into trainees weekly while underway, it is probably the easiest section of the exam. It is too easy to get 60 out of 70, and cruise through stability.

Because the chief mate is traditionally in charge of the vessel's loading and its stability calculations, why not make stability a separate section of the chief mate license exam, rather than average stability with deck safety as it is currently done?

(Note: The policy was changed in January 1994. Now, all chief mate candidates must take safety "B" stability problems first. This helps, but still allows someone to become a chief mate, even if they are dangerously weak in stability.)

"I have never sailed aboard a tanker, but I can now legally be the chief officer of one . . ."

Oral boards

On a United States Coast Guard cutter, every position from helm-lookout on up requires an oral board. (Most oral boards consist of two or three individuals who are qualified in the job under examination. They ask questions regarding the job and have the final approval as to whether the candidates obtain their qualifications.) Marine Inspection Office New York requires oral boards for life raft inspectors. The Federal Aviation Administration (FAA) requires them for all licenses and ratings.

It would be ideal if we could sit down with all the individuals we license, but there are not enough Coast Guard employees to do this. Most regional exam center employees are not mariners, so the load would fall on the marine safety offices.

I propose we set up an oral board for all original unlimited master license candidates, which are few in number.

Even if it becomes a rubber stamp, it would foster a better working relationship between the Coast Guard and the individuals we license. Before he or she begins to fill out the official log book, it would help to meet them. It would give us the opportunity to tell them we really are here for their safety, and explain why we do some of the things we do. It would also allow the mariners to ask questions of Coast Guard personnel, and possibly clear up some misconceptions.

Tanker service

I have never sailed aboard a tanker, but I can now legally be the chief officer of one, or even master if it is under 1,600 gross tons. I probably would have a difficult time gaining such employment, but I still wonder if I should be allowed to work aboard a tanker in a more responsible capacity than second mate.

In a time of national emergency, or if I should sail on a foreign flag ship, I could conceivably be employed aboard a tanker. I believe tanker service above second mate should require an endorsement. Unfortunately, I doubt that that will ever happen due to the cost involved, not to mention the trouble it would cause those who are already employed and very proficient in tanker operations.

I do feel that there weren't enough tanker operation questions asked on my last exam. The deck general section of the chief mate's exam consists of two modules, and I don't believe any subject is emphasized in either one.

Considering the current emphasis in the industry regarding pollution and OPA 90, I propose that one of the general deck modules to be dedicated to tankship operations/safety/regulations.

Exam center locations

Many regional exam centers are in congested metropolitan areas, especially the ones in New York, Miami and New Orleans. It is expensive for license candidates to lodge and park their cars in these areas. Many of the locations are plagued by high crime.

Why can't test centers be located in more convenient, less costly places for mariners?

At total quality management (TQM) sessions, we are taught that the public is our customer. We would serve our customers and ourselves better by placing test centers in areas where mariners could park their cars reasonably. Possible future locations could include suburban shopping malls and community colleges.

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"I realize that many of these proposals could create as many problems as solutions."

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Exam administers

On the same note, why not adopt a service-wide format allowing unlimited masters to administer able seamen exams underway?

If the unlimited master attests under his or her license that the exam was conducted in accordance with Coast Guard regulations, many individuals could forgo the inconveniences of traveling to regional exam centers. (As an ensign, I administered service-wide exams and warrant officer exams, why not let an unlimited master give an able seaman exam?)

FAA personnel administer no tests themselves. All multiple choice exams are conducted at approved private testing centers, which administer the exams using a computer system. While FAA exams are different from those of the merchant marine, we could save substantial government funds by adopting parts of the FAA system, especially with regard to allowing private industry to administer the exams.

Also if the tests were given on a computer, test modules could be created at a much quicker pace, possibly creating a unique module for each candidate.

Summary

I realize that many of these proposals could create as many problems as solutions. Perhaps the licenses should be left alone. I'm also only one voice.

In the spirit of TQM, let's ask our "customers" how we are doing.

After we accept that last check for $35.00 (license fee), let's give each mariner a questionnaire with a stamped self-addressed envelope with their license, and have them tell us how we are doing.

In the end, I hope that I haven't stepped on too many toes. I also hope that my executive officer doesn't decide that, since I know so much about the regional exam center, I should work there.

I do believe we can improve licensing procedures for both ourselves and the United States merchant marine.

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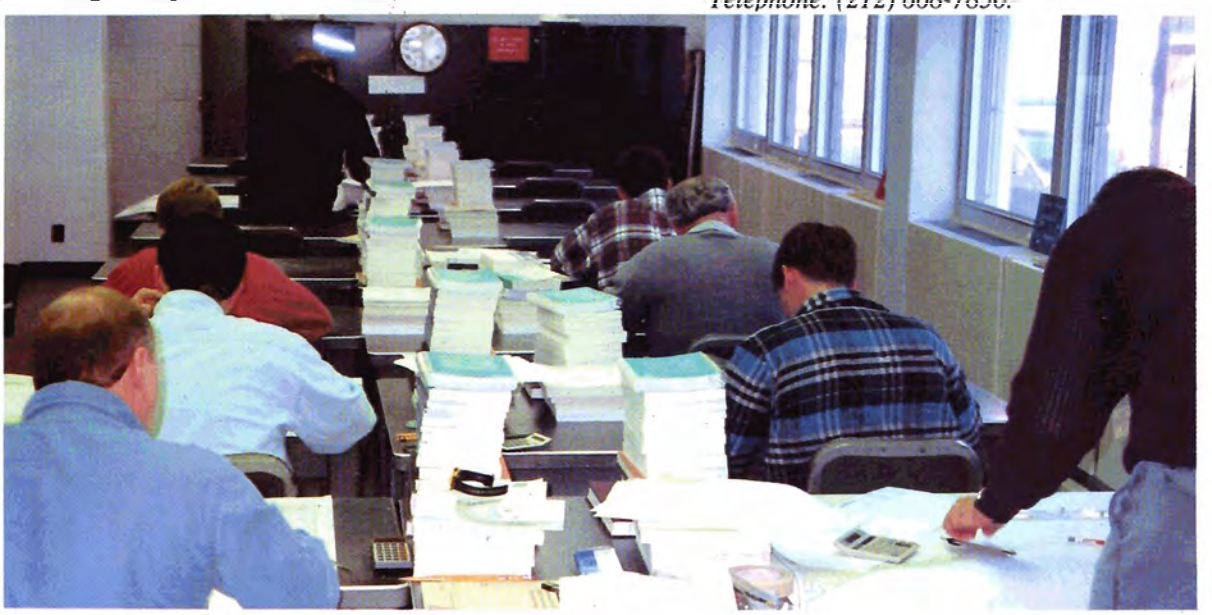

Merchant Vessel Personnel Division response

By Mr. Frank Flyntz

A major Coast Guard responsibility is to issue licenses, certificates and documents to merchant mariners employed on United States vessels. This is to ensure that the mariners possess the requisite knowledge, skill and ability to perform job tasks required for the safe operation of a vessel.

As acting chief of the Merchant Vessel Personnel Division of the Office of Marine Safety, Security and Environmental Protection, first I wish to congratulate LT Gerard Achenbach on passing the Coast Guard examination and receiving his merchant mariner's license. This is no easy achievement and he should be proud of his accomplishment.

The Coast Guard is well aware of the imperfections and problems concerning licensing and examination procedures pointed out by LT Achenbach in his *Proceedings* article. The entire program has been under critical review.

During the spring of 1993, the division assembled a focus group to study current directions of the marine licensing program and to project license requirements on into the next century. The group produced a report, "Licensing 2000 and Beyond," which sets forth 25 recommendations on how to bring the marine licensing program in line with today's industry and that of the next century.

In addition, the commandant called for the establishment of a 19-member advisory committee to serve as a deliberative body on matters relating to the training, qualifications, licensing, certification and fitness of individuals serving in the merchant marine. This Merchant Marine Personnel Advisory Committee (MERPAC) also acts as a public forum seeking advice on merchant vessel personnel regulations. (See page 37.) MERPAC is now reviewing "Licensing 2000 and Beyond."

LT Achenbach's concerns

Preparation

Applicants do have a wide range of options in studying for a Coast Guard examination. Lt Achenbach's method is just one. We are in the process of promoting and requiring more hands-on training, especially in areas such as radar observation, fire fighting and bridge resource management to ensure that critical skills are acquired.

Chartwork

To change from a multiple choice to a fill-in-the-blank examination would not substantially improve the competency level of the merchant mariner. The present format has four closely-related multiple choice answers. To arrive at the appropriate answers, an applicant must plot the chart problem correctly. This type of exam not only facilitates grading, but allows for statistical analysis and reduces the chances for misgrading.

To improve the navigation problem section, the Coast Guard is studying the possibilities of using simulators to assess applicants' bridge management skills and ability to cope with actual vessel operation.

Stability/safety

The Merchant Marine Examination Branch is now reviewing alternatives to enhance testing of applicants' knowledge in this critical area.

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Tanker experience

The Coast Guard will soon issue an interim rule setting out the qualifications for tankship operators, and for persons in charge of and assisting in the handling, transfer and transport of oil and certain hazardous liquid cargoes in bulk aboard vessels. This rule will establish training standards, operational requirements and certification procedures to ensure that licensed or unlicensed persons in charge are competent to perform their duties.

Oral board

The focus group did not recommend an oral board, but a shift from the current systems to one employing more demonstrations of competence. The demonstrations of practical skills would be conducted before licensed designated examiners or Coast Guard personnel. Skill demonstrations could take place on the water or be conducted using a computer or simulator.

Test centers

The Coast Guard is trying to reduce the number of trips to regional exam centers by processing as much of the application as possible through the mail. The need to place the exam centers in areas of easy access for mariners is a must, although most applicants either ship out of or live in the general area of a center.

On January 13, 1992, the Coast Guard submitted a report entitled, "The Plan to License Operators of Federally-Documented Commercial Fishing Industry Vessels," to Congress, recommending the use of a third party for training and certifying organizations to allow applications and related paperwork to be processed through the mail.

This plan only applies to fishing industry vessels of less than 200 gross tons. Should it prove successful, it may be applied to other parts of the program.

Exam administers

The focus group recommended designated examiners, or qualified third parties to test merchant mariners. The successful precedent in the current system for the use of designated examiners is found in radar observer endorsements. The use of a designated examiner is appealing — that a master of a ship be required to proctor Coast Guard examinations is not.

Summary

License applicants previously had to pass a written Coast Guard exam and show sufficient sea service. The trend is shifting toward allowing specific training to satisfy some sea service and exam requirements. Studies by the National Research Council, the Oil Pollution Act of 1990 staff and the focus group support formal training requirements for mariners.

More emphasis will be placed on formal training, rather than on sea time and multiple choice exams as sole guarantors of competency. The Coast Guard is interested in how the knowledge was gained, not merely in a course completion certificate. License applicants will have to meet formal training and sea service requirements, and pass multiple choice and practical examinations. The licensing program is changing to meet the needs of the modern merchant marine industry by using "Licensing Year 2000 and Beyond" as a road map, as well as recommendations of advisory groups.

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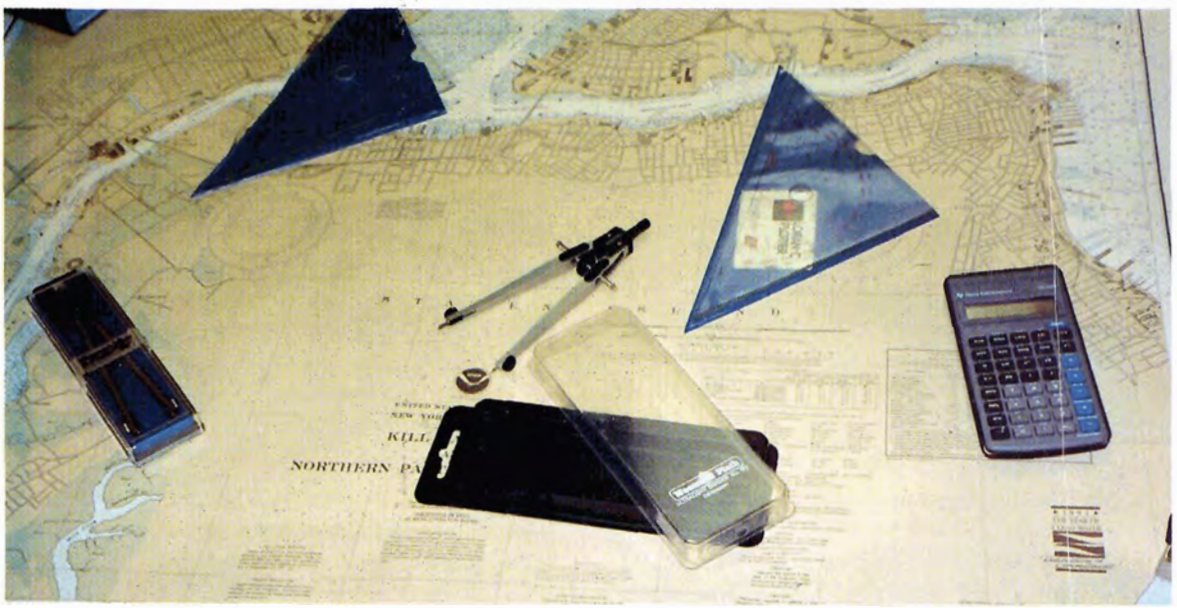

How pilots are regulated

then and now

By Mr. John Hartke

Federal pilots are licensed deck officers with special knowledge of local waters. They are responsible for safely directing coastwise seagoing vessels within the navigable waters of the United States.

Origins

The origin of pilotage can be traced to shortly after the founding of the American colonies. At that time, many states regulated local pilotage according to their own laws. The federal government was authorized by the commerce clause of the constitution to regulate interstate and foreign commerce.

The Lighthouse Act of August 7, 1789, provided for pilotage to continue to be regulated by the states until further congressional action was taken. The language of this act preceded the current 46 U.S.C. 8501, which states that, except as otherwise provided, pilots in the bays, rivers, harbors and ports of the United States shall be regulated only in conformity with the laws of the states.

The first law concerning federal licensing of pilots was the Act of August 30, 1852, which stipulated that steam-propelled passenger vessels were to be operated by federally licensed pilots.

In 1871, congress passed laws requiring coastwise steam vessels not under registry to have federal pilots when underway, except on the high seas. Codified as 46 U.S.C. 8502(a), the law states that a coastwise seagoing vessel shall be under the direction and control of a pilot licensed by the Coast Guard if it is:

(1) not sailing on register,
(2) underway,
(3) not on the high seas, and
(4) is an inspected self-propelled vessel or an inspected tank barge.

Today

Pilotage laws have remained relatively the same until very recently. Pilotage regulations, however, have been under continuous amendment since about 1980. Presently, there are two regulatory projects underway regarding federal pilotage.

One is a final rule concerning the licensing of pilots. This rule defines "coastwise seagoing vessels," clarifies which vessels must have pilots, and describes the waters where pilots are required.

The other rulemaking would require federal pilots for self-propelled foreign trade vessels in California, Hawaii, Massachusetts, New York and New Jersey, where state laws do not require them.

Generally, foreign vessels and United States vessels operating on registry endorsement are under state pilotage authority, and United States vessels operating on coastwise endorsement are under federal pilotage authority. Great Lakes pilotage is an exception.

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Great Lakes pilotage

In 1960, congress passed the Great Lakes Pilotage Act (now codified as 46 U.S.C. chapter 93), which preempted the states and placed the regulation of foreign merchant vessels and United States vessels under register, operating on the Great Lakes, under federal authority.

This legislation was enacted to ensure safety of large vessels navigating the Great Lakes following the opening of the St. Lawrence Seaway. It would be bedlam if the eight states bordering the Great Lakes were to make their own individual, possibly conflicting, pilotage laws. Also, dealings with a foreign national government are reserved for the federal government.

In 1961, the United States and Canada established a memorandum of arrangements to coordinate the implementation of their respective pilotage laws. (The latest agreement in 1977 coordinated the provisions of pilotage services and, in particular, the distribution of work between pilots of the two nationalities in each of the three Great Lakes pilotage districts.)

The secretary of transportation delegated the administration of Great Lakes pilotage to the Coast Guard, but retained the authority to enter into agreements with Canada.

Beginning in 1968, oversight of Great Lakes pilotage was conducted by the Ninth Coast Guard District based in Cleveland, Ohio. In 1990, this responsibility was transferred to Coast Guard headquarters under a new Merchant Vessel Pilotage Branch of the Merchant Vessel Personnel Division.

The Coast Guard's regulation of registered pilots on the Great Lakes is extensive. It includes registering pilots, establishing pilotage rates, authorizing pilotage pools, prescribing regulations for the operation and administration of the pools, establishing a uniform system of accounts, and doing audits and inspections. The Great Lakes pilotage regulations are under 46 CFR parts 401 to 404.

Significant Great Lakes pilotage documents include the Department of Transportation Great Lakes Pilotage Study published on December 7, 1988, the Department of Transportation Inspector General Audit Report dated December 14, 1990, and the commandant instruction entitled Coordination of Great Lakes Registered Pilot Issues of March 4, 1994.

New proposals

Two Great Lakes pilotage regulatory projects are now being developed. One is a proposal to amend the Great Lakes pilotage regulations by establishing new procedures for determining pilotage rates. The proposal would adopt methods which have proven effective in ratemaking used by regulators of other public service industries.

The other proposal would amend sections of the Great Lakes pilotage regulations dealing with the pilot registration process, qualifications, employment of pilots and the operation of pilotage pools. In addition, it is being proposed to adopt a one pilot, one vote concept for all the pilot associations.

Conclusion

Both state and federal pilotage systems have worked relatively well over the years. However, as a result of recent incidents such as the grounding of the *Exxon Valdez* in Prince William Sound, Alaska, and the AMTRAK derailment in Alabama, changes are very likely. The marine board of the National Research Council is completing a study on navigation and piloting. Some far reaching recommendations are expected from that study.

Photographs of foreign flag vessels visiting Great Lakes ports accompanying this article are courtesy of the Saint Lawrence Seaway Development Corporation.

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