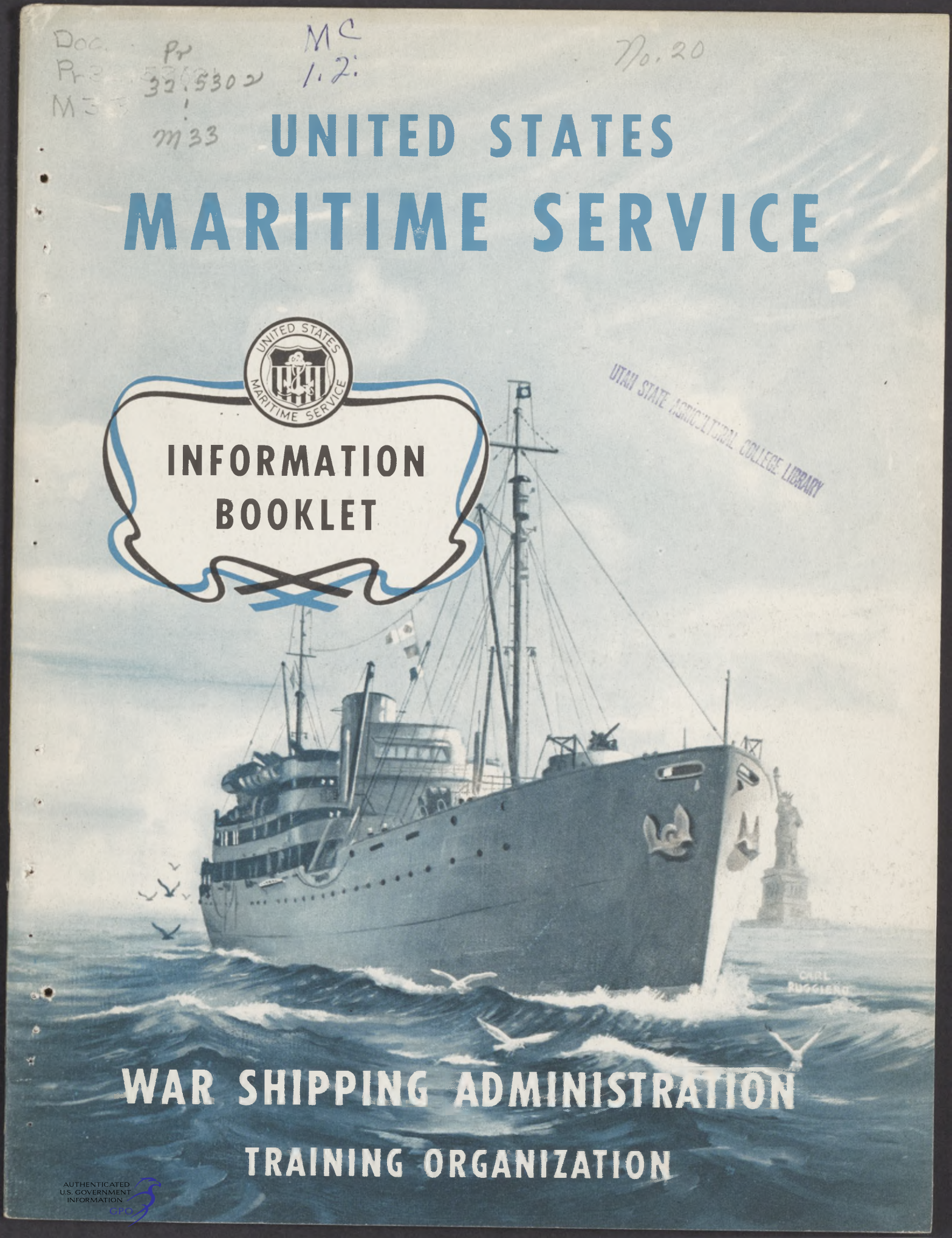
# UNITED STATES MARITIME SERVICE

## INFORMATION BOOKLET






## WAR SHIPPING ADMINISTRATION

## TRAINING ORGANIZATION


NOTED PREWAR
UNITED STATES
PASSENGER VESSELS
SS BRAZIL
SS MANHATTAN
SS URUGUAY

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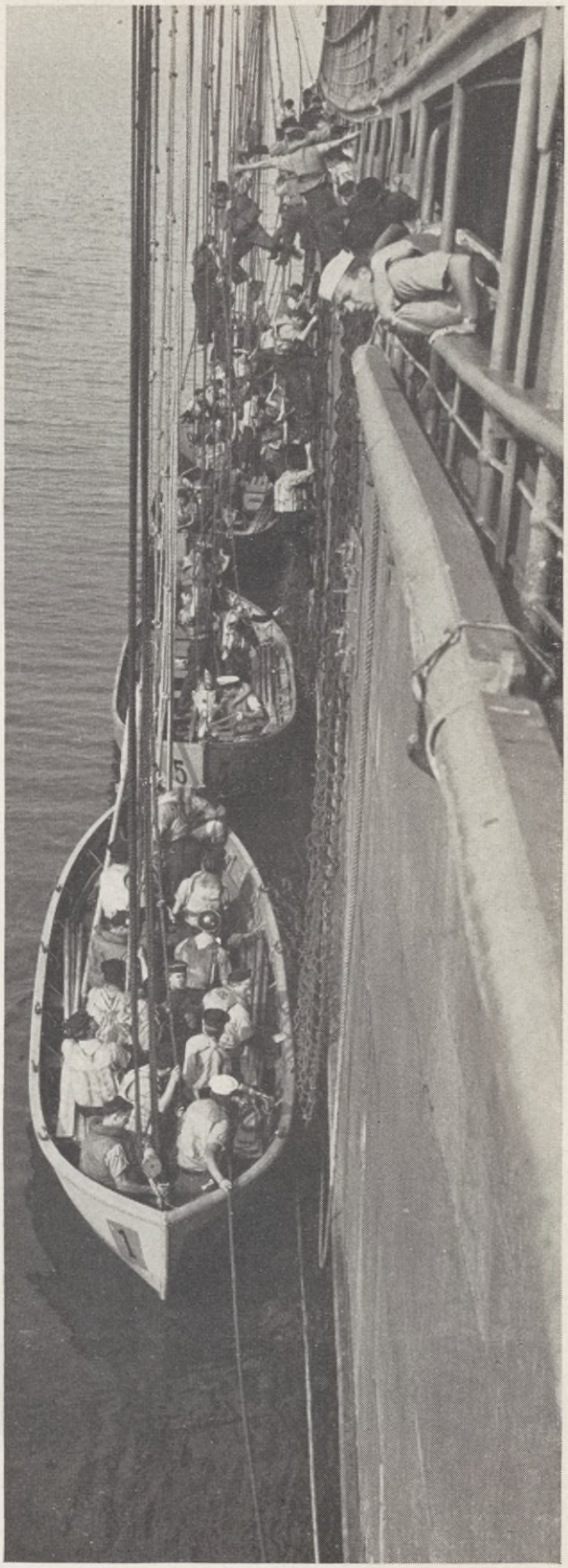
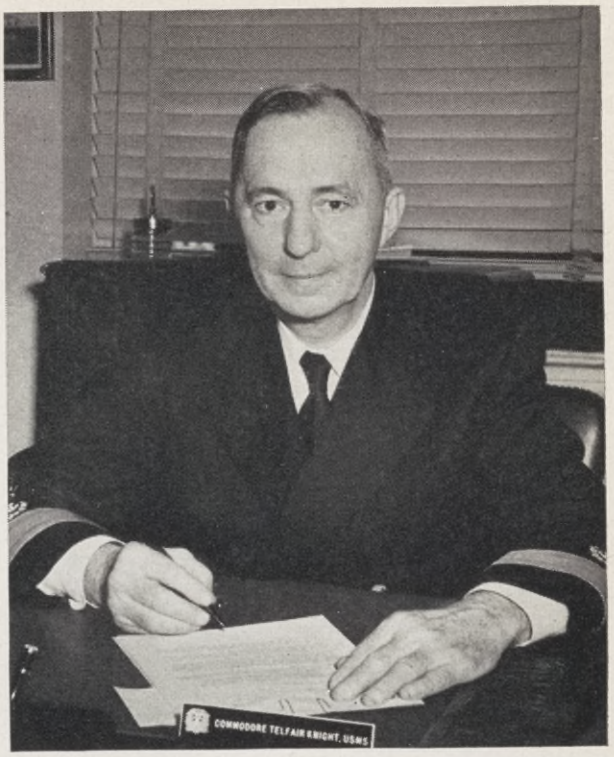


"Abandon-ship" drill

Capt. EDWARD A. MACAULEY, USN (Ret'd), Deputy Administrator, War Shipping Administration, and Commissioner, United States Maritime Commission, has supervision, among other functions, of the Training Organization of War Shipping Administration. Captain Macauley was commanding officer of the USS *George Washington* in World War I, and was awarded the Navy Cross. He is an officer of the Legion of Honor (France), the Order of Leopold (Belgium), and holds Spanish-American, West Indian, and Philippine campaign medals




Commodore TELFAIR KNIGHT, USMS, Assistant Deputy Administrator for Training, War Shipping Administration, has been connected with the program for training personnel for the Merchant Marine and United States Maritime Service since its inception in 1938. Previously, he served as secretary, United States Maritime Commission. In April 1937 he was appointed assistant to Rear Admiral H. A. Wiley, USN (Ret'd), Member of the U. S. Maritime Commission. In August 1940 he became Acting Director and then Director, Division of Training, U. S. Maritime Commission. In 1942 he was assigned to his present post as the Assistant Deputy Administrator for Training

A night view, typical of the activity in our Nation's shipyards building vessels to smash the Axis

# A FOREWORD

By Vice-Admiral Emory S. Land, USN (Ret'd); Chairman, United States Maritime Commission and Administrator, War Shipping Administration

Today, America is operating the greatest merchant fleet in the history of the World. Soon, 4,000 ships will be at sea; 3,000 are now transporting to every part of the world the vital necessities to carry on a global war, just as in time of peace, they are the transports of the Nation's commerce.

The modern ships are vast complicated affairs with intricate machinery installed within to propel them through the oceans of the world. Unless fully manned, they are huge useless captives, idle hulks tied to a dock or anchored in the still waters of a harbor.

There is an urgent need for experienced and inexperienced men to become ships' officers and seamen. Every day, five desperately needed ships are sliding down the ways of American shipyards to carry the cargoes needed by our fighting men and our fighting allies.

In 1944, 80,000 men will be needed to man these newly built vessels. Half of them must be men with former sea experience who left the sea for positions ashore. These men are needed now on ships. Courses established by the Government will assist them to regain their former skill. The other half will consist of men without previous sea experience who will be trained at government expense to fill out the crew complements aboard these new vessels.

The purpose of this information booklet is to inform Americans, especially young Americans, of the many opportunities which have been made available to them through the establishment of training stations, upgrade schools, and specialist schools by the United States Maritime Service.

The United States Maritime Service is an organization of volunteers. Every man enrolled for training in the U. S. Maritime Service can be proud of the uniform he wears. It has been worn at every important overseas undertaking—at Guadalcanal, Tarawa, Casablanca, Salerno, and at Cherbourg.

The American seaman's contribution to ultimate victory cannot be measured by words. When the victory is won, many of the men who read this booklet and join the Maritime Service will continue to sail in time of peace. No career is more honorable than that offered in our Merchant Marine.

E. S. Land

E. S. LAND
*Chairman, U. S. Maritime Commission*
*Administrator, War Shipping Administration.*

JOHN BARRY, "Father of the American Navy" began his sea career at the age of 11. He commanded the *Lexington* and was so successful in destroying enemy shipping that he was offered 20,000 pounds and a command to desert the Colonies. He refused. In 1777, he was appointed delegate to the Philadelphia Convention assembled to review the Articles of Confederation

NATHANIEL BOWDITCH, mathematician, astronomer and navigator. His writings formed the basis upon which modern navigation is practiced as an exact science. While commanding the *Astrea,* he taught every member of his crew, including the colored cook, the principles of navigation. His American Practical Navigator, first published in 1802, is used today as a standard authority

DONALD McKAY, naval architect and shipbuilder. His plans revolutionized the sailing vessels and method of handling in his generation. His creation, extreme clippers, included the *Flying Cloud, Challenge, Red Jacket, Sovereign of the Seas* and *Great Republic,* largest clipper ever built. His genius for designing sailing ships of speed and beauty has never been surpassed

ELIAS HASKET DERBY, illustrious member of a famous American seafaring family. Foreseeing the advantages of the China trade, Captain Derby fitted out vessels and risked his fortune in the enterprises. His sons were educated abroad with instructions to study the China and India trades. He was responsible for the present system of using bonded warehouses and paying taxes as goods are withdrawn

ROBERT FULTON, architect, portrait painter, and inventor. At the age of 10, he invented successful paddle wheels for a fishing boat. Thirty years later, his *Clermont* doomed the sailing vessel and revolutionized the maritime industry. Other inventions included submarines, machines for spinning flax, cast-iron aqueducts, torpedoes and inclined planes for raising and lowering boats

JOHN CLARK JAMISON, master mariner, was a protégé of Capt. Samuel Samuels, under whom he served aboard the packet *Dreadnought.* In 1893, Captain Jamison was given command of the newly purchased luxury liner *New York.* Other noted vessels he commanded were the *St. Paul,* the *St. Louis,* and later, the *Vaterland,* the interned German vessel which this Government seized in World War I. Like Captain Samuels, he helped many men in their sea careers

# PART ONE

# HISTORY of the American Merchant Marine and the Seamen Who Man the Ships . . . . . .

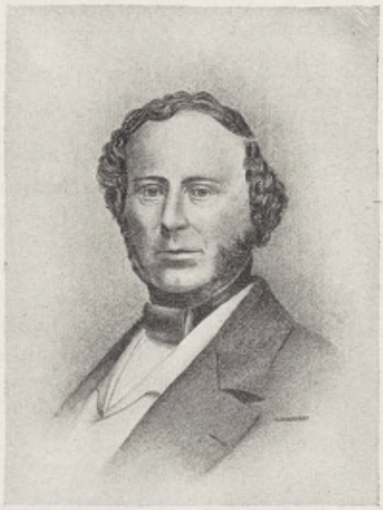
PRESENT DAY AMERICANS will find it hard to believe, that, for almost two centuries, the prosperity and economic growth of this Nation was dependent almost entirely on its merchant marine industry. Yet, it is a historical fact that America's destiny has always lain seaward. The genius for seafaring, inherited from early Colonial days, enabled a young Republic to establish its Independence and maintain a brilliant maritime supremacy, right up to the advent of iron ships.

During these two centuries, the maritime industry produced famous statesmen, scientists, bankers, merchants, shipbuilders, shipowners, captains and naval leaders. Like today, young men sought careers at sea because there were splendid opportunities for advancement, far better than what professions offered on shore. So important to survival as a nation was the industry, that on one occasion, this Nation went to war with a major power over the rights of its seamen. Other wars have been waged and armies sent abroad to protect our maritime commerce and our freedom of the seas.

In the middle of the seventeenth century, when our colonies were sparsely settled, coastal villages were engaged in community shipbuilding enterprises and its sons were venturing forth in small sloops on daring ocean voyages. In these projects, the village blacksmith, carpenter, sail-weaver and maker, merchant and trapper all participated and for their efforts and contributions received shares in the vessel and its profits. Their sons, most of them 13 to 21 years of age, were the crew members and signed on to receive shares as payment and reward.

The arrivals and departures of these vessels were important events in the life of our early Colonies. In some years, when extreme hardships were experienced through

ANDREW FURUSETH, Norwegian-born sailor, organizer, and advocate of seaman's rights. Furuseth sailed before the mast in many ships and personally experienced the hardships and severe treatment accorded seamen of his generation. Elected secretary of his union, he championed the fight that resulted in the acts of 1904 and 1915 which improved seamen's working conditions and established their legal rights and benefits



JOHN ERICSSON, Swedish-born inventor and engineer, came to the United States in 1839 to construct a screw ship for use in the Delaware and Raritan canal. He designed the warship *Princeton* with its propelling machinery under water beyond reach of enemy fire. His screw-propulsion principles changed the construction of the world's navies and his *Monitor,* first Union iron-clad vessel, defeated the Confederate *Merrimac* to save Union shipping

JOSEPH I. KEMP, America's foremost trial captain and Atlantic coast pilot came from a noted seafaring family. His father and six brothers were either masters or chief engineers in the United States Merchant Marine. He has commanded more than 800 vessels on trial runs including the *George Washington, Manhattan, America,* first-line battleships, cruisers, destroyers, and submarines. Between trips, he serves as secretary of the Boston Marine Society

**An early clipper type of sailing vessel built by community enterprise in the Colonies**

the winter months, the spring arrival of the vessels with holds loaded with stores and provisions meant survival. As this early commerce expanded, the villages likewise grew and became towns and cities. New England families were quick to point out that all the sons were seafaring men, notable examples being the five Croninshield brothers and the Derbys of Salem. Richard Derby, after sailing before the mast, joined his brother Elias Hasket Derby in a shipbuilding enterprise that was very successful.

These lads who shipped out at an early age and participated in the shares and bonuses that were offered for quick and profitable voyages were usually able to acquire comfortable fortunes before arriving of age.

The records of early Massachusetts Colony reveal that between the years of 1670 and 1714, the shipyards of the Colony launched more than 1,250 vessels, of which some 250 were designed and built for ocean voyages. By the year 1750, the Colonies had become serious rivals of England in competition for foreign trade and shipbuilding.

This energy and willingness to venture forth for trade was to stand the Colonies in good stead in their fight for Independence. Handicapped by the lack of a regular naval force, the Colonies depended upon their merchant vessels and the daring and skill of the captains and crews to meet their adversary. The effectiveness of these converted merchantmen in breaking up the convoys and raids carried even into the rivers and harbors of the enemy was a major factor in determining the victory.

The need for a strong merchant marine was recognized by the delegates assembled for drawing up the Articles of Confederation and later, the Constitution and Bill of Rights. The very first act of the First Congress, assembled on July 4, 1789, four months after the Constitution was adopted, was enactment of a law granting a 10-percent tax preference for merchandise carried in American bottoms.

Thomas Jefferson, when Secretary of State, opposed Southern States attempting to block legislation benefiting our merchant marine industry and uttered a warning that is as true today as when it was given:

*"If we have no seamen, our ships will be useless; — consequently our ship timber, iron and hemp; our shipbuilding will be at an end, our ships' carpenters will go to other nations; our young men have no call for the sea; our products carried in foreign bottoms will be saddled with war-freight and insurance in times of war"—*

The War of 1812 was fought to protect our sailors against impressment by foreign nations. The young Republic, resenting the ruthless and unlawful seizures made aboard our merchantmen, fought and successfully established our rights to free, untrammeled commerce in all ports of the world.

The crews of that generation lived hard lives aboard ships that were little more than floating "hells." Many worked 8, 10, and even 15 years without pay. Their sleeping quarters were hovels, wet, poorly ventilated and cold. The food was bad and floggings were the rule for every infraction of discipline, real or imagined by a superior officer. Many died.

Shortly after the turn of the nineteenth century, important changes were to occur that revolutionized the navies of the world and the sea commerce of the leading

**A typical harbor scene of early Colonial times. Sailing vessels dropped anchor in the rude harbors and their cargoes and stores were taken off by the many small boats of the village which acted as lighters between the vessel and the shore**

**Capt. SAMUEL SAMUELS, master mariner and shipbuilder. His career and achievements were among the most outstanding in a generation which contributed some of the most brilliant personages in our maritime history. Cabin boy at 11, master at 21; among the famous sailing vessels he commanded was the *Dreadnought,* whose construction he superintended. Many famous captains were his protégés.**

maritime powers. These changes brought to the Republic an era of unequalled prosperity, of dominance in the world trade.

The "Clipper" era saw the United States rise to the crest of maritime glory and the story forms the brightest pages in our merchant marine history. The Clipper era provided the foundation of wealth and economic solidity which would enable the Nation to leave the sea and find even greater wealth, inland expansion, and the growth of an industrial age.

New trade routes were being opened in the early years of the nineteenth century. Wheat and grain from Australia, tea and spices from the Orient, sperm oil obtained by the whaling fleets, all were producing a world-wide commerce that saw high premiums paid by shippers to ship owners and captains who could make fast daring passages.

The clipper ships designed and built by Donald McKay, William H. Webb and others were entirely the products of American inventive genius. These vessels with their high lofty pinnacles of sail and manned by a superior class of mariners outsailed the ships of every rival nation. The national ensign was a familiar sight in every world port of importance.

The foreigners berated the American skippers for their foolhardiness in "cracking on" sail and "carrying hard" in all kinds of weather. The Yankee skippers handled sail in weather as an exact science and their knowledge paid for itself in fast passages and collection of high rates and premiums.

This superiority and ability to outsail the vessels of other nations also produced a generation of masters who were accomplished traders, linguists, correspondents, ambassadors and merchants. Their passages were as regular as our present railroad schedules and almost as dependable. The great clippers and packets of that day were household names; the identities of their skippers were as well known. The *Flying Cloud, Red Jacket, Sea Witch, Dreadnought, Lightning, Challenge, Sovereign of the Seas,* and *Great Republic* are just a few of the many famous ships of the time. These vessels set sailing records that have not been surpassed to this day. The fame of the captains who commanded the ships has become legendary and today serves as the basis for the traditions and customs which make up our present merchant marine. Such men as Samuel Samuels, Robert Waterman, John Collins, Robert Cressy, "Shot-Gun" Murphy, Laughlin McKay, and others will always remain heroes to our young men who make the sea their career.

**The famous Red Cross packet *Dreadnought,* holder of the world's transatlantic sailing passage record—made in 9 days and 17 hours**

Many of these vessels served as training ships for famous masters who followed. Capt. Samuel Samuels, in particular, adopted many young men as proteges. The Salem ship *George,* built in 1814, and owned by the famous merchant and shipowner, Joseph Peabody, in 25 years of operation signed on over 7,000 seamen. A large portion were young lads who came from Salem and vicinity. Their main ambition was to master the technique of navigation and become masters. The *George* was one of our first nautical training vessels and boys with the right stuff were certain of advancement. From her crews came 45 masters, 20 chief mates and 6 second mates.

The finding of gold by Sutter on the banks of the Sacramento River increased the demand for fast packets. Sutter's discovery brought on a mad, head-on migration to reach the West Coast and share in the wealth that could be dug out of the earth and rivers. Long queues of prospectors lined up before shipping offices and eagerly offered high premiums for fast passages around the Horn.

Historians have often expressed amazement that this Nation permitted the dominance it held in maritime supremacy to slip away. During the years when we were enjoying our greatest supremacy, the causes for subsequent decline were forming and the roots of decay taking firm hold.

Robert Fulton in 1809 successfully demonstrated the practical use of the steam engine for use in vessels. In 1822, thirteen years later, the *Savannah* made the first trans-Atlantic steam-propelled crossing. English yards at this period were changing over and designing vessels with iron hulls. American builders swore by the sail and wooden ship. Congress, more intent on the absorption of Indian territory and development of railroad routes, ignored the pleas of shippers and shipowners for subsidies to compete successfully with England and other nations. The War between the States saw the overnight destruction of a large portion of the existing tonnage * * * tonnage that would not be replaced. The merchant marine of the United States was becoming a decadent object and the coastal villages, once thriving communities, were fast becoming dormant with ghostly docks and warehouses rotting away.

A few years before the War between the States, the estimated gross tonnage engaged in foreign import and export trade was placed at approximately 2,400,000 tons. In the last half of the nineteenth century, it dwindled at a steady pace to 1910 with a low total of 850,000 gross tons.

At the start of the twentieth century, Great Britain was dominant in shipping. Challenging her supremacy was Germany with Holland, Norway, France, and Japan increasing their tonnage at this Nation's expense.

World War I found Great Britain with 20,424,000 tons of shipping, Germany with 5,098,000, Norway with 1,923,000, France with 1,918,000, and the United States with 1,837,000 tons. The latter nation was increasing her tonnage to handle the demands of shippers for vessels sailing under a neutral flag.

*Great Republic,* extreme clipper type built by McKay in 1853. The original *Great Republic* was the largest sailing vessel ever built in the United States. The launching, October 4, 1853, was witnessed by a tremendous gathering. Fire destroyed the vessel on the eve of her maiden voyage. It was rebuilt and for 16 years rendered notable service. Dimensions: 335 x 38 feet; tonnage, 4,555.

*Sovereign of the Seas.* This famous clipper shares with the *Flying Cloud, Red Jacket,* etc., the honor of being one of the best known clipper ships of the fifties. The vessel was built by Donald McKay on speculation and justified his risk by making many record-making and profit-making passages

The quick turn of events brought on by the entry of the United States into the conflict found the nation inadequately prepared to supply the needs of her Allies and the American Expeditionary Forces. A gigantic shipbuilding program was launched and in the span of four years, this country spent in excess of three billion dollars, and gross tonnage reached an all-time American high of 11,000,000 tons.

This activity proved short-lived. With the signing of the Armistice, decline again set in, engendered by public indifference, high construction costs and wage differentials which enabled foreign registered vessels to operate and compete successfully.

Our seamen, trained during a period of national emergency to man the cargo ships used in the transport of supplies, now roamed the beaches and watched foreign ships loaded full and down glide out of American harbors, their crews employed and laughing at the idle American seamen on shore.

The vessels engaged in American trade were older types and the large percentage of these handled coastwise trade or operated on the Great Lakes hauling iron ore, coal, and grain between the lake ports. Nor do any figures reveal the true condition.

A survey completed in 1932 revealed the alarming fact that by the year 1942, 92 percent of the existing American owned foreign trade carriers would be obsolete. Nor was this Nation, like its foreign competitors, building or training a merchant marine personnel capable of handling the vessels. Through legislation enacted at various times, rules and regulations had been adopted which governed the operation of vessels, maintained safety standards for passengers, and provided for aids to navigation, but no over-all program had been attempted.

The first legislation enacted by Congress in 1838, set up a Marine Inspection Service which provided for the inspection of hulls and the machinery used to operate vessels. Owners were required to employ competent engineers and provide the vessels with fire hose, pumps and other safety equipment.

The increasing speed of vessels made possible by improved engines and screw-propulsion principles made further rules necessary to govern the rights of the road for vessels and cover passing situations. The act of 1871 set up these regulations. It also brought ferry boats, tugs, tows, etc., under the supervision of the Steamboat Inspection service and set up an examining board to review the qualifications of applicants for licenses as masters, mates or engineers aboard American owned vessels. In 1898, this authority was extended to include vessels operated on the Great Lakes, sounds, rivers and bays.

In 1904, the first legislation attempting to protect seamen's rights was passed by Congress. The profession of seafaring at its best up to now had little to recommend it to the youth of the country. Poor pay, bad quarters and food, penalties of the lash and fines were accepted as the seaman's lot.

Movements to correct these conditions had been advocated but little progress made until the Unions of the West Coast led by Andrew Furuseth brought the light of publicity to a shocked nation which demanded action.

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Furuseth had sailed before the mast for many years. He raised his voice and enlisted powerful forces including the press who protested the unlawful shanghai methods used to impress sailors and the loggings, floggings and unwholesome conditions which existed on the waterfront and aboard vessels. His efforts gained recognition of existing conditions and his crusade was championed by the Senator from Wisconsin, Robert M. La Follette. In 1915 the La Follette Seaman's Act was passed.

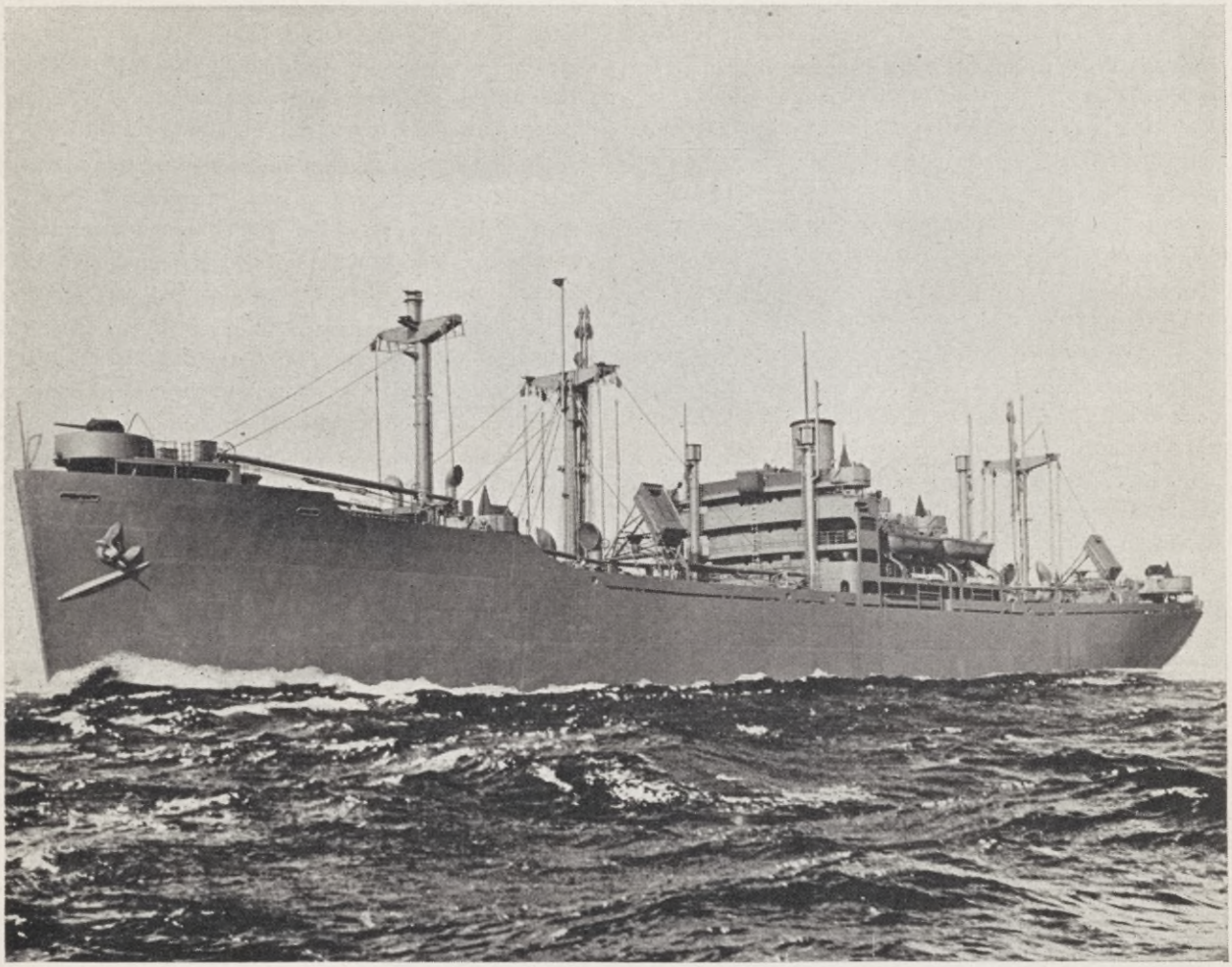
Under its provisions, the adoption of watches was made mandatory, Sunday and holiday work was eliminated except in port when necessary to work a vessel; part payment of wages in foreign ports was included; provision was made for proper and adequate berthing of the crew; sanitation and serving of food.

Other important parts of the act set up the procedure for recognizing complaints of the crew, prohibited corporal punishment and set up and outlined the punishable offenses for crew misconduct. The La Follette Act also prescribed the crew complement necessary to man vessels in excess of 150 gross tons and established the ratings and qualifications of Able Seamen and Certified Lifeboatmen. Those provisions contained in the act of 1915, supplemented since with minor revisions, are essentially in force today.

The modern cargo vessel's complement of licensed and unlicensed seamen is prescribed by law for each department and the qualifications to earn a rating or license are fully covered by existing statutes.

**The Liberty ship. Product of American mass production engineering genius, more than 2,000 Liberty ships have been constructed since Pearl Harbor. The tonnage of these vessels has solved the problem of transportation to our many battlefronts**

# PART TWO



The Victory ship. Illustrious successor to the Liberty ship. Its modern steam turbine-gear propulsion machinery of 8,500 horsepower, developes 17 knots plus. This difference in speed promises a vessel most efficient for peacetime commerce needs

# A MODERN MERCHANT MARINE

When the 1914 European conflict began the United States possessed a small merchant marine and therefore was faced with a shipping dilemma. It was confronted with a problem identical to the manufacturer who, having the facilities to produce and the customers to sell to, had no means of transportation to bring in his raw materials or ship out his finished products.

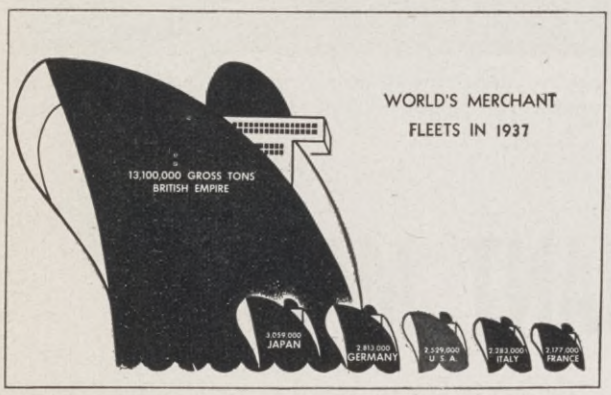
The war in Europe created an ever-increasing demand for American-made goods. The United States had the industrial facilities to produce and satisfy the demand, but had no ships to import the raw materials needed by her industries or to export the manufactured articles sought by other nations. With the Nation's entry into the conflict in 1917, this condition was aggravated and

resulted in inevitable confusion and costly war production.

For lack of ships, the country's warehouses and docks were piled high with goods; our vast railroad transportation system broke down; bottlenecks developed in light and heavy industry with resultant unemployment to thousands and the war program was thrown out of gear. The answer was ships . . . any kind . . . just as long as they would float and carry goods. Three billion dollars were poured out in a gigantic 3-year shipbuilding program. Looking back over a quarter of a century there is no question that advanced planning would have saved much of this stupendous sum and eliminated a large portion of the Nation's construction energy which was dissipated by the policy pursued in the years following the signing of the Armistice ending World War I.

Other nations profited by the lessons it cost America so much to learn and which we disregarded. While Americans continued indifferent to world trade and erected high tariff barriers, Britain, Germany, Norway, France and Japan (the latter especially), began a competitive fight for foreign trade. Most of it was America's.

These countries began long range merchant marine programs to build up their foreign and domestic trade volume and included training programs for an adequate merchant marine personnel which would be available as an auxiliary force to their navies in times of national emergency. A 1936 survey revealed the following positions as related to gross tonnage possessed by the leading world maritime powers as follows:




***World's Merchant Fleets in 1937***

| *Nation* | *Gross tonnage* |
|---|---|
| British Empire | 13, 100, 000 |
| Japan | 3, 059, 000 |
| Germany | 2, 813, 000 |
| *United States* | *2, 529, 000* |
| Italy | 2, 283, 000 |
| France | 2, 177, 000 |

Most significant was the rise of Japan's gross tonnage and the complete revival of Germany's merchant marine which had been practically annihilated in World War I. A large percentage of the American tonnage figure consisted of coastal and Great Lakes vessels. What was used in foreign trade was rapidly becoming obsolete. The picture was depressing and presaged the United States sinking to a second rate maritime power.

Throughout the Nation, however, there were individuals and organized groups who remembered America's prosperity in the days of her flourishing merchant marine supremacy. The groups included statesmen, industrial leaders, farm and labor groups and ship operators.

This small, but aggressive, minority began a national campaign of education. The lessons of World War I were pointed out. The dangers to the United States in the event of another national emergency arising were emphasized. There was ample substance upon which to manufacture sound and logical arguments. Events were so shaping themselves in Europe that another global conflict seemed likely. The question asked was whether America should continue on the path she had pursued for more than half a century or adopt a long-range merchant marine planning program in self protection as the other nations were doing.

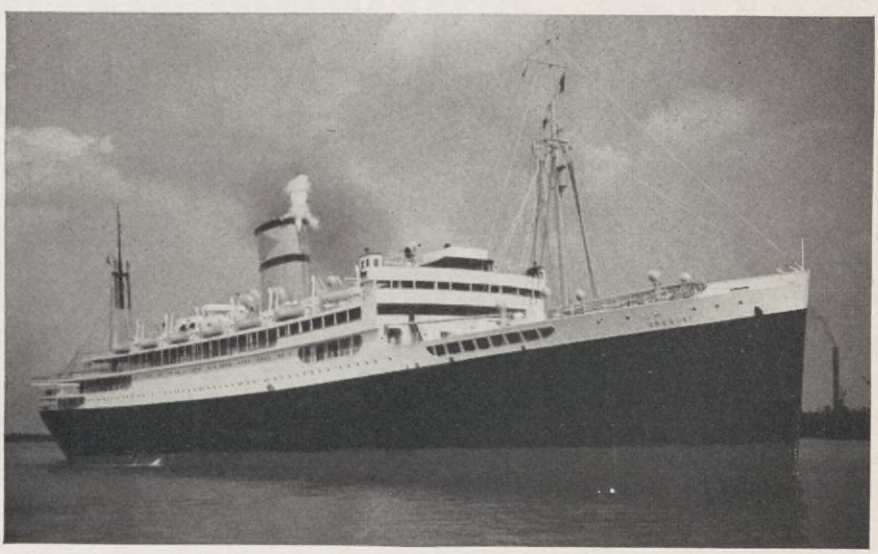
Many hearings were held and presentations made before congressional committees. Thorough surveys and studies were authorized and out of this effort, Congress moved and enacted what has since become known as the "Magna Charta" of the United States Merchant Marine . . . the *"Merchant Marine Act of 1936"*.

A definite policy with respect to the merchant marine of the Nation was laid down and stated as follows:

*"It is necessary for the national defense and development of its foreign and domestic commerce that the United States shall have a Merchant Marine (A) sufficient to carry its domestic water-borne commerce and a substantial portion of the export and import foreign commerce of the United States and to provide shipping service on all routes essential for maintaining the flow of such domestic and foreign water-borne commerce at all times, (B) capable of serving as a naval and military auxiliary in times of war or national Emergency, (C) owned and operated under the United States flag by citizens of the United States insofar as may be practicable, and (D) composed of the best equipped, safest, and most suitable types of vessels constructed in the United States and manned with a trained and efficient citizen personnel. It is hereby declared to be the policy of the United States to foster the development and encourage the maintenance of such a Merchant Marine."*

The *Champlain* is one of a number of large ore carriers built by the U. S. Maritime Commission and distributed among Great Lakes operators. These huge vessels have the new cruiser stern and Lentz engine installed. They are typical of the Great Lakes vessels which have moved in excess of 90 million tons of iron ore in the summer of 1944

T–2 type tanker with a full deck cargo of planes and parts, laying at anchor in an American harbor. These vessels have made important contributions in keeping the fuel supply lines open for our fighting aviation forces



SS *Uruguay,* formerly the SS *California* of the Panama-Pacific Line, and operated prior to the outbreak of war as one of three fast liners in the Good Neighbor fleet established in 1938 by the U. S. Maritime Commission. Turbo-electric propelled, 601 feet in length, 80 feet in beam and with a hull depth of 52 feet





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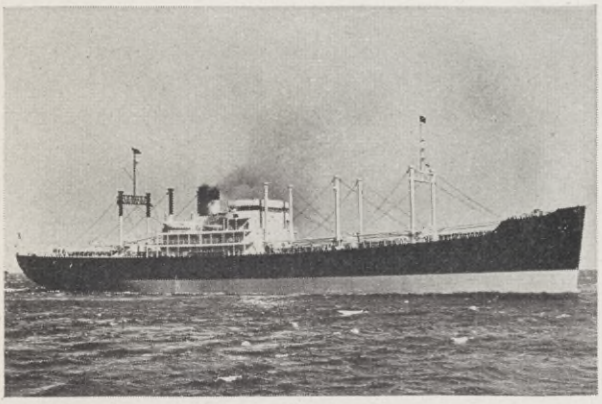
The hopes of the strong merchant marine advocates were about to become true. Their ideal, to build up an industry that would handle a fair share of our waterborne commerce; manned by a trained citizen personnel; in American-made and American-owned bottoms of the best and safest types possible; with a further guarantee of encouragement towards development and maintenance of that industry, was becoming a reality.

When the Merchant Marine Act was passed in 1936, a commission known as the *United States Maritime Commission* was established. This Commission, acting under the mandate of Congress, prepared a 10-year plan that would place approximately 4,000,000 gross tons in service. It was a modest program designed to provide this Nation with a fleet competitive, if not superior, in speed, efficiency and safety to other nations.

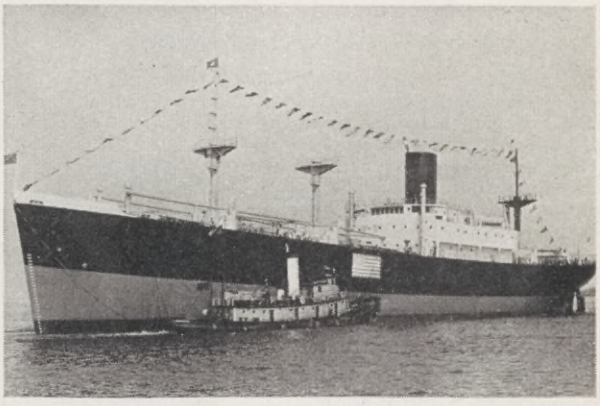
The 10-year program called for the construction of some 500 vessels. Consideration was given to the country's over-all needs and regard was had for the usefulness of the fleet in time of national emergency. Certain types of vessels planned were standardized in design and equipment to reduce costs and speed up construction.

World War II changed the picture. Overnight, the Nation was again deluged with a demand for American-made goods. We were more fortunate on this occasion. A new fleet was already in the making. With the stimulus of the Lend-Lease Act, enacted in 1939, the shipbuilding program was enlarged and streamlined.

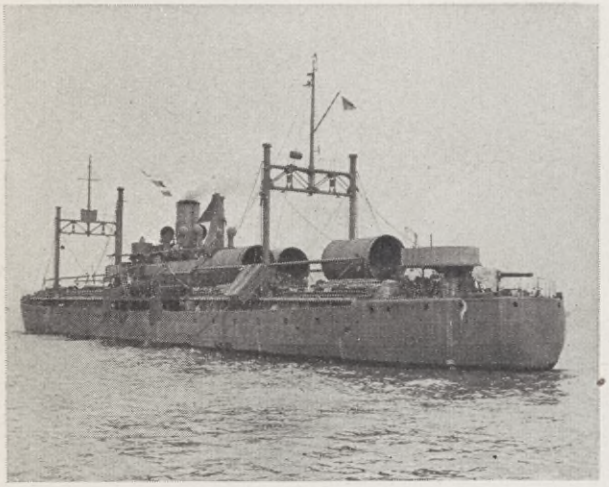
The declaration of war, December 8, 1941, threw our energies into a shipbuilding program that made all previous plans fade into insignificance. The *United States Maritime Commission* acting under directive of the President, was authorized to construct approximately 4,400 new vessels during the calendar years of 1943 and 1944. This quota has been met.



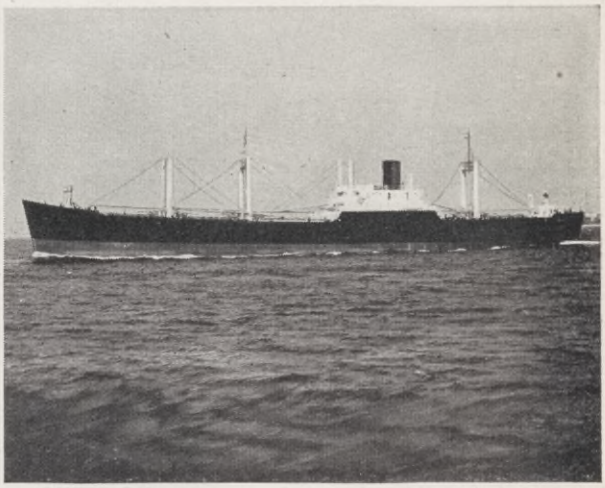
C–3 type cargo vessel



C1–B type cargo vessel



Heavily loaded freighter with lend-lease cargo above and below deck ready to sail



A C–2 type cargo vessel, planned and built by the U. S. Maritime Commission

# PART THREE

United States Maritime Service trainees with fully packed sea bags ready to ship

# UNITED STATES MARITIME SERVICE

The modern cargo vessel is a living, complicated hulk containing within its vast spaces, powerful and intricate mechanisms and machinery developed to carry it in the water to every part of the globe.

The complement needed aboard the modern cargo vessel must be highly trained to handle efficiently the intricate machinery and scientific instruments installed. The huge increases in tonnage authorized from 1936 to 1941 required similar increases in the merchant marine personnel that would be needed to man the ships. Section 216 of the Merchant Marine Act of 1936 provided for and directed the *United States Maritime Commission* to set up a training organization for the purpose of training officers and unlicensed men to handle the newly built vessels.

By Executive order of the President, the training program was placed under the jurisdiction of the War Shipping Administration for the duration of the war. The training program which has been adopted was evolved from thorough studies made of the systems in vogue in foreign nations, revised and augmented to meet the specific needs of our own manning problems.

Though designed originally to meet peacetime needs, the accelerated shipbuilding program has necessitated many changes, shortening and streamlining the training courses and vast increases in our training facilities.

The training courses that have been established are designed to meet the specific needs aboard the modern vessel. They include every activity aboard ship in the deck, engine, radio, steward and hospital departments

Capt. THOMAS BLAU, USNR, former Commandant of the United States Maritime Service, has over 50 years of distinguished service at sea. During World War I he served as first officer aboard the SS *Mongolia,* first American vessel to destroy an enemy submarine. He is a holder of the Navy Cross and has many notable achievements at sea credited to his record. In 1943, Captain Blau returned to active sea duty, where he is presently serving as Convoy Commodore

Capt. H. H. DREANY, USMS, Assistant Commandant of the United States Maritime Service, commenced a distinguished naval and merchant marine career in 1927 when he enlisted in the Navy. He successfully passed a competitive examination for enlisted men to enter the U. S. Naval Academy, from which he graduated in 1932. He then resigned his naval commission to enter the merchant marine. Quick promotions because of his marked abilities followed and he received his master's papers in 1938. In June 1940, he went on active duty in the Naval Reserve, being released in November 1940 to serve as Commanding Officer of the U. S. Maritime Commission Cadet School, New Orleans, La. Nine months later he was appointed Assistant Supervisor, Educational Unit, USMMCC. On July 11, 942, when administration of U. S. Maritime Service was placed with War Shipping Administration, he was appointed to his present post

U. S. Maritime Service enrollees in lifeboat drill while at sea

Rear Admiral A. B. RANDALL, USNR (Ret'd)
Commandant, United States Maritime Service

Rear Admiral Randall is the first merchant marine officer to achieve the distinction of being commissioned Rear Admiral in the United States Naval Reserve. He is a former Commodore of the United States Lines and was commanding officer aboard the SS *Leviathan,* and later, the SS *Manhattan.* During World War I, he commanded the USS *Bridgeport* and served as Commodore of Convoys. In 1906, while acting Chief Officer aboard the USS *Caeser,* he was given command of the *Hannibal* in recognition of his efforts in an outstanding maritime achievement. It was the towing of a huge 500-foot drydock for a distance of 12,000 miles from Baltimore to Olongapo, Philippine Islands. Heavy storms encountered during the passage made the feat an unusual maritime achievement. Rear Admiral Randall is a great-great-nephew of Gershon Corwin, who fought at the side of John Paul Jones

Recreation afloat. USMS trainees racing on Tampa Bay, USMS Training Station, St. Petersburg, Fla.



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**Review at the United States Maritime Service Officers' School, Fort Trumbull, New London, Conn.**

and cover the training necessary to prepare licensed and unlicensed personnel.

In over-all supervision of the personnel including training and under the Administrator and directing its activities is Captain Edward A. Macauley, USN (Retired), Deputy Administrator, War Shipping Administration, and a Commissioner of the USMC.

The War Shipping Administration Training Organization is composed of three principal units:

The United States Maritime Service.

The United States Merchant Marine Cadet Corps.

The State Maritime Academies.

To these three units has been entrusted the task of training the approximate total of 180,000 officers and men which will comprise the personnel handling the 50,000,000 gross tons of shipping: the anticipated figure set for January 1, 1945.

The United States Maritime Service is the largest unit in the War Shipping Administration Training Organization. Its activities are handled by four branches; each branch covering some particular phase or scope of training for licensed or unlicensed ship personnel.

Too often, the term "Merchant Marine" is confused with the term "Maritime Service." A distinction exists which should be made clear to the layman. *"Merchant Marine"* in the broadest sense applies to the industry as a whole and covers the construction, planning, manning, and operations conducted in handling the water-borne commerce of the Nation. The term *"Maritime Service"* applies to a unit within the training organization of the War Shipping Administration.

The United States Maritime Service is a governmental agency whose personnel is composed of uniformed volun-

**Abandon ship drill. Regular drill held aboard the *Joseph Conrad,* training ship of the United States Maritime Service. The *Joseph Conrad* is stationed at St. Petersburg, Fla.**

teers created to bring the personnel of the Merchant Marine to a high point of professional efficiency. It is charged with the duty of training men to become licensed and unlicensed seamen who, upon graduation or completion of training courses, become part of the complement aboard United States vessels engaged in the transportation of persons, goods, or raw materials by water.

The United States Maritime Service operates various types of schools and the curricula of training established at these schools covers every activity carried on aboard the merchant vessel.

There are five types of training schools established by the United States Maritime Service. They are:

(1) *United States Maritime Service Training Stations* where new men entering the industry receive training in the deck, engine, or stewards departments.

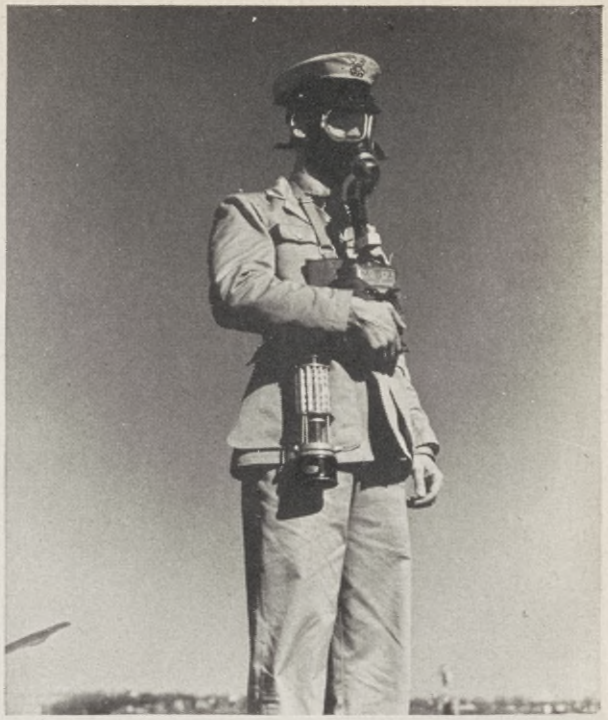
(2) *United States Maritime Service Officers' Schools* where seamen possessing the minimum required time at sea are given courses to become licensed officers in the deck or engine departments.

(3) *United States Maritime Service Radio Training Stations* where qualified men receive training to become radio operators.

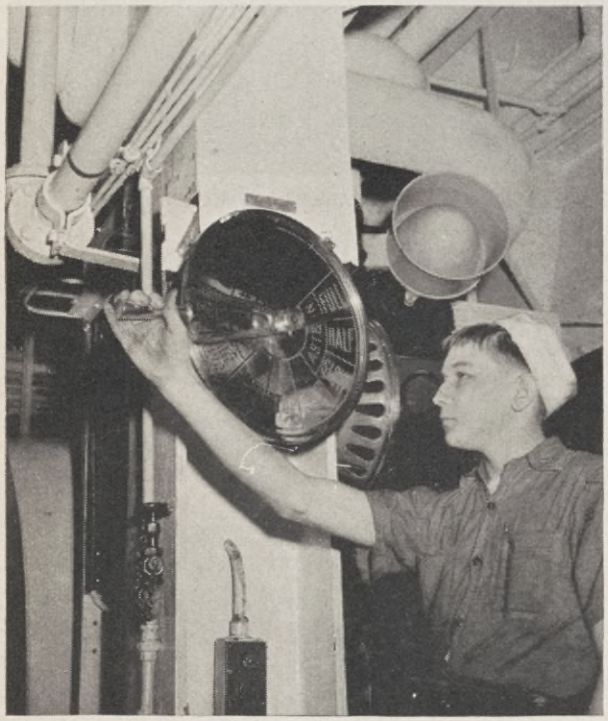
(4) *United States Maritime Service Upgrade Schools* which provide training courses in the deck, engine, or stewards departments for men who possess the qualifications and required sea time to raise their ratings or licenses.

(5) In addition, the *United States Maritime Service* operates special training courses for ship's carpenters; assistant purser-hospital corpsmen; signal schools; bar-

Officer candidate practicing sending a semaphore message. These drills form an important part of the officer-candidate training course



Gas mask drill is another important phase of training which officer candidates receive while preparing to become ships' officers



USMS trainee in the engine department receiving practical experience in handling the engine control telegraph. Average training cruise is about 2 weeks

Steering oarsman. Lifeboat drills are held daily at all of the USMS training stations and give trainees plenty of experience for their work at sea

**United States Maritime Service trainees at the St. Petersburg, Fla., training station marching in the regular Saturday review**

rage balloon schools; convoy procedure, and communications courses; turbo-electric schools; refresher courses for men returning to sea; and correspondence courses for men at sea.

*U. S. Maritime Service Institute*

The United States Maritime Service Institute conducts correspondence and extension courses for USMS enrollees and merchant seamen.

To understand the purpose of the various schools and courses of training which have been established, it is necessary for the layman to have an understanding of the departments that exist aboard a merchant vessel and the specialized duties assigned to each department to successfully maneuver and carry on the normal operations. The organization chart on page 23 shows the departments, officers and unlicensed men making up the crew complement on the average *Victory* or *Liberty* ship.

Vessels engaged in commercial operations in the United States Merchant Marine vary according to the uses or purposes they serve.

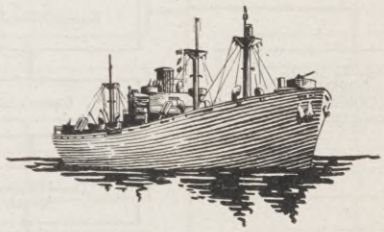
There are certain classes or types of vessels which are designed to carry special cargoes; the tankers transport huge quantities of liquid fuel including oil, gasoline and alcohol; ore carriers such as are used in the Great Lakes or Chile trade, haul the raw ore to the smelters. Merchant vessels in this war are transporting supplies to all parts of the world—to many new ports where docking facilities have been built overnight or do not exist.

The United States Maritime Service maintains three shore training stations where new men are trained for positions as unlicensed seamen in the deck, engine or stewards departments. They are:

*USMS Training Station,* Sheepshead Bay; located at Sheepshead Bay, Brooklyn, N. Y.

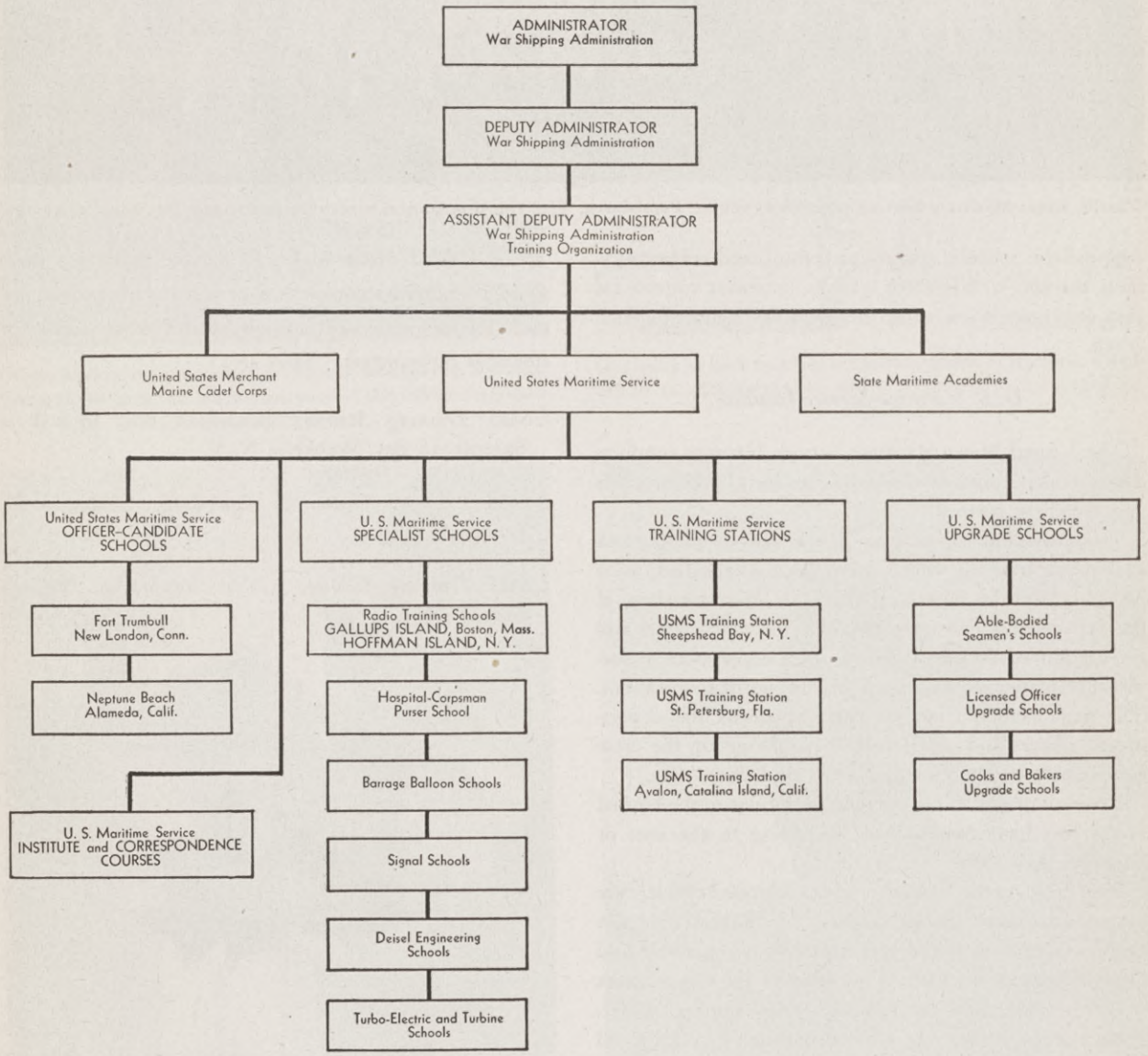
*USMS Training Station,* St. Petersburg; located at St. Petersburg, Fla.

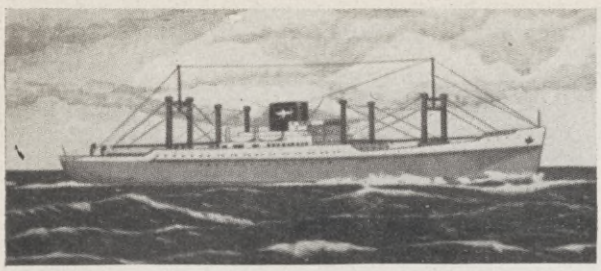
*USMS Training Station,* Avalon; located on Catalina Island, Calif.

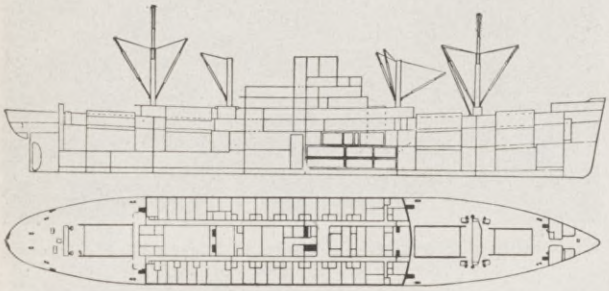


## Training Organization, War Shipping Administration

# ORGANIZATION CHART

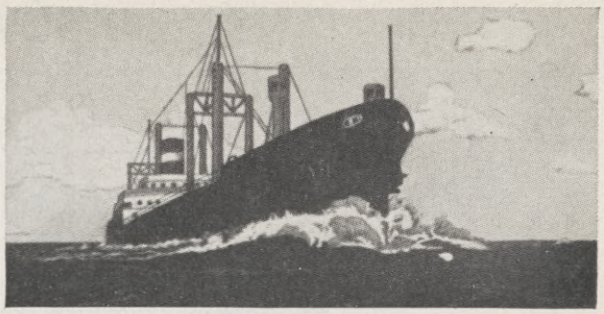


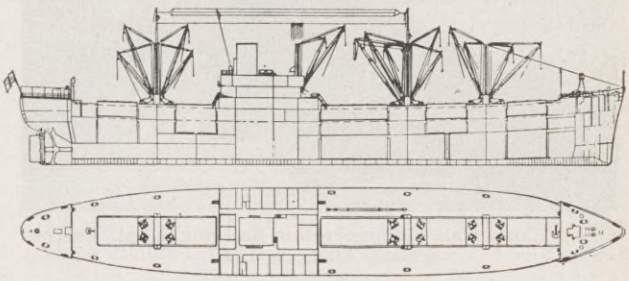




CP–3 COMBINATION CARGO AND PASSENGER VESSEL

Designed for South American and round-the-world trade. This type vessel has essentially the same hull as the C–3, altered only to provide more passenger accommodations. High standards of comfort and safety have been built into the basic plans of these vessels

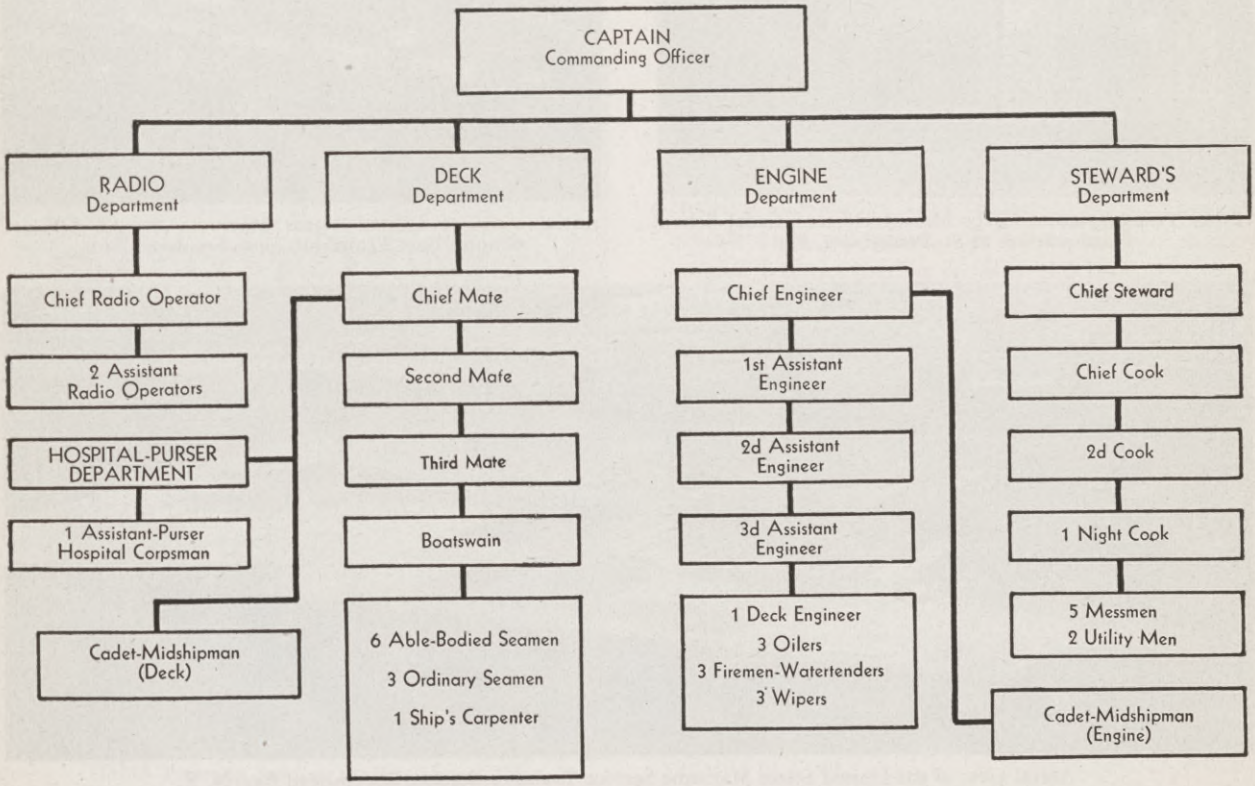




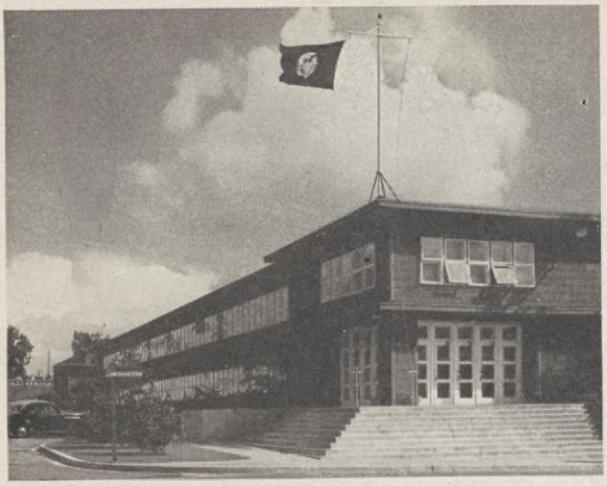
C–2 CARGO VESSEL

An original design of the U. S. Maritime Commission selected because the type combined superior advantages of cargo capacity, speed, and economical operating characteristics. The record built during the emergency has proven its worth

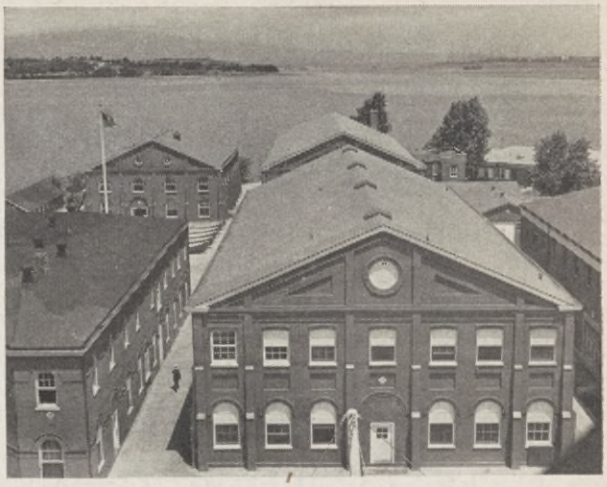
## ORGANIZATION CHART OF AVERAGE LIBERTY SHIP'S CREW



## UNITED STATES MARITIME SERVICE TRAINING STATIONS



Flying Cloud Hall, Administration Building, USMS Officers' School, Alameda, Calif.



View from Radio School at Hoffman Island, N. Y., showing New York Harbor entrance

USMS Transportation Corps Marine Officers' Cadet School Headquarters at St. Petersburg, Fla.

Aerial view of United States Maritime Service Officers' School, Fort Trumbull, New London, Conn.

Aerial view of the United States Maritime Service Training Station, Sheepshead Bay, N. Y.

Aerial view, United States Maritime Service Officers' School Fort Trumbull, New London, Conn.

## USMS OFFICERS' SCHOOL, FORT TRUMBULL NEW LONDON, CONN.

"Fort Trumbull' is located about a mile below the city of New London, Conn., on a promontory located on the south bank of the Thames River. Its history dates back to the War of the Revolution.

In 1781, the fort was captured by a strong detachment of the King's land troops under the command of the traitor, Benedict Arnold. The defenders, local militiamen, hastily gathered from the nearby farms to defend the fort, were massacred after putting up a strong and courageous defense.

In the War of 1812, the British fleet made several attempts to occupy the fort, but it was too heavily garrisoned. Following this war, the fort was not used and fell into decay. With the exception of the blockhouse which stands today as a memorial, the old works were demolished to clear the way for the present structures.

Fort Trumbull covers an area of approximately 15 acres. Facilities include a modern two-story administration building, canteen and recreation hall, three-story barracks named after famous clipper ships, classrooms, study halls, shops, gymnasium and large cafeteria.

The school has facilities for training a maximum of 2,000 officer candidates at a time.


Vinoy Hotel, formerly used as preliminary training center. USMS Training Station, St. Petersburg, Fla.

## USMS TRAINING STATION, ST. PETERSBURG, FLA.

This shore training station was selected at St. Petersburg, Fla., to provide a location convenient for shipping entering and leaving Gulf of Mexico ports. Important consideration was given, too, to the climate, available hospital facilities, harbor facilities and berthing capacity for training vessels and small boats.

In October 1939, an agreement was drawn up between the U. S. Maritime Commission and city officials of the Port of St. Petersburg which provided for the latter leasing 10 acres to the Commission.

Construction of the large T-shaped two-story administration building was completed July 21, 1941, at which time dedication ceremonies were held. The building contains dormitories for 400 enrollees, staff quarters, administrative offices, auditorium, mess hall and galley and recreation rooms for officers and men. Other construction includes a utility building, wharves and pier where deep draft vessels can tie up to. Emergency capacity, 1,500 men. For a time two big hotels increased the capacity to 4,500.

View of McKay Avenue, United States Maritime Service Officers' School, Alameda, Calif.

## USMS OFFICERS' SCHOOL, ALAMEDA, CALIF.

Construction was begun in October 1942, and the station moved from Government Island on the week end of February 6, 1943, without loss of a day's school time. The last class to be graduated from Government Island totaled 350. At Alameda the graduating list approximates 175 monthly. Construction has been continuous since occupation of this station.

Approximately 2,700 Officer Candidates have been graduated since September 1, 1942. Enrollment has increased and the station is now handling as many Officer Candidates as there are berths available. The training program has expanded with the physical growth of the station.

This important west coast officers' school has contributed materially to furnishing officers for the large fleets of ships built in the California, Oregon, and Washington yards.

United States Maritime Service Training Station, Avalon, Catalina Island, Calif.

## USMS TRAINING STATION AT AVALON, CATALINA ISLAND, CALIF.

Avalon training station is situated on picturesque Santa Catalina Island, located in the Gulf of Catalina about 20 miles off the mainland and south-southeast of the Port of Los Angeles.

Previous to its being taken over by the War Shipping Administration for use of the United States Maritime Service as a shore training base, the island was one of the most noted year-round vacationing resorts in the world; a mecca for west coast sportsmen and yachtsmen, visited annually by thousands.

Facing Avalon Bay is the famed Casino, St. Catherine Hotel, and ball park used by the Chicago Cubs as a training site and now the parade ground and drill field.

Also in use are the colorful villas and cozy cabins which formerly housed vacationers and now serve as sleeping quarters for the seamen in training.

The base is equipped to handle a total of 3,000 enrollees in addition to the regular training staff of commissioned officers and men assigned to administrative and training duties.

## USMS TRAINING STATION, SHEEPSHEAD BAY, N. Y.

The Sheepshead Bay training station is the largest shore training station in the United States Maritime Service. The station was officially dedicated with impressive ceremonies on December 12, 1942. It is located on the eastern end of Coney Island, bounded on the north by Sheepshead Bay from which it derives its name and on the east and south by Rockaway Inlet.

The site was selected because it offered many natural advantages including: central location with the advantages of fire protection, transportation, public utilities, lower cost of construction and maintenance; and the many and diversified and recreational opportunities offered in New York City.

The training station is a gigantic enterprise, capable of housing, feeding and training 10,000 men at a time. The buildings are modern, of two- and three-story height and include a mammoth auditorium and gymnasium, barracks, administration center, canteen, staff quarters, hospital and dental clinics, mess halls and galleys, the largest enclosed swimming pool in the world, machine and carpenter shops, heating and maintenance buildings, and docking facilities for lifeboat training.


United States Maritime Service Training Station, Sheepshead Bay, N. Y.

## USMS RADIO TRAINING STATION, GALLUPS ISLAND, MASS.

Gallups Island training station is an island located in Boston Harbor, approximately ¾ mile long and ¼ mile wide. The station is considered by competent authorities to possess one of the finest radio training schools in the world.

The land was originally acquired by the Federal Government from the city of Boston for use as a quarantine station. When the Lend-Lease Act was enacted by Congress in 1939, there was an immediate and urgent need created for competent radio operators aboard merchant ships. To partially satisfy this need, Gallups Island was turned over to the United States Maritime Commission, and facilities were installed to provide the necessary training course.

There are some 30 buildings erected on Gallups Island, including administrative barracks, classrooms, study halls, radio construction and maintenance shops, mess halls and galleys.

More than 2,500 have been graduated from this station. The base has facilities for a maximum attendance of 1,000 enrollees.

United States Maritime Service Radio Training Station, Gallups Island, Boston, Mass.

Muster of United States Maritime Service trainees, Vinoy Park Drill Field, St. Petersburg, Fla.

## USMS UPGRADE SCHOOLS

The United States Maritime Service has established courses of upgrade training which enable a seaman from the lowest rank to constantly improve himself and by the aids provided in academic and practical instruction rise to the highest position aboard ship.

The schools which comprise the upgrade unit of the United States Maritime Service offer four courses of training:

(1) Able-bodied seaman's course.
(2) Licensed officer's course.
(3) Cooks and bakers course.
(4) Correspondence Courses for men at sea.

The schools are located in most of the principal ports of the Nation. Courses are of 2 to 8 weeks' duration depending upon the qualifications of the enrollee, and the nature of the upgrading course taken.

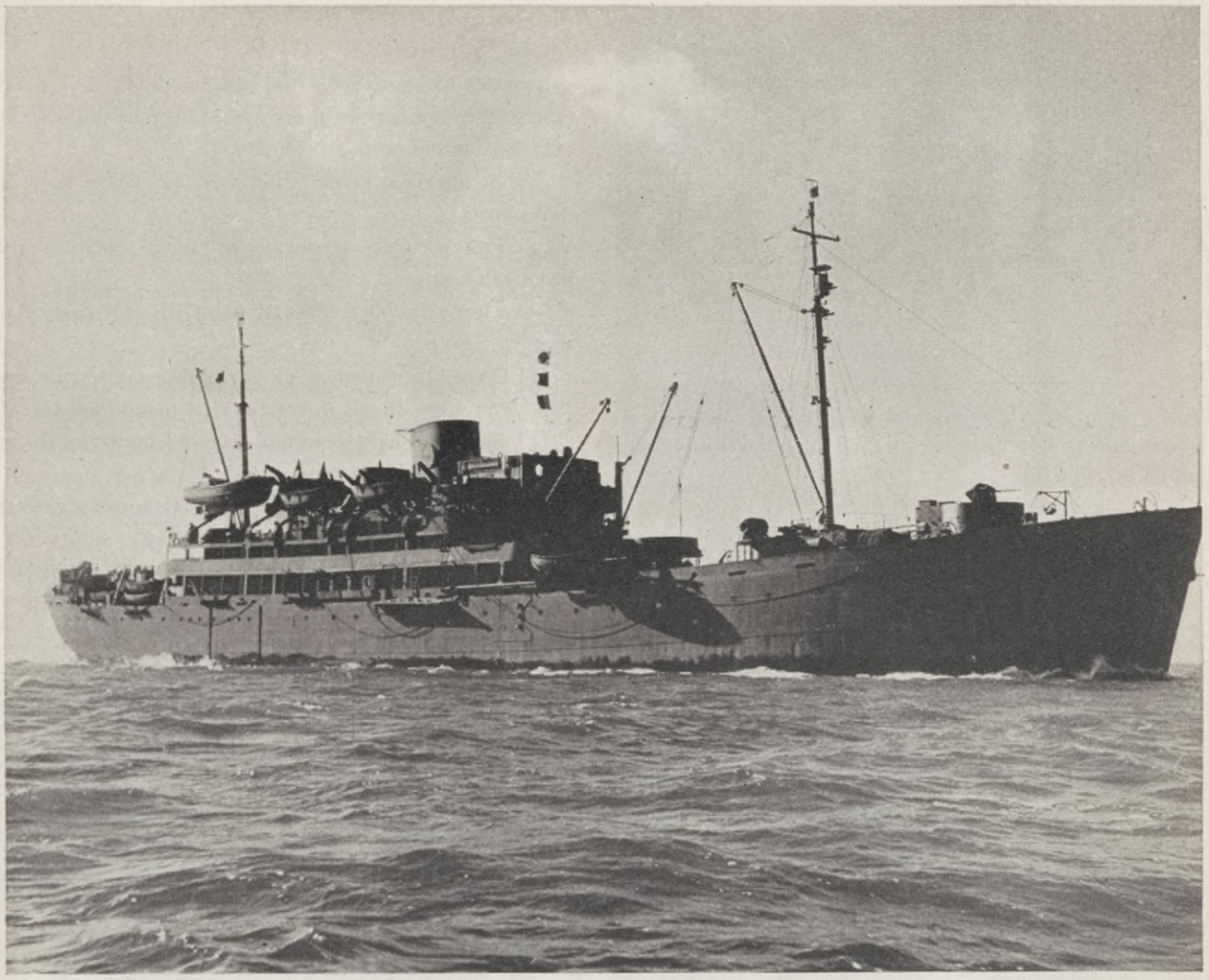
## USMS INSTITUTE AND CORRESPONDENCE SCHOOLS

The Institute was recently established to assist seamen while serving at sea to improve themselves by special courses for upgrading and examinations. The self-aid instruction texts are available to all personnel employed in the merchant marine.

In addition to the shore bases, the United States Maritime Service maintains a fleet of large and small training vessels which are used for imparting the practical knowledge to enrollees which they will require at sea.

Fore view of the United States Maritime Service Training Station, St. Petersburg, Fla.

# PART FOUR



United States Maritime Service Training Vessel *American Mariner.* A 10,000-ton converted Liberty ship.

# TRAINING COURSES

## Established by the United States Maritime Service

### BASIC QUALIFICATIONS GOVERNING ALL U. S. MARITIME SERVICE ENROLLEES

The Merchant Marine of the United States is composed, as stated before, of different types of vessels, designed to serve specific needs in our water commerce. These vessels can be divided into four principal classes:

(1) Passenger vessels.
(2) Freight vessels.
(3) Combination passenger and freight vessels.
(4) Bulk cargo carriers.

By far, the largest percentage of men trained in the United States Maritime Service, will serve aboard classes *two* or *four*. The freight vessels include all of the Liberty and Victory types. The bulk carriers are serving in special trades engaged in transporting oil, coal, wheat, or iron ore.

The crew's complement of these vessels is divided into licensed and unlicensed men. The duties of the entire ship's personnel vary according to the department whether it is deck, engine, steward, radio, or hospital-purser.

The officers and seamen who comprise the deck crew are charged with the responsibility of handling the loading and unloading operations of the vessel and the piloting and navigation from port to port. The engine department operates and maintains the machinery which

includes the main engines, auxiliaries, electrical system, generators, winches, etc. The members of the stewards department have the responsibility of preparing and serving the meals, handling and distributing laundry, etc. Page 23 shows the organization chart of the average cargo vessel of the *Liberty* or *Victory* types.

Men enrolled in the United States Maritime Service for subsequent service in the American merchant marine are divided into two major classes of enrollees, i. e., (1) those with no previous experience at sea, and (2) those who at sometime served in the merchant marine in previous years or are presently serving and desire to raise their grades or ratings.

Regulations covering the acceptance of volunteer enrollments in the United States Maritime Service are subject to amendment from time to time depending upon conditions which affect the over-all manpower situation and war effort.

Applicants desiring to enroll in the United States Maritime Service are requested to visit the local U. S. Maritime Service Enrolling Office or address a communication to the Commandant, United States Maritime Service, War Shipping Administration Training Organization, Washington 25, D. C., for the latest, complete information covering regulations.

In order to be accepted for enrollment in the United States Maritime Service, every applicant must possess certain basic qualifications. These are:

(1) Be a citizen of the United States (native born or naturalized).

(2) Possess birth certificate or other documentary proof of citizenship.

(3) Meet prescribed physical standards (for particular training desired).

(4) Possess a statement of availability (issued by the War Manpower Board in certain vital manpower areas).

(5) Shall not have reported, received notice to report for induction, or have been inducted.

(6) Parental or guardian consent (if a minor under 21 years of age).

(7) Submit satisfactory character reference.

**Newly arrived recruits standing at attention while receiving instructions as to routines and responsibilities. United States Maritime Service Training Station, St. Petersburg, Fla.**

## APPRENTICE SEAMAN TRAINING

Men who have had no previous sea experience are accepted for enrollment in the United States Maritime Service subject to the following regulations:

Having satisfactorily passed the physical examination, the applicant is enrolled as an Apprentice Seaman and shipped to one of the three Training Stations located at Sheepshead Bay, New York; St. Petersburg, Fla.; Avalon, Santa Catalina Island, Calif. Married men are required to have the written consent of their wives.

Transportation to the training station and meals while traveling are furnished by the United States Maritime Service. Upon arrival at the Training Station, the enrollee is provided with uniforms, miscellaneous apparel, subsistence and quarters. The barracks which house the enrollees are modern structures, clean and comfortable. The meals are excellent, planned and prepared by an experienced commissary department.

All enrollees receive the 6 weeks' basic or preliminary training. The purpose of this training period is to teach the fundamental knowledge of general seamanship, water and sea safety, physical fitness, boatmanship, hygiene and gunnery fundamentals necessary to all seamen, regardless of branch, department or rating, to instill a knowledge of discipline, teamwork, group activity and to prepare for the hardships and isolation of life in the merchant marine, and to provide a general knowledge of messman duties.

During the first 2 weeks of training selections are made for assignments to specialized training and departmental branch training. This assignment shall be made considering the following factors, in the order listed:

(1) Needs of the industry.

(2) Aptitude.

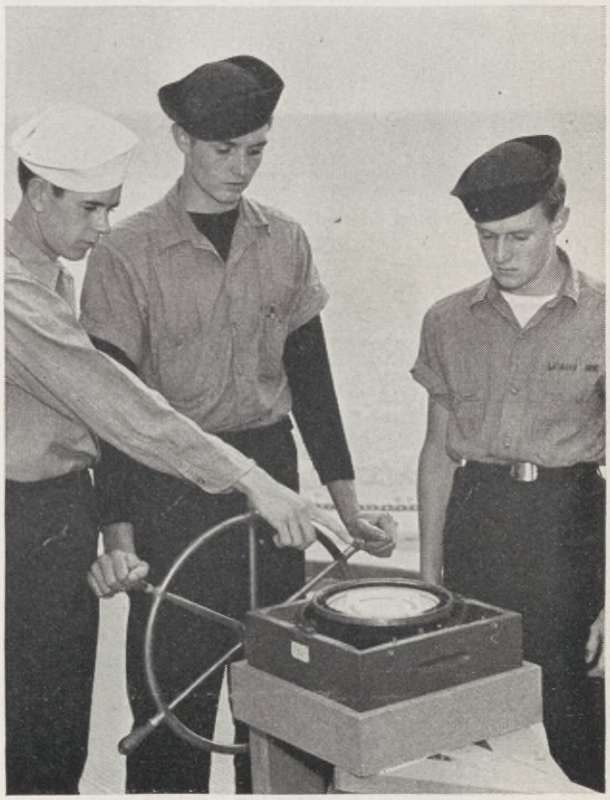
(3) Personal preference.

Upon completion of the preliminary period and after the men so assigned have been detailed to specialized training, the balance of the trainees shall be divided 50 percent to deck branch training and 50 percent to engine branch training. Overage or physically handicapped men who were specifically enrolled for stewards training only, and who were not selected for the Cooks and Bakers School, shall be immediately certified as messmen and made available to the Graduate Stations.

The needs of the shipping industry for messmen shall be met by certifying as messmen only those trainees assigned to the deck and engine departments showing the least aptitude.

It is anticipated that approximately 30 percent of all men entering deck or engine branch training will be selected to serve as messmen only.

**Safety at sea. USMS trainee uses trousers as water floats during safety seamanship drill**



**USMS trainees learn how to hold a true course as part of their deck department training**

Compass class aboard USMSTS *Vigil*

Apprentice seamen at canvas work

Swabbing down the deck aboard ship

Sailing practice during lifeboat drill

Advanced trainees handling mooring lines

Proper handling of heaving line explained

Members of the deck departments include ordinary seamen, able seamen, boatswains, and quartermasters; while wipers, firemen, coal passers, water-tenders and oilers are classified as members of the engine department. Men in the stewards department may serve as second or third cooks, waiters, messmen, room or deck assistant stewards.

The following subjects comprise the courses of study which have been established at the Apprentice Seaman Training Stations of the United States Maritime Service:

PRELIMINARY TRAINING

Indoctrination:
- Rules and Regulations.
- Mental Hygiene.
- Organization and Classification.
- Customs and Traditions.

Physical Development.

Hygiene, Venereal Disease, First Aid.

Safety and Emergency Training:
- Fire Equipment.
- Lifeboat and Life Raft Equipment.
- Practical Boat Training
- Breeches-Buoy & Line Throwing Gun.
- Compass.
- Gas Masks and Breathing Apparatus.
- Life Preservers and Exposure Suits.

General Seamanship:
- Nautical Nomenclature.
- Knots.
- Gunnery.

Messman Training:
- Table Service.
- Maintenance of Quarters.
- Salad Dressings and Pantry Work.
- Steam Table and Service.
- Storeroom and Ice-Box Maintenance.
- Personal Cleanliness and Care of Tools.

DECK BRANCH TRAINING

Steering:
- Indoctrination.
- Practical Steering.

Compass.

Lookout.

Bridge and Navigation Gear:
- Bridge Equipment.
- Piloting and Navigation Equipment.
- Sounding Equipment and Weather Instruments.
- Communication, Emergency Equipment and Examination.

Cargo Hatch:
- Cargo Hatch.
- Booms and Rigging.
- Cargo Handling.

Cargo Work:
- Principles of Cargo Stowage.
- Special Cargoes and Examination.

Ships:
- Ships' Construction.
- Specifications.
- Type of Vessels and Examination.

Masts and Rigging:
- Lines, Blocks and Tackles.
- Masts and Rigging.

Ground Tackle and Mooring Lines:
- Anchors and Fittings.
- Mooring and Examination.

Paints and Maintenance.

Sail Loft:
- Canvas Work.
- Knots.
- Splices.
- Boatswain Chair and Stage Hitches.

Boat Drill.

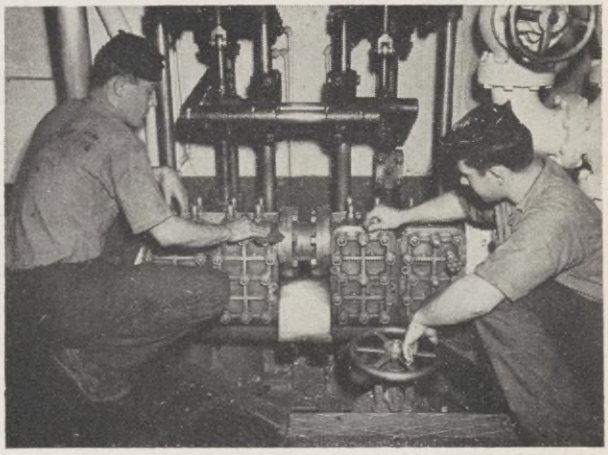
Lifeboats.

Gunnery.

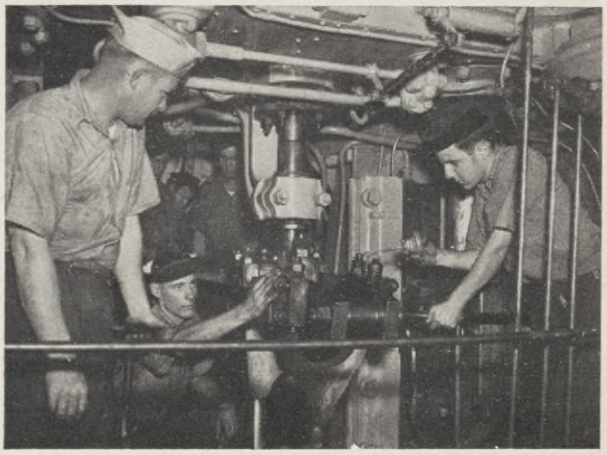
Swimming.

Preparation for A. B.:
- Navigation Lights.
- Coast Guard Signals.
- Buoyage and Examination.
- Rules of the Road.

**Engineer trainees aboard ship receiving instruction, while one uses speaking tube which leads to pilot house**



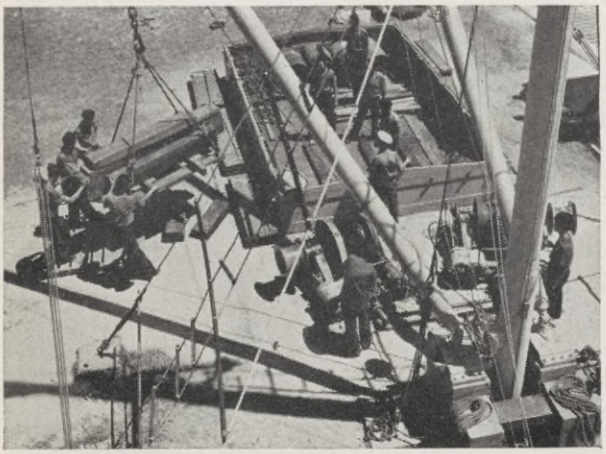
**Trainees cleaning and polishing a fire and ballast pump aboard ship. Constant care insures constant operation**



**Engineer class of trainees receiving practical experience in oiling and wiping moving parts of machinery**

Trainees in cooks and bakers course receiving instruction on proper methods of boning and preparing various cuts of meat

Advanced deck trainees rigging a boat boom. In a short time these lads will perform same duties aboard merchant ships



Dry land cargo hatch, booms, and winches are used to give practical experience to trainees qualifying for the deck department

ENGINE BRANCH TRAINING

Steam and Water Cycle:
- Theory of Steam.
- Steam Condensers.
- Feedwater.

Boilers:
- Boiler Operation.
- Scotch Marine Boiler.
- Watertube Boiler.
- Boiler Fittings.
- Boiler Cleaning.

Pumps:
- Reciprocation.
- Duplex.
- Centrifugal.

Reciprocating Engines.
Main Condensers.
Lubrication.
Steering Engine.
Deck Machinery.
Refrigeration.
Turbines.
Firefighting Equipment.
Safety Precautions.
Use of Hand Tools.

In addition to the above two departments, men who have completed the basic 6 weeks' courses and possess special qualifications based on education, experience and general aptitude, will be considered and given the opportunity to enter the Cooks and Bakers School, Radio School, and Assistant Purser-Hospital Corps School.

The Radio training course is 20 weeks, and upon successfully completing the course prescribed, the enrollee is qualified to sit for an examination as Radiotelegrapher, Second Class.

The Assistant Purser-Hospital Corps training course lasts approximately 26 weeks. Upon completion, the enrollee is given the specialist rating of Assistant Purser-Pharmacist's mate.

The Cooks and Bakers training course is 10 weeks, and upon successful completion of this course enrollees receive certification of graduation specifying their competency to fill the ratings of chief cook, second cook and baker or third cook.

The U. S. Maritime Service operates two post graduate schools which give additional training to men completing either deck or engine training. These schools are the Transportation Corps-Marine Officers' Cadet School and the Ships' Carpenter School.

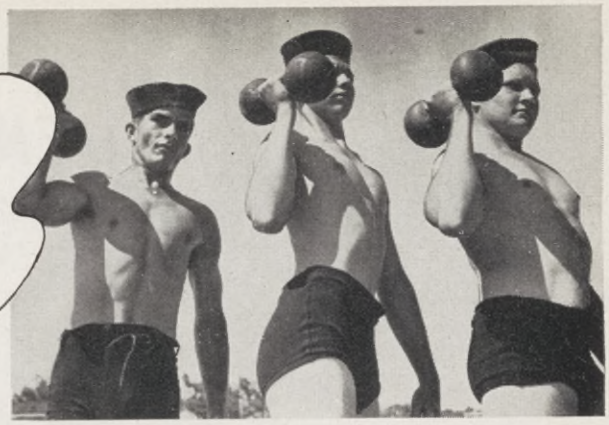
The Transportation Corps-Marine Officers' Cadet School course is 12 weeks for the deck branch and 10 weeks for the engine branch. Upon successful completion of the prescribed course the enrollee is qualified to serve as a Junior Marine Officer aboard a vessel of the Army Transportation Corps.

The Ships' Carpenter course is of 4 weeks' duration. Upon completion of this course the enrollee is qualified to serve aboard ship as ship's carpenter.

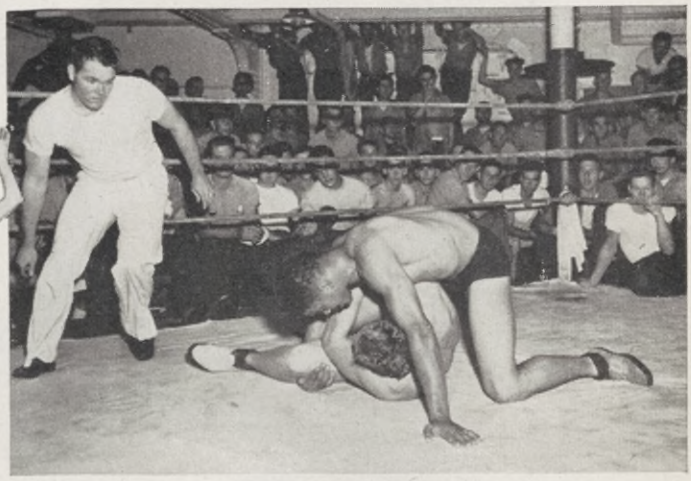
Having successfully completed the course of training prescribed for Apprentice Seamen, the United States Maritime Service enrollee is assigned to a U. S. Maritime Service Graduate Station and through the graduate station to a vessel by the Recruitment and Manning Organization of War Shipping Administration. This agency works in close cooperation with the ship opera-

# SPORTS and RECREATION

*Complete facilities for sports activities and physical recreation, in addition to library and reading rooms are available at all of the U. S. Maritime Service Stations*

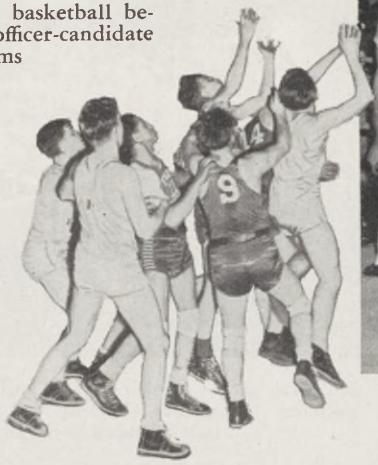


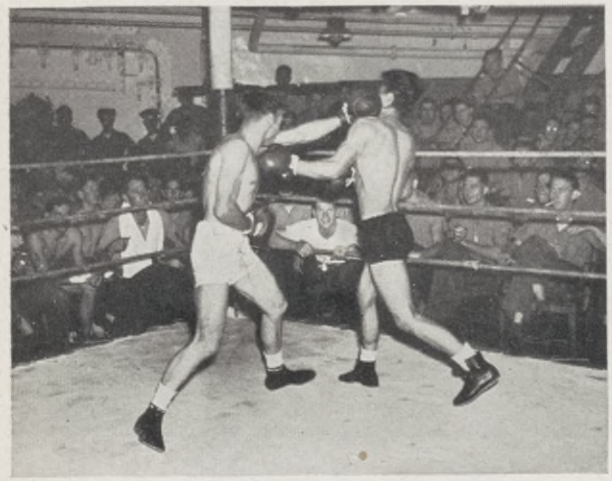
Weight lifting and acrobatics are an important phase of apprentice seaman physical training



Sports night. After a day of drills and classrooms, enrollees welcome a fast bout or wrestling match

A fast game of basketball between two officer-candidate teams



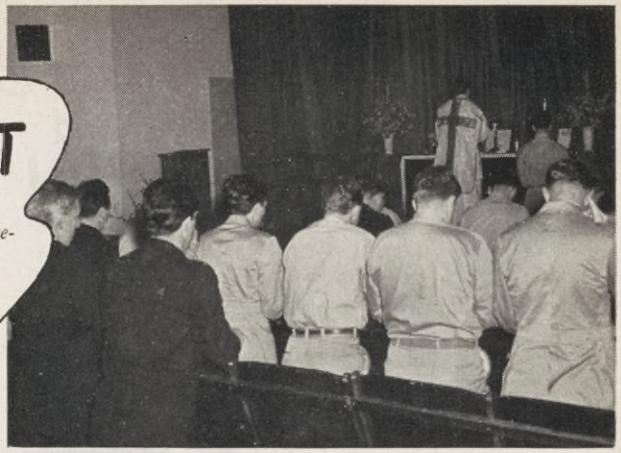


A left to the face and his opponent misses a left to the jaw. Boxing is taught by capable former professionals who serve on the physical fitness staff

One of the recreation rooms, typical of the facilities installed for the benefit of USMS enrollees


# WELFARE and IMPROVEMENT

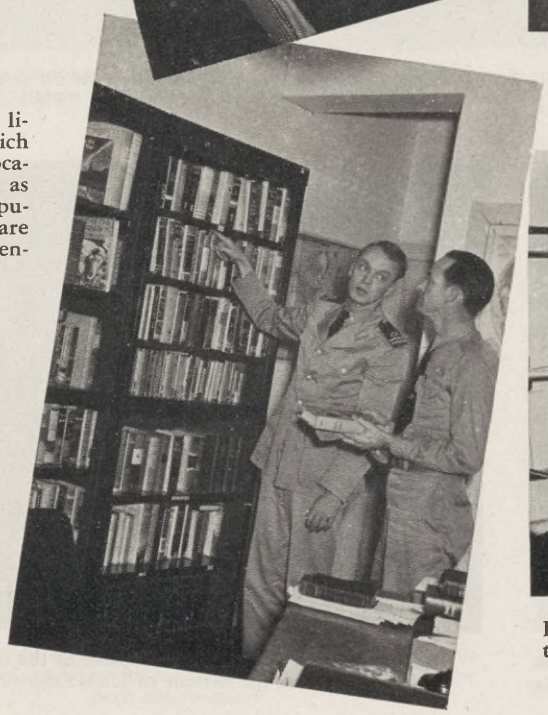
*Religion and educational aids for self-improvement are included and Sunday services are conducted for members of the various denominations. A chaplain's corps comprised of, ministers of the Catholic, Jewish, and Protestant faiths are stationed at all stations to guide, counsel, and assist the men while in training.*



Sunday mass. Catholic enrollees are kneeling while the priest recites the *Pater Noster* before Communion service is given

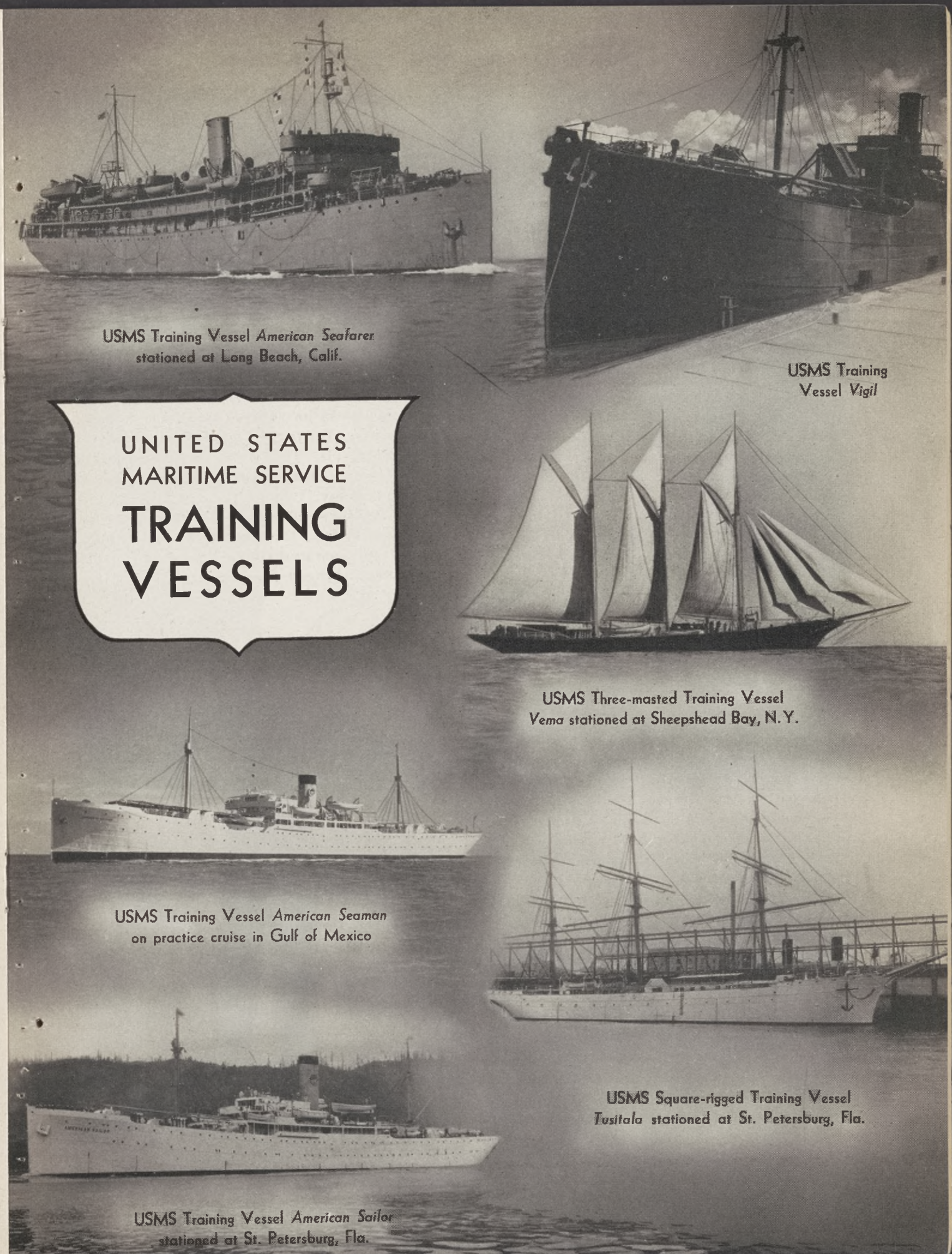
Chaplain counsel. Enrollees constantly seek the advice and counsel of members of the Chaplain's Corps

Hospital ward. The progress and condition of USMS patients is carefully checked and all hospital facilities are included in the sick bay



Well-stocked libraries which include vocational books as well as popular fiction are available to enrollees

Dental clinic. Care of the teeth includes examination, extractions where necessary and filling or plates by dentists assigned to the various stations



USMS Training Vessel *American Seafarer* stationed at Long Beach, Calif.

USMS Training Vessel *Vigil*

# UNITED STATES MARITIME SERVICE TRAINING VESSELS

USMS Three-masted Training Vessel *Vema* stationed at Sheepshead Bay, N.Y.

USMS Training Vessel *American Seaman* on practice cruise in Gulf of Mexico

USMS Square-rigged Training Vessel *Tusitala* stationed at St. Petersburg, Fla.

USMS Training Vessel *American Sailor* stationed at St. Petersburg, Fla.

**USMS trainees with sea bags packed receiving final instructions preparatory to reporting at graduate station for shipping out**

tors and provides personnel for them. The United States Maritime Service enrollee, as soon as he is assigned to a merchant vessel, is changed from *active* to *inactive* status. He is provided with the Identification Card, Certificate of Graduation, Coast Guard Identification Card, Seaman's Passport Papers and all other necessary papers. He now becomes a full-fledged seaman, capable of discharging all the duties required of an ordinary seaman.

## PRACTICAL TRAINING ABOARD SHIP

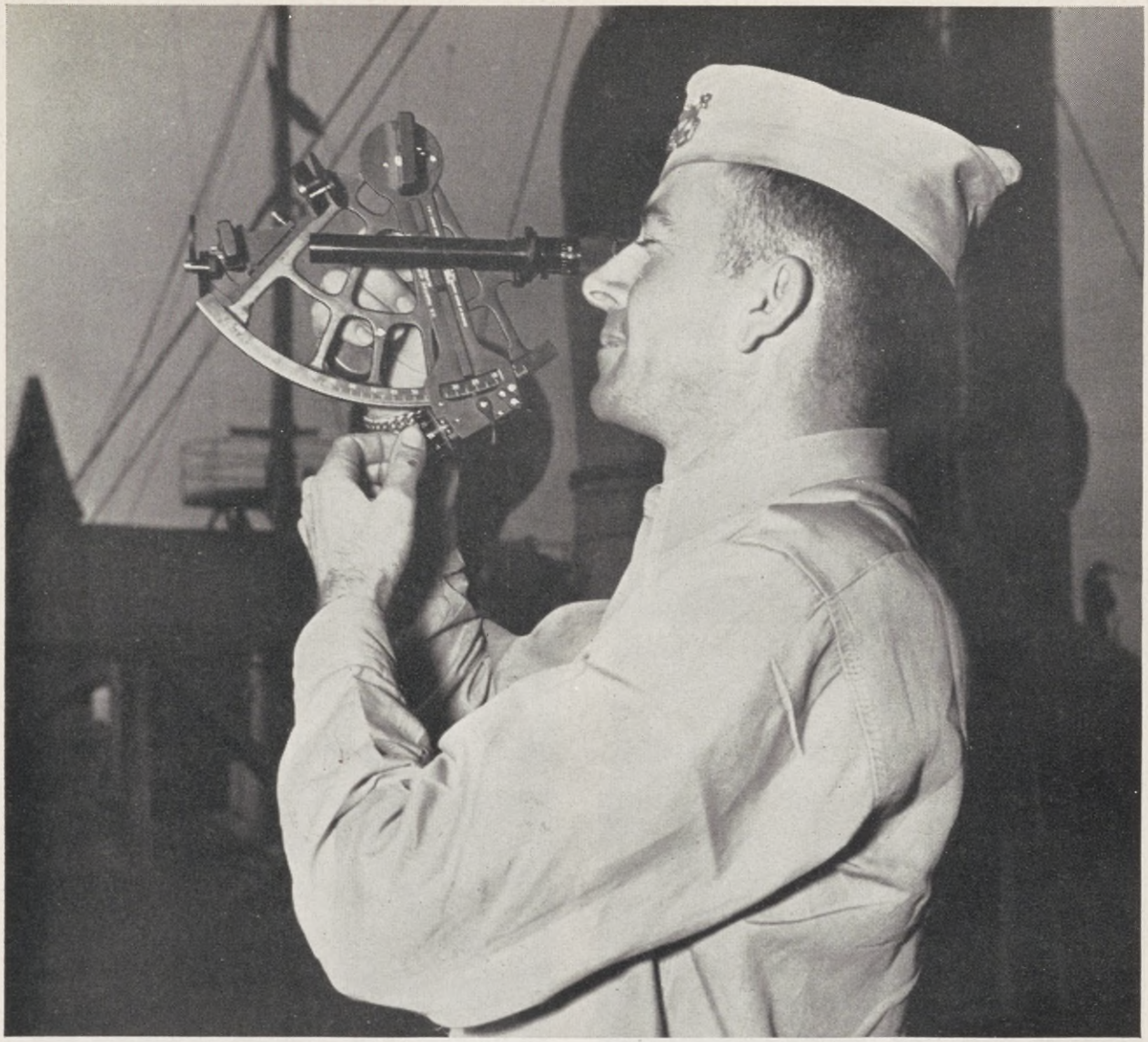
The United States Maritime Service operates a fleet of large and small training vessels whereon enrollees receive 3 weeks of practical instruction. This type of practical instruction enables the enrollee to obtain by actual contact and vision a working knowledge of the subjects he has studied ashore. An apprentice seaman may feel that he has become thoroughly qualified to serve as quartermaster after completing his basic and advanced training because he has had an opportunity to stand watches and steer a vessel similar to what he will be required to handle, once he is shipped as a regular crew member.

Newest of the United States Maritime Service Training fleet is the USMSTS *American Mariner,* stationed in New York Harbor. Enrollees from the training station at Sheepshead Bay and Officer Candidates at Fort Trumbull receive practical training aboard this vessel. The *American Mariner* is a 10,800-ton Liberty-type vessel converted for training purposes. Approximatley 400 officer candidates and seamen are carried each trip for training purposes. The USMSTS *American Seaman* is a 10,000-ton converted merchant vessel in New York Harbor and Sheepshead Bay Training Station and has facilities for training 300 enrollees. A sister ship of the *American Seaman,* the *American Sailor,* is stationed at St. Petersburg, Fla. Other training vessels stationed in the port of Baltimore, Md., are the *American Navigator* and *American Engineer,* converted combination passenger-freight vessels. They combine and provide facilities for training 1,500 seamen each cruise from the Sheepshead Bay station. In addition, the *American Seafarer* at Avalon, Calif., provides training facilities for 400 additional men.

Augmenting the modern deep-water vessels which comprise the USMS *American* group training fleet are several noted auxiliary sailing vessels, aboard which apprentice seamen receive a real taste of sailing under "sail." Most famous of these sailing vessels is the *Joseph Conrad,* a three-masted, full-rigged auxiliary, formerly a Norwegian training ship, over 100 years old. Many notable voyages have been made in this old vessel, named after the famous Polish author. The *Joseph Conrad* is now stationed at St. Petersburg, Fla. The *Vema,* a three-masted auxiliary schooner with accommodations for 86 men is stationed at Sheepshead Bay.

The American vessels make weekly cruises lasting from Monday to Friday. The enrollees shipped aboard for practical instruction are divided into two groups for duties in the deck and engine departments.

**On his way! Qualified and ready to assume his duties aboard ship**



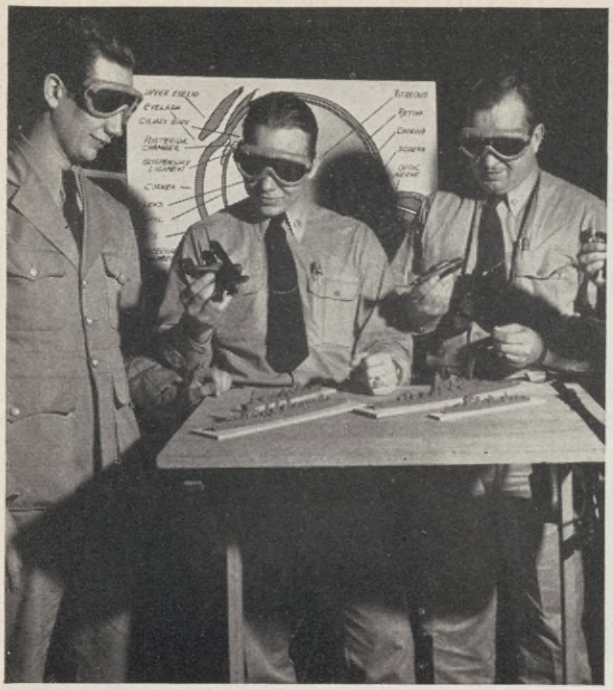
USMS officer-candidate practicing with sextant and taking sights of the sun

## UNITED STATES MARITIME SERVICE OFFICERS' SCHOOL TRAINING

In the report which the United States Maritime Commission submitted to Congress, January 1, 1939, its recommendations included the establishment of Officer-Candidate Schools which would provide the necessary training opportunities for men to rise from the ranks to become ships' officers.

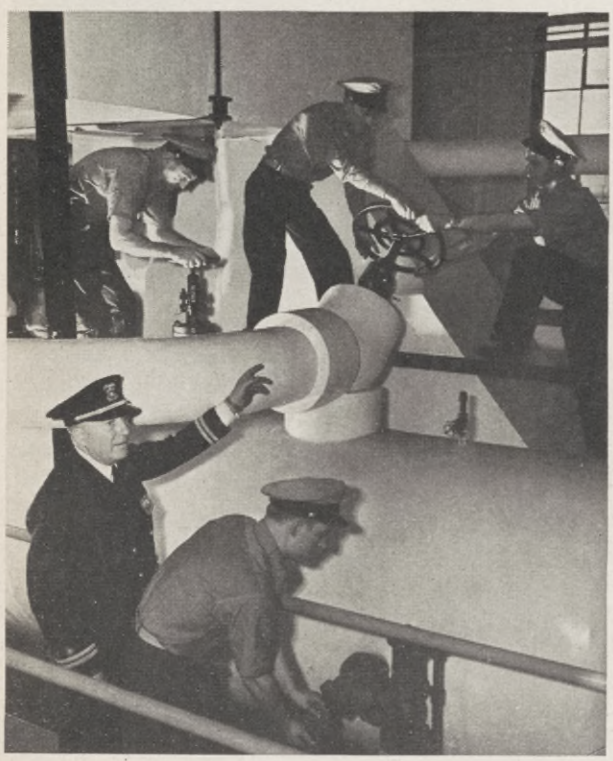
Surveys had indicated that a substantial percentage of the merchant marine officers serving aboard ships had received promotions through their own efforts. They represented a substantial portion of ship officer personnel. The Maritime Commission recommended that new facilities for specialized training be provided to broaden the opportunities of our seamen to qualify for examinations for licensed ship officers.

The United States Maritime Service maintains two Officer-Candidate Schools. Seamen 19 years of age, or over, who have completed 14 months at sea in the deck or engine departments of ocean-going, coastwise or Great Lakes vessels are eligible for enrollment. At the Officer-Candidate School they are given a 4 months' course of training designed to qualify them for examinations as Third Mates or Third Assistant Engineers.



A night vision class using goggles, model planes, and model ships

Officer candidates (deck) learning use of the radio direction finder for a bearing



The "whys" and "wherefores" are taught to engineer officer-candidates

Officer candidate (engineer) taking soundings in the fuel tanks

Engineer officer candidates at lecture class in machine shop practice

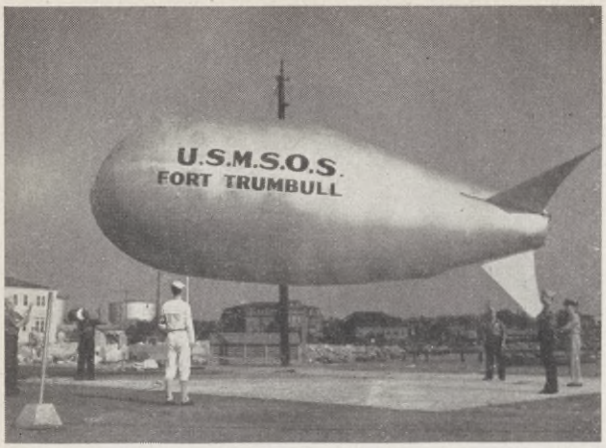
Navigation class using azimuth for obtaining bearings

View of the turbine engine laboratory at the USMS Officers' School, Alameda, Calif.

Classroom scene. Instructor explaining method of obtaining three-way "fix"

Drill press instruction for machine shop practice is given to engineer officer candidates

Practical instruction in the gas mask and its uses during an emergency




Barrage balloon instruction. Deck candidate officers receive training in handling of the "ugly duckling"

Baseball is a popular recreation. A regular league made up of section classes has been formed

Interior view of the Fort Trumbull power plant which performs the dual function of supplying power for the base and training future officers

Following the routine of classes and practical instruction, officer candidates do plenty of night study preparing for examinations

Officer Candidates are rated Seamen (2d class), if scheduled for deck training, or Firemen (2d class), if intended for engineer training. Upon arrival at the station and commencement of the training course they are advanced to the Chief Petty Officers (acting).

The courses adopted for Officer-Candidate training cover every requisite subject thoroughly, combining academic study with practical training instruction. This plan enables the Officer-Candidate with limited education to master such intricate subjects as Celo-Navigation, Piloting, Tables, Logarithms, Electronics, Engineering, etc., in addition to other subjects necessary to qualify for the licensed officer examination.

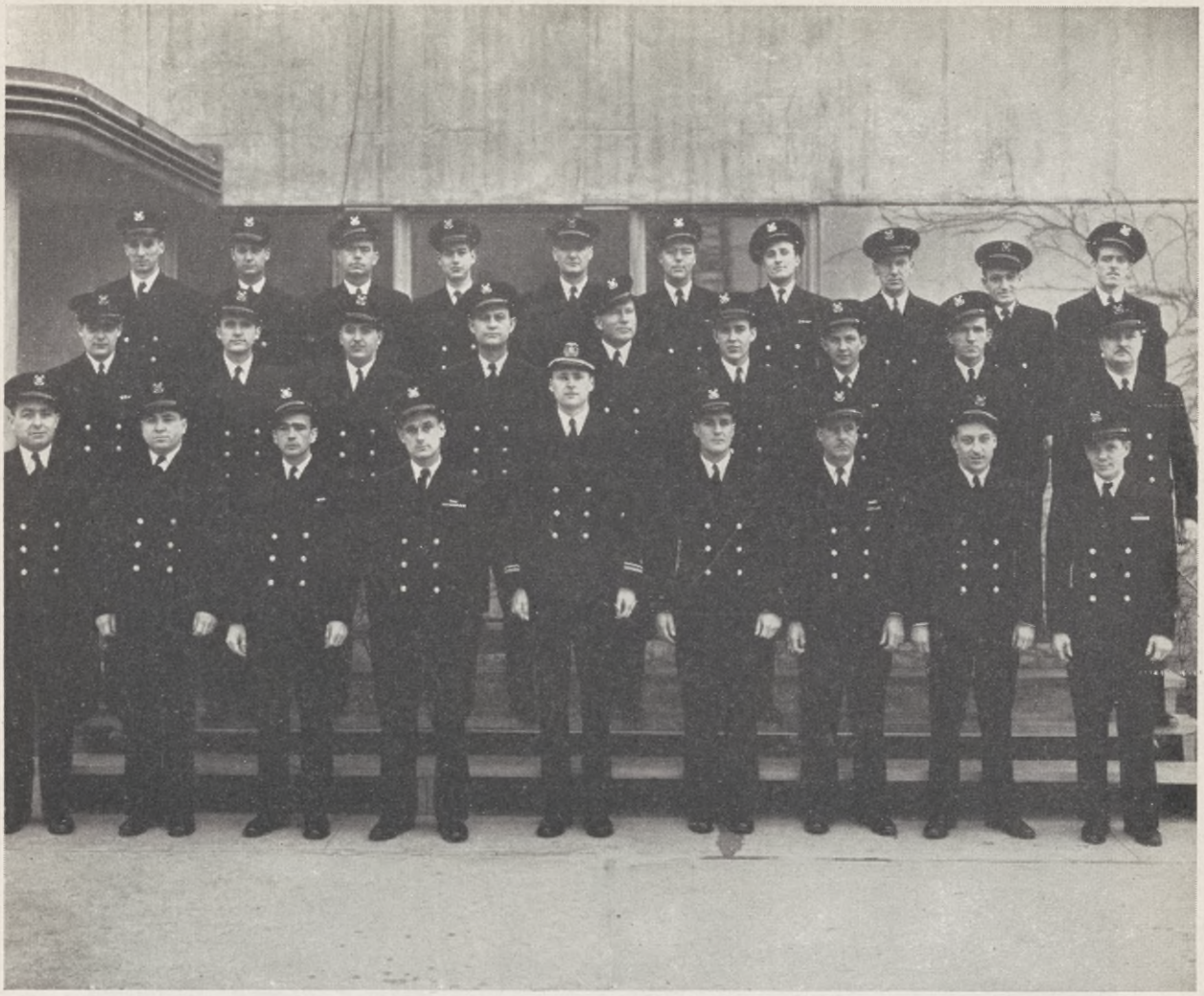
The following subjects comprise the courses of study which have been established at the Officer-Candidate Schools of the United States Maritime Service:

1. *General Training:*
   - Physical Education.
   - First Aid.
   - Decontamination.
   - Gas Mask Instruction.
   - Lyle Gun.
   - Breeches Buoy.
   - Pyrotechnics.
   - Flame Safety Lamp.
   - Fire Fighting.
   - Mathematics.

2. *Deck Department:*
   - Navigation.
   - Seamanship.
   - Rules of the Road.
   - Cargo.
   - Instruments—Gyro.
   - Communications.
   - Inspector Rules.
   - Special Subjects.

3. *Engine Department:*
   - Boilers.
   - Reciprocation.
   - Turbine.
   - Steam Auxiliary.
   - Heat.
   - Electricity.
   - Internal Combustion.
   - Machine Shops.
   - Drawing.
   - Inspector Rules.

Officer-Candidates enrolled for the Course of Study and Training prescribed for Third Mates' examinations re-



A typical United States Maritime Service Officer Candidate Graduate Class

ceive instructions in subjects 1 and 2. Engineer Officer-Candidates receive instruction in subjects 1 and 3.

Every modern facility to aid Officer-Candidates to complete satisfactorily the course of study has been established at the schools.

The instructors are mostly experienced merchant marine officers enrolled in the United States Maritime Service. They have been selected for their experience and knowledge in the subjects they teach and constitute a thoroughly qualified educational training staff.

Having successfully completed the 4-months' course of training prescribed for Officer-Candidates, the enrollee appears before United States Coast Guard Marine Inspection Officers who supervise the examinations held to qualify licensed officers. With the passing of the examinations, the Officer-Candidates are sworn in and receive their licenses as Third Mates or Third Assistant Engineers and are commissioned Ensigns in the United States Maritime Service. They are then assigned to the Recruitment and Manning Organization of War Shipping Administration for transfer and assignment to merchant vessels.

Transportation, including meals, is furnished to the school by the United States Maritime Service. While in training, officer candidates receive $126 monthly base pay. Uniforms, quarters, subsistence, and textbooks are also provided without charge.

## UNITED STATES MARITIME SERVICE UPGRADE SCHOOLS

*General Purpose*

United States Maritime Service Upgrade Schools have been established in order to qualify eligible seamen to sit for examinations to advance in grade as required by laws and regulations enacted and adopted by Congress and the authorities empowered to carry out and enforce the various provisions.

There are three types of schools maintained by the United States Maritime Service, each established to provide a particular course of upgrade instruction. They are:

(1) Upgrade Schools for Rating as Able-Bodied Seamen.

(2) Upgrade Schools for Licensed Officers.

(3) Upgrade Schools for Cooks and Bakers.

Seamen who desire to enroll for courses of training are required to possess the minimum required sea time, proven by DISCHARGES signed by the Master in command of the ships they served on.

The courses vary from 2 to 4 weeks and are designed to qualify the enrollee to sit for the particular type of examination required.

### SEA TIME NECESSARY

Three courses of Able-Bodied Upgrading Training are available to seamen who desire to enroll. These courses are based on the requirements needed to qualify a seaman for his examination for his A. B. Ticket and lifeboat Certificate. Men who have been employed on ocean, coastwise, Great Lakes vessels (100 gross tons or over) will be accepted.

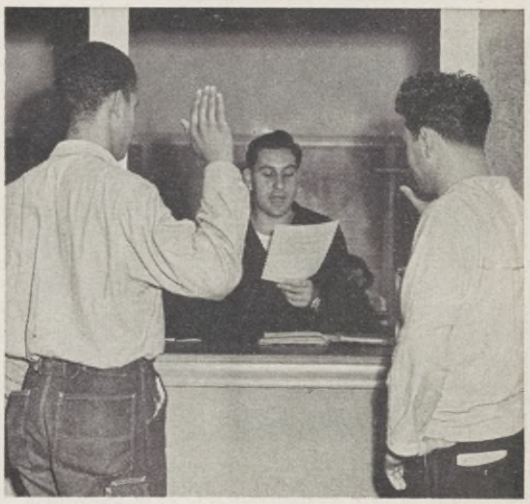
In cases where the seaman has already received his lifeboat certificate, the courses of training are naturally shortened through this part of the course being eliminated. (See pp. 60 and 61, requirements of sea time, etc., necessary to qualify for Upgrade School.)

### EARN WHILE LEARNING

While attending A. B. School, men are paid at the rate of $66 per month, plus $3 per day for quarters and subsistence. Pay begins the day a candidate is accepted and sworn into the U. S. Maritime Service. Men absent from training for any reason lose their pay for each day of absence.

Presenting credentials for enrollment

A physical examination is necessary



Accepted and sworn in for upgrade training

Able-bodied Seamen's upgrade course includes rigging a bo'sun's chair.

Block and tackle explained by USMS class instructor

## FARE AND MEALS

Seamen accepted and enrolled for Able-Bodied Upgrading Course of training are provided with fare and meals from the point of enrollment to Upgrade School. Fare is *not* paid from the Upgrade School to return point of enrollment. Men who desire to return to the city where they were enrolled, do so at their own expense.

## QUARTERS AND SUBSISTENCE

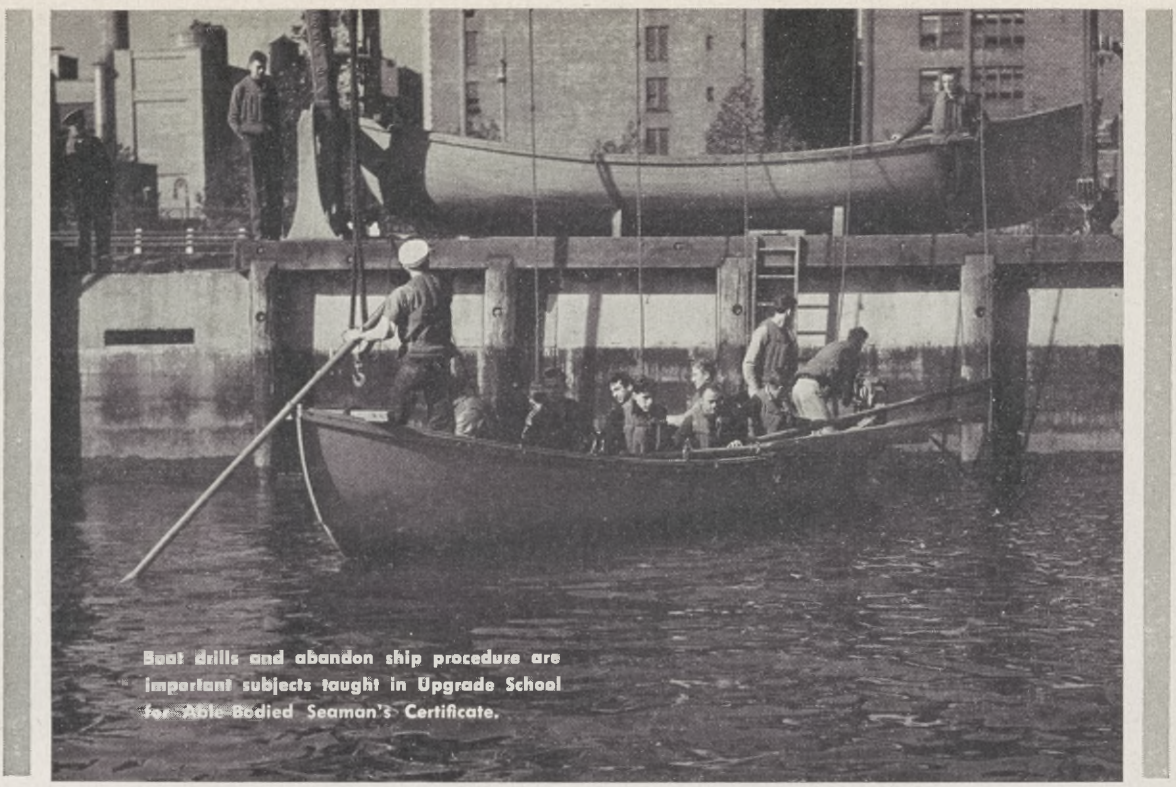
In addition to the monthly base rate of pay, an allowance of $3 per day is paid to the upgrading enrollee in lieu of meals and sleeping quarters. Little difficulty has been found by men attending the Upgrade Schools in securing lodgings and convenient restaurants serving medium-priced meals.

## PHYSICAL QUALIFICATIONS AND MEDICAL FACILITIES

In case of sickness, the U. S. Maritime Service provides complete medical facilities including medical care and hospitalization. Applicants before being accepted are required to meet physical standards to become eligible. Although the physical standards set up are not


KNOTS AND SPLICES. Seaman are taught all the necessary "hitches"

FIRE DRILL. An important part of the A. B. Upgrade course is safety work



Boat drills and abandon ship procedure are important subjects taught in Upgrade School for Able-Bodied Seaman's Certificate.

severe, applicants must be able to pass the vision tests including color sense. Men wearing glasses with corrected vision are accepted, provided eye tests show a minimum of 20/40 in one eye and 20/70 in the other.

## SEAMEN'S DISCHARGES

No applicant will be considered for Upgrade School who does not possess the required sea time as outlined on pages 60 and 61. It is important that proof of this sea time be submitted at the time of application. Records which are acceptable and proof of such required length of sea service include (a) Certificate of Discharge signed by the Master showing the name of the vessel, capacity employed, length of voyage, date of shipment and discharge, vessel's tonnage and nature of voyage; (b) Army Transport Service discharges which provide the same information as must be contained in (a); and (c) Navy transcripts of service, for men who have served in the *deck department,* which show the rating, names of vessels serving aboard and dates of service therein. IMPORTANT: Where discharges have been lost, a letter from the steamship company showing the above required information will be accepted.

## FINANCES OF APPLICANTS

Pay starts the day a seaman is enrolled. However, pay day for trainees is every Saturday or upon completion of the course. Seamen should have the necessary funds to carry them through until pay day and should ascertain from the U. S. Maritime Service Enrolling Officer when pay day occurs.

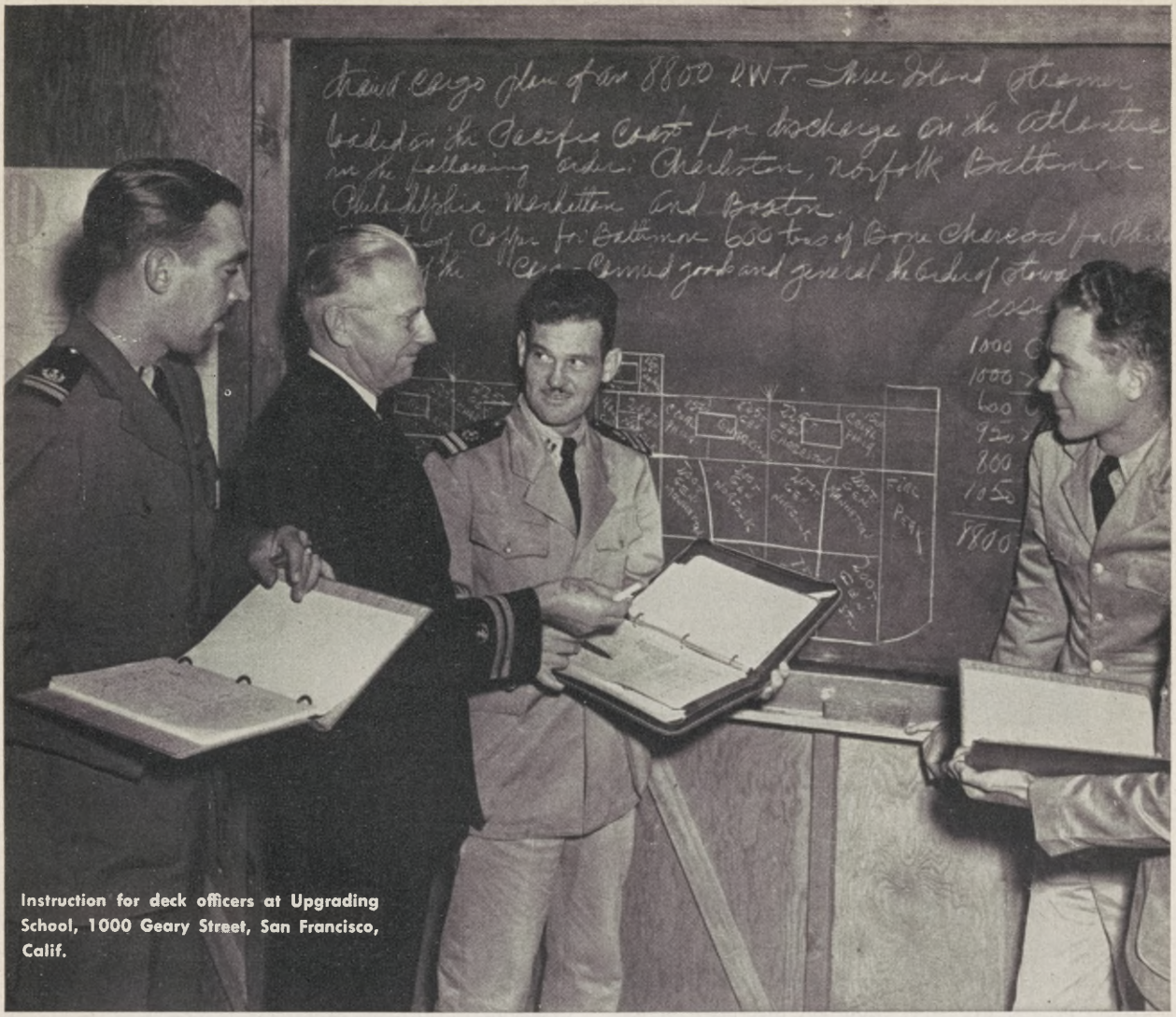
The Able-Bodied Seaman Upgrade training course thoroughly covers those subjects which the seaman is required to know in practicing and carrying out his duties as an Able-Bodied seaman. The course has been streamlined to meet basic requirements and thus saves the seaman a long period of time he would have to spend ashore.

A. B. UPGRADE COURSE:

Rules of the Road:
- Passing Situations.
- Fog Signals.
- Breakdown and Emergency Signals.
- Lights.

Steering.
Compass.
Lookout Training.
Leadline and Sounding Machine.
Signalling.
Ground Tackle.
Mooring Lines
Paints and painting.
Deck Gear.
Marlinspike Seamanship.
Cargo Gear.
Hitches.
Cargo Holds.
Draft.
Tankers:
- Types of Cargo.
- Construction.
- Pipe Lines and Valves.
- Pumps and Pumproom.
- Cargo Hose and Connections.
- Safety Precautions.
- Terminology.

Fire and Station Bills.
Fire.
Abandon Ship.
Emergency and Safety Equipment.



Instruction for deck officers at Upgrading School, 1000 Geary Street, San Francisco, Calif.

## UNITED STATES MARITIME SERVICE LICENSED OFFICER UPGRADE SCHOOLS

### REQUIREMENTS FOR LICENSED OFFICER UPGRADE COURSES

Licensed officers who desire to raise their licenses to a higher grade have every opportunity given them through the medium of these Licensed Officer Upgrade Schools of the United States Maritime Service.

Licensed Officer Upgrading Schools established by the United States Maritime Service for raising licenses are located in six of the largest shipping ports in the United States. The addresses of these Upgrading Schools are as follows:

*New York, N. Y.*
39 Broadway.

*San Francisco, Calif.,*
1000 Geary Street.

*Seattle, Wash.,*
1427 Main Street.

*New Orleans, La,*
523 St. Ann Street.

*Boston, Mass.,*
25 Warrenton Street.

*Baltimore, Md.,*
City College of Baltimore.

To qualify for the Officer Candidate School, applicants are required to submit the following supporting papers and documents:

(1) Proof of U. S. citizenship.

(2) Certificate of Identification and Certificate of Service.

(3) Possess not less than the minimum sea time proven by discharges in either *Deck* or *Engine Departments* required by law. See pages 60 and 61.

(4) Possess the necessary physical qualifications.

Applicants who desire to raise their grades of license to Second Mate, Second Assistant Engineer, First Mate, or First Assistant Engineer must be in possession of unex-

pired licenses in the grade which qualified them for the next raise. Part of their qualifying sea time experience under the lower license must have been served since December 7, 1941.

## TRAINING COURSE FOR RAISING LICENSES

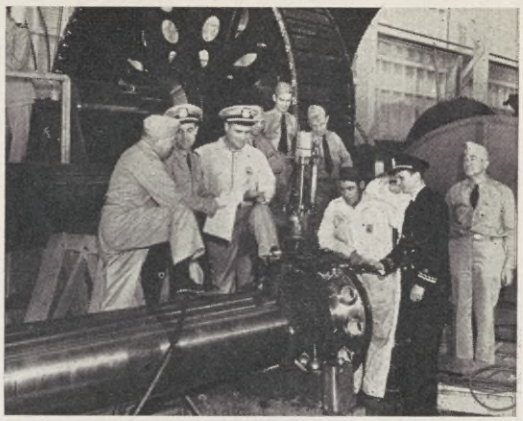
New classes are formed and begin every week. These classes last for a maximum of 4 weeks, and enrollees spend an average of 6 hours per day from Monday to, and including, Saturday at the Upgrading School. If deemed qualified before the end of 4 weeks, they are allowed to sit for licenses then.

The courses are so designed as to present all the necessary technical and academic knowledge which the officer must possess to qualify for his examination before the U. S. Coast Guard Merchant Marine Inspection Service examiners.

Complete facilities for both Deck and Engine Departments have been established and a corps of experienced licensed officers are in charge of the classes. These men are well qualified to impart the necessary knowledge required for the examination. If enrollees apply themselves to consistent study during the course of training, they will experience little difficulty in successfully raising their licenses.

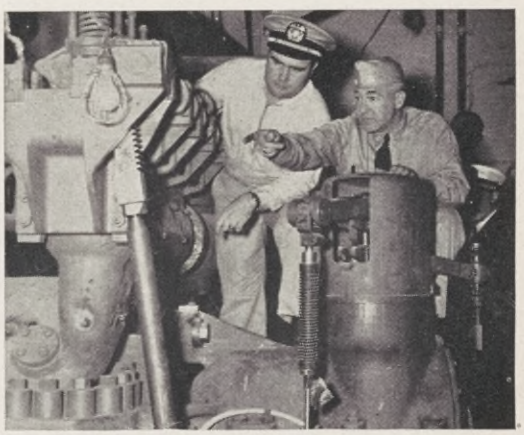
## RATE OF PAY WHILE LEARNING

United States Maritime Service enrollees seeking to raise their license are paid the base salary in the rank to which they belong in addition to quarters and subsistence. Members enrolled for upgrading training for licenses as Second Mates or Second Assistant Engineers are enrolled with the rank of Lieutenant (j. g.) and receive a base pay of $166.67 per month plus the regular allowances for the grade depending upon dependents listed. Members sitting for First Mate or First Assistant Engineers licenses are ranked as Lieutenant (Senior Grade) and receive a monthly base pay of $200 plus quarters and subsistence according to dependents listed.



A class receiving turbine information

Instructor showing uses of equipment



Instructors with years of experience combine academic with practical instruction

**Engineer officers before a panel board are shown various instruments installed aboard ship**

**Practical demonstrations on making repairs gives the trainee a good chance to learn**

*Rates of basic pay and allowances for commissioned officers with and without dependents*

With Dependents

| Rating | Per month | Rental | Subsistence | Total pay plus allowance |
|---|---|---|---|---|
| Lieutenant | $200.00 | $90.00 | $42.00 | $332.00 |
| Lieutenant (jg) | 166.67 | 75.00 | 42.00 | 283.67 |
| Ensign | 150.00 | 60.00 | 42.00 | 252.00 |

Without Dependents

| | | | | |
|---|---|---|---|---|
| Lieutenant | $200.00 | $75.00 | $21.00 | $296.00 |
| Lieutenant (jg) | 166.67 | 60.00 | 21.00 | 247.67 |
| Ensign | 150.00 | 45.00 | 21.00 | 216.00 |

Licensed officers not enrolled or desiring to enroll in the U. S. Maritime Service receive standby wages according to a scale developed by the Recruitment and Manning Organization, War Shipping Administration, as follows:

(a) Enrolled for Second Mate or Second Assistant Engineer Courses at $4 per day pay, plus $4 allowance for quarters and subsistence ($240 per month).

(b) Enrolled for First Mate or First Assistant Engineer Course receive $5 per day standby wages, plus $4 per day for quarters and subsistence ($270 per month).

The subjects taught at the U. S. Maritime Service Upgrading Schools for Licensed Officers include such subjects as:

DECK:
- Seamanship.
- Cargo.
- Ship Construction.
- Compass Adjustment.
- Chart Construction.
- Piloting.
- Celestial Navigation.
- Time.
- Use and Care of Instruments and Accessories.
- Ocean Winds and Weather.
- Specimen Examination Questions and Answers.

ENGINE:
- Sketching.
- Turbines.
- Refrigeration.
- Reduction Gears.
- Condensers.
- Air Ejectors.
- Reciprocating Engines.
- Electricity.
- Boilers.
- Feedwater.
- Speed Calculations, Tail shafts and Propellers.
- Engineering Material.
- Pipe Calculations.
- Steering Gear.
- Marine Engineering Regulations.
- Fuel Oil Combustion.
- Fire Equipment.
- Mathematics.
- Safety Equipment.

## MISCELLANEOUS INFORMATION

Fare and meals for travel are paid for from the point of enrollment to the Upgrading School.

Time spent at Upgrading School is not applied against furlough time allotted by Selective Service Draft Boards.

Textbooks are furnished for study uses, remaining the property of the U. S. Maritime Service.

**USMS officers sitting for mate and engineer licenses**

## UNITED STATES MARITIME SERVICE INSTITUTE EXTENSION COURSES

Extension courses are offered to personnel employed in the American Merchant Marine by the United States Maritime Service in accordance with a Statute which provides:

*"The Commission is hereby authorized to prescribe, conduct and supervise such extension and correspondence courses as it may deem necessary to supplement other training facilities, and to make such courses available, under such rules and regulations and upon such terms as it may prescribe, to the licensed and unlicensed personnel of the merchant marine, and to cadets and cadet officers who shall make application therefor."*

Personnel of the U. S. Maritime Service and the U. S. Merchant Marine are eligible for the extension courses of the United States Maritime Service. Seamen who enroll in the United States Maritime Service Institute for an extension course are required to have the endorsement of the master, chief engineer or purser on the vessel on which they are serving. If U. S. Maritime Service personnel is on active duty in the U. S. Maritime Service, the endorsement of the commanding officer is required.

Self-aid instruction tests prepared specially for the subjects desired by the enrollee have been prepared. Students are required to submit at regular intervals examination papers, and these are reviewed and graded by United States Maritime Service Institute personnel according to standards approved by institutions which maintain similar facilities for nonresident study.

Upon satisfactory completion of the study course an appropriate Completion Certificate is issued each student by the United States Maritime Service Institute.

### LIST OF CORRESPONDENCE COURSES AVAILABLE TO SEAMEN

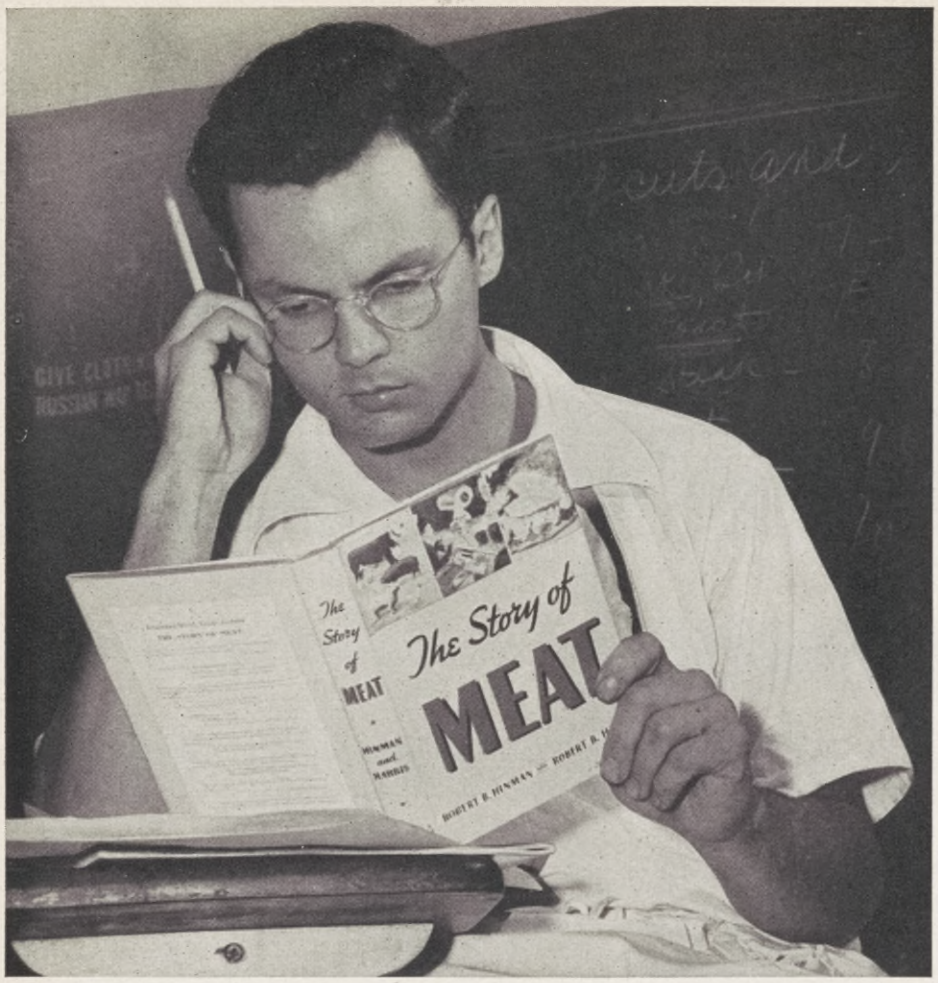
Subjects which are now available to seamen include the following subjects:

*Deck*:
- Elementary Navigation.
- Advanced Navigation.
- Handling and Stowage of Cargo.
- Seamanship.
- Seamanship Studies for Young Officers.
- Maritime Law for Seamen.
- Ships Medicine Chest and First Aid at Sea.

*Engine*:
- Elementary Marine Engineering.
- Marine Steam Engineering.
- Internal Combustion Engines.
- Fire Room Subjects.
- Engine Room Subjects.
- Marine Refrigeration.
- Gas Welding.
- Marine Electricity.
- Mechanical Drawing.
- Blueprint Reading.
- Electric Welding.
- Ships Machine Shop.

*Miscllaneous*:
- History of the United States.
- High School Mathematics.
- Practical English.
- Arithmetic.
- Algebra.
- Plane Geometry.
- Plane Trigonometry.
- Preparatory Mathematics for Navigation.
- Preparatory Mathematics for Handling and Stowage of Cargo.
- Preparatory Mathematics for Engineering.
- Principles of Mechanics.
- Elements of Physics.

All applications should be submitted on Forms 33 and 33A provided by the United States Maritime Service. These forms can be obtained at any one of the United States Maritime Service Enrolling Offices or by addressing a request to the Office of the Commandant, United States Maritime Service, Washington 25, D. C.




## UNITED STATES MARITIME SERVICE COOKS AND BAKERS UPGRADE SCHOOLS

According to Napoleon an army travels on its stomach. The adage holds true for the men of the merchant marine. Food, properly planned and prepared with skill and knowledge, appetizingly served, will be a big factor in keeping a crew healthy and satisfied.

United States Maritime Service Upgrade Schools have been established for cooks and bakers, with that idea in mind . . . to provide a steward's department qualified to serve good food aboard our merchant ships.

The regulations governing the enrollment of men for the Cooks and Bakers Schools are relatively simple. Men who possess the following qualifications will be enrolled for the upgrading courses:

(1) Possess proof of citizenship.

(2) Certificate of Identification and Certificate of Service.

(3) Pass a physical examination.

(4) Possess sufficient discharges signed by the Chief Steward supporting the minimum sea time required.

Men enrolled for the Cooks and Bakers course will be rated as Stewards Mates (2d class). Pay, based on that rating, is $54 per month with $3 per day allowance for meals and quarters, a total of $144 per month.

It is easy to enroll for Upgrading Training in the United States Maritime Service Upgrade Schools. Enrolling offices are located in all of the important coastal ports. Applicants are urged to bring all necessary papers when seeking an interview with the enrolling officer.

Railroad fare and meals from the point of enrollment to the upgrade school are paid by the Federal Government. No uniforms are provided. However, necessary textbooks, etc., are furnished enrollees during the training course period.

### COOKS AND BAKERS TRAINING OUTLINED

The United States Maritime Service Cooks and Bakers Upgrading Training Course is complete. Every facility

FINISHED BAKED GOODS. Instruction by experienced bakers makes these tasty pastries etc., possible.

FRUITS AND VEGETABLE preparation to make varied menus aboard ship

used aboard ship is provided to enable enrollees to acquire a thorough knowledge of food and its preparation.

Important subjects covered in the training course include the following:

Bills of fare.
Meats, study of.
Salads and their preparation.
Vegetables and their preparation.
Pastries and their preparation.

Every subject covered in the course of training combines the academic and practical method. This course of study enables the future chief cook to obtain a thorough knowledge and understanding of his duties aboard ship. He learns the chemical reaction caused by salt water upon yeast when used as a substitute for fresh water. Charts which show the important parts of a steer, hog, lamb, or poultry and correct methods of severing and preparing roasts, stews, fries, etc., are studied and explained in lecture courses by competent instructors.

Much emphasis is placed upon salads and their preparation. Native foods and fruits which may be purchased in various ports throughout the world are studied because it offers the steward an opportunity to vary diet and take advantage of native products available in local markets.

Pastries including pies, cakes, rolls, cookies are prepared in the classes and the results analyzed. The practical phases embodied in the course of training enable enrollees to learn their weaknesses and correct inherent baking and cooking faults.

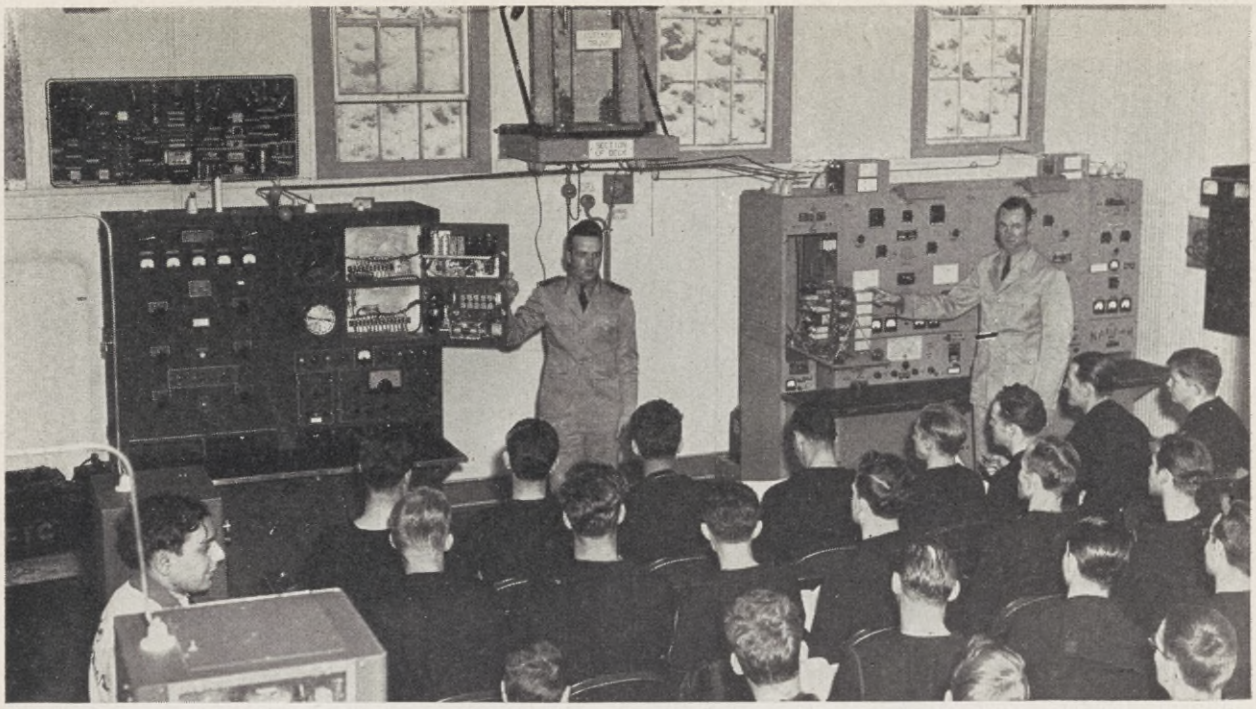
## U. S. MARITIME SERVICE APPRENTICE GRADUATES

Graduates or men already enrolled in the United States Maritime Service will be recalled to active duty with the pay and grade of Stewards Mate (2d class).

## LENGTH OF TRAINING

The Cooks and Bakers course of upgrade training varies from 6 to 8 weeks. Failure of enrollees to report for instruction will result in pay deductions based on the number of days absent. Time spent in attendance at the U. S. Maritime Service Cooks and Bakers Upgrade School does not count against furlough time ashore permitted under Selective Service regulations.

APPETIZING MENUS are taught by able and experienced instructors



Radiomarine hookups complete in every detail have been installed

## UNITED STATES MARITIME SERVICE RADIO TRAINING SCHOOLS

The United States Maritime Service Radio Training course was established to provide an adequate source of trained radio operators for the vessels of our merchant fleet. Radio operators are specialists aboard ship. They are usually accorded the privileges extended to officers and are furnished quarters and messing facilities commensurate with their position.

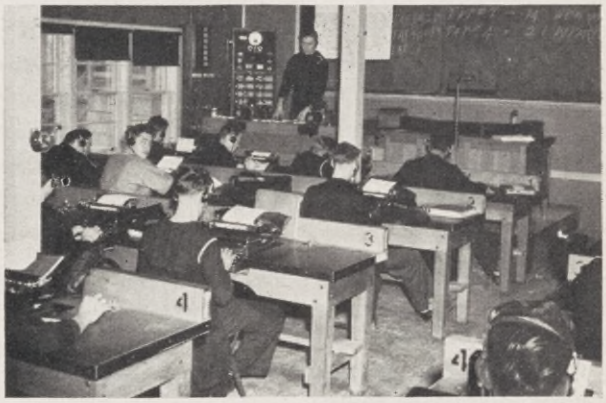
Enrollees of the United States Maritime Service who successfully complete the radio training course at Gallups Island are qualified to sit for examination as Second Class Radio-Telegraphers. Holders of second-class operators licenses, temporary limited licenses, graduates of commercial radio schools, radio amateurs, as well as inexperienced men who desire careers in this branch of the seafaring profession are accepted for enrollment.

Gallups Island Radio Training Station has attained recognition as one of the outstanding schools of its kind. The school is equipped with the most modern equipment and facilities for instruction purposes.

To meet the new and increased demands of the shipping industry for radio operators, the U. S. Maritime Service Training Station, Hoffman Island, N. Y., has been recently converted to a radio school to supplement the facilities of Gallups Island. Hoffman Island was the first Maritime Service Training Station to be established.

The standard marine radio installation laboratory comprises at least one of each type of radio equipment now being installed aboard vessels constructed by the United States Maritime Commission. It contains crystal-controlled intermediate and high frequency transmitters, superheterodyne sets, radio direction finding equipment, standby equipment, lifeboat transmitting and receiving equipment, small craft radiotelephone equipment and radio accessories.

The training staff stationed at the schools comprises specially selected commissioned and non-commissioned United States Maritime Service personnel thoroughly qualified to supervise and instruct the course of training which has been established at these schools.



A class at work receiving in code

Practical laboratory instruction supplements the theoretical instruction throughout the course. The academic part of the course presents the enrollee with a complete and comprehensive understanding of the basic principles of radio. Special emphasis is placed upon code sending and receiving.

Subjects included are:

Mathematics.
Fundamentals of Electricity.
Magnetism.
Direct Current Starting and Controlling Equipment.
Capacitance.
Turned Circuits-Resonance.
Vacuum Tubes.
Detectors.
Transmitters.
Radio Telephony.
Marine Receivers.
Auto Alarms.
Spark and Arc Transmitters.
Wartime Radio Procedure.
Ohm's Law.
Storage Batteries.
D. C. Generators and Motors.
A. C. Circuits.
Power and Audio - Frequency Transformers.
Rectifiers, Filter Systems, Voltage Dividers.
Oscillators.
Antennas and Coupling Systems.
Superheterodyne Receivers.
Direction Finders.
Marine Transmitters.
Practical Shop Practice.

The practical course of instruction includes the use and care of tools, drilling, tapping, wire splicing, soldering, transmitter assemblies, and the maintenance, operation, adjustment and servicing of radio equipment.

An important part of the radio operator's duties aboard ship is the responsibility for maintenance and servicing of all radiomarine equipment installed.

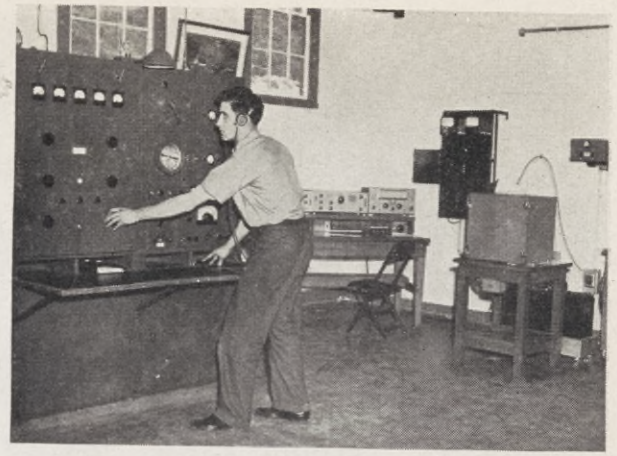
The phonetic method of code instruction is employed. The enrollee is taught to recognize the actual sound of the signals rather than by memorizing the dot and dash equivalents. The touch system of typing is taught. The most modern types of automatic code transmitting devices are employed for reception, insuring accurate receiving within the accepted speed limits.

During the latter part of the course, the enrollees stand actual watches. Students operate the equipment used aboard ship, keep up the radio logs and learn how to handle the radio weather signals, hydrographic reports, time signals, broadcasts and techniques of ship-to-ship and ship-to-shore operations in use.

Men who finish the prescribed course of training are awarded United States Maritime Service diplomas in recognition of their attainment.

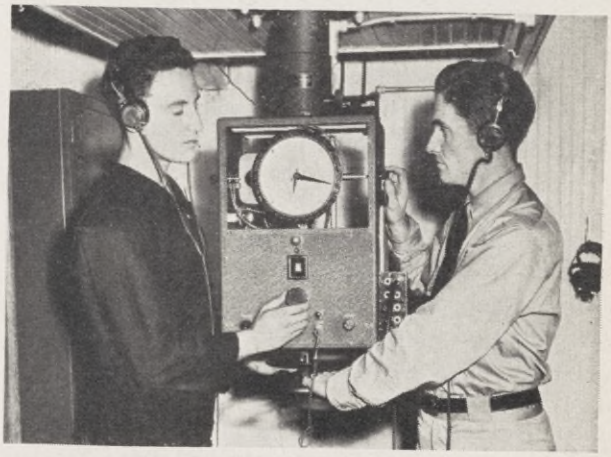
Due to the accelerated course of instruction, graduates are offered a suitable Maritime Service Institute correspondence course in radio theory to enable them to prepare themselves for the Federal Communications Commission license examination.

Upon graduation, the enrollee is advanced to the grade of Radioman (3rd class) or Warrant Radio-Electrician.



Complete ship radio equipment installation including ship to shore sets, radio direction finders, signal and fire alarm controls

Repair technique is important. Each enrollee is provided with complete repair kits to use in working on equipment used on ships



Instructor teaching enrollee method of using ship's radio direction finder for taking bearings

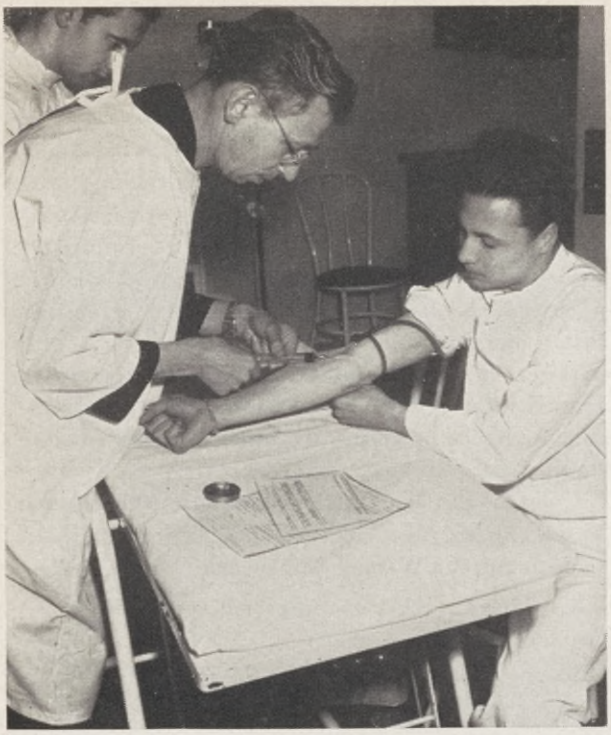
Artificial respiration on a mass scale. This vital training is given every United States Maritime Service "boot"

## UNITED STATES MARITIME SERVICE ASSISTANT PURSER-HOSPITAL CORPS SCHOOL

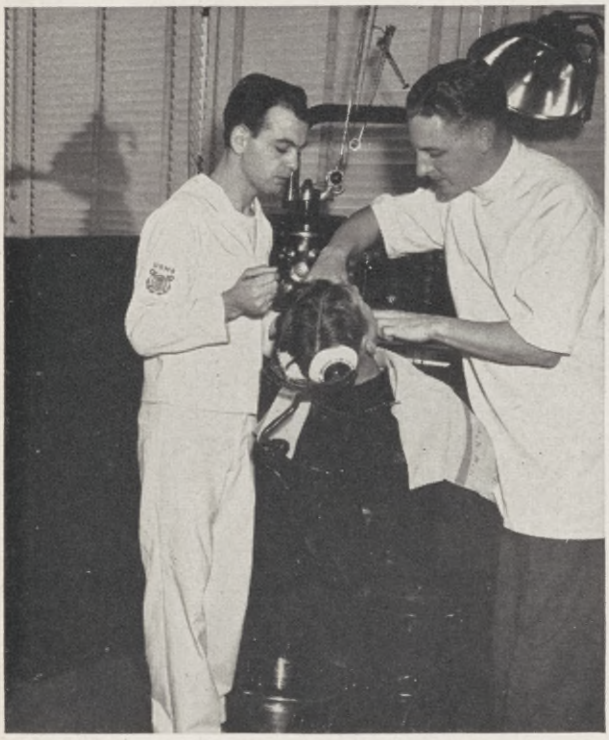
The present global war which the United States is waging has revolutionized many practices that hitherto were neglected or unthought of. Vessels of our merchant marine now visit ports that have been built overnight. Much of the supplies they carry are transported to islands lying in the equatorial zone where jungle fevers and diseases, foreign to more temperate climes abound.

The development of the aeronautics and submersible instruments of warfare has wiped out the freighter's immunity to attack while at sea and made the vessel a ready prey of enemy forces. Port loading and unloading procedure has changed and is now a matter of hours where formerly the handling of cargo required days. Yet, our quarantine rules have not been changed and a "letter of pratique" giving clearance to a vessel is more important today than ever before.

The United States Maritime Service Assistant Purser-Hospital Corps course of training was adopted to meet the new developments in the merchant marine industry. The United States Maritime Service Assistant Purser-Hospital Corps School located at Sheepshead Bay, N. Y., prepares carefully and thoroughly trained personnel to handle the duties of ship's clerk and pharmacist's mate aboard ship. An enrollee who has successfully completed the 26 weeks' training course is qualified to act as a health and sanitation officer whose value in obtaining quick port clearances and avoiding shipping delays cannot be exaggerated. His knowledge of anatomy, nursing and pharmaceutics enables him to maintain a healthy condition among the crew members and pursue the necessary practices to avoid spread of germs or disease.



**Blood test. Physician makes test while enrollee observes method used**



**Clinical experience. Enrollees are assigned to definite duties assisting medical staff as internes**

The present Assistant Purser-Hospital Corps School at Sheepshead Bay, N. Y., is the first school of its kind established for the merchant marine, although schools of this character have existed in the United States Navy for some years.

Enrollees for the Assistant Purser-Hospital Corps School are carefully selected. A large percentage of the men enrolled have had college education, and many have previously attended pre-medical or medical schools or received practical nursing, medical or pharmaceutical training.

The training course established at Sheepshead Bay has received formal recognition from various State boards of education and accredits graduates for rating in regards to compensation status for men employed in industrial medicine.

The training course extends over a period of 26 weeks. Classes are divided into two groups, and consist of men who have had previous experience at sea in the Purser Department and men newly enrolled without previous experience. The former are not required to take the ship's clerk course, which lasts 6 weeks, and the entire course for these men is thereby shortened.

Like the other courses of training which the United States Maritime Service set up; the Assistant Purser-Hospital Corps training course combines practical experience with the academic and theoretical study. Major subjects covered in the training course include:

GENERAL:
- Typing.
- Physical Training.
- Boats and Boat Handling.
- Swimming.

SHIP'S CLERK:
- Pay-roll Accounting:
  - Mathematics Review.
  - Pay Time.
  - Basic Wages.
  - Voyage, Area, and Attack Bonuses.
  - F. O. A. B.
  - Withholding Tax.
  - Slop Chest.
  - Cash Book.
  - Cash Advances.
- Ship's Papers:
  - Articles.
  - Allotments.
  - Crew Lists.
  - Log Books.
  - Consular Work.
  - Signing On and Off.
  - Coastwise Shipping.
  - Entry and Clearance.

HOSPITAL CORPS:
- Anatomy.
- Physiology.
- Hygiene.
- Sanitation.
- Pharmacy.
- Clinical Procedure.
- Nursing.
- Emergency Treatment.
- Minor Surgery.
- Sick Call.

Boat handling and safety at sea instruction acquaints the enrollee with his duties in time of emergency at sea, when he is charged with the responsibility of providing lifeboat provisions, blankets, medicine and other items whose purpose is the comfort and well-being of

the survivors. The course of instruction for ship's clerk qualifies the enrollee to handle the duties of the ship's purser.

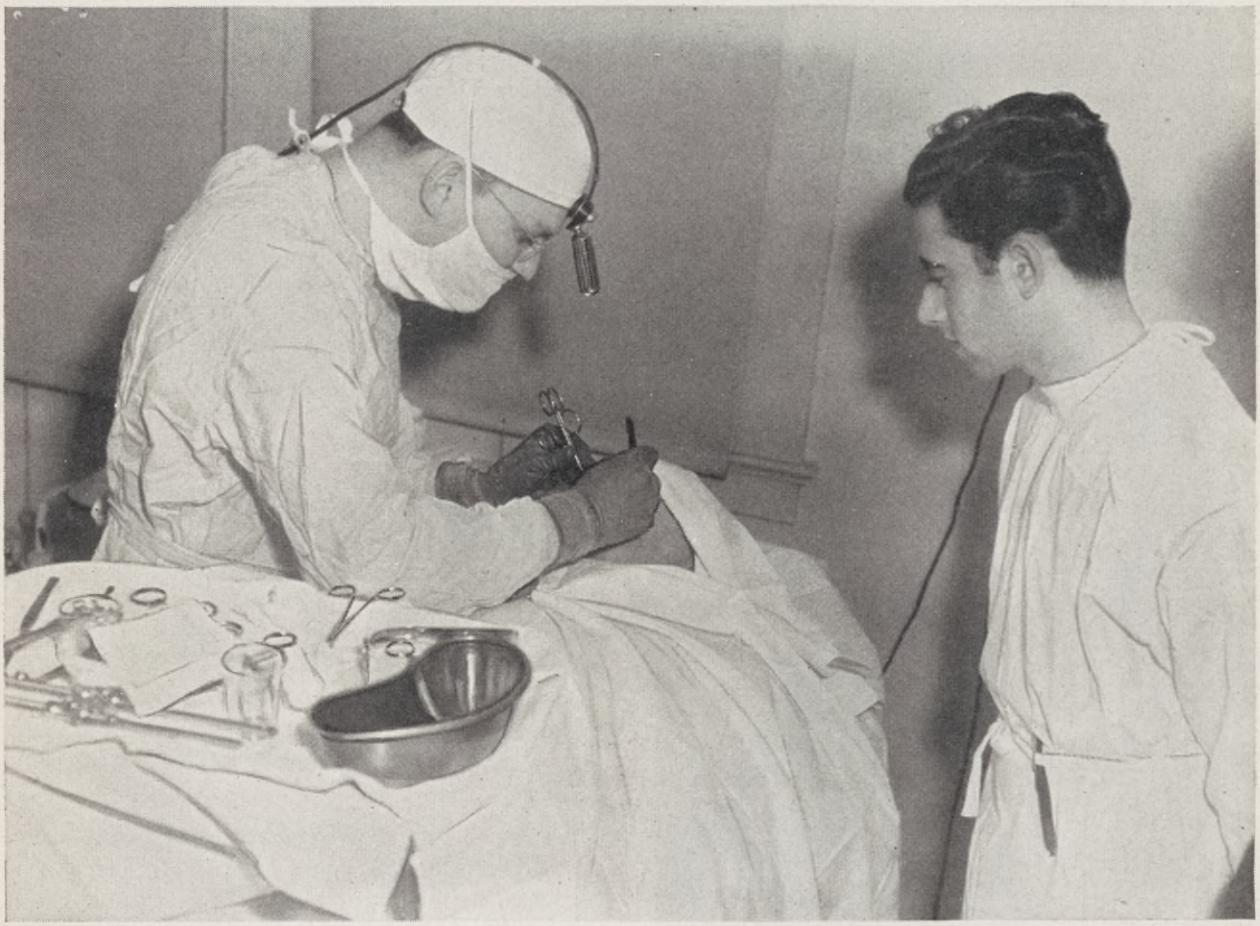
The hospital corps phase of training is thorough, combining academic study with practical instruction. The enrollee learns the basic parts of the human anatomy including the construction of the bones, nervous system, blood system and other organs. He is taught the proper methods of handling inoculations for the prevention of such diseases and fevers as typhoid, small pox, cholera, pneumonia and administration of morphine injections, etc.

Hygiene and sanitation are subjects which each enrollee must master to be able to qualify for graduation. Nursing and pharmacist's practice are other important parts of the training course.

Upon completion of the hospital school course, the enrollee is usually assigned to a United States Marine or approved hospital for further training and practical experience. During the month he is on assignment at the hospital he masters the essential techniques of efficient bedside nursing, medicine administration, pulse, temperature and blood recordings, and receives training in elementary pharmacy. He learns the approved methods of handling emergency cases admitted to the hospital.

Having successfuly completed his month of training at a hospital, the enrollee awaits assignment at a United States Maritime Service graduate station to a vessel. While at the graduate station, the enrollee familiarizes himself with the illness and accident forms used aboard ship, supply and medicine requisitions and miscellaneous duties.

Upon completion of the training course at the Assistant Purser-Hospital Corps School, the enrollee is advanced to the rating of a Warrant Ship's Clerk.



**Assistant Purser-Hospital Corpsman observes while U. S. Public Health Service officer performs tonsillectomy**

## ENGINEER TRAINING COURSES FOR MEN WITHOUT EXPERIENCE

Men who have had specialized training or experience in connection with the construction, maintenance, operation or repair of marine or stationary engines, *but are without sea experience,* will be considered for enrollment to become engineer officers aboard ship.

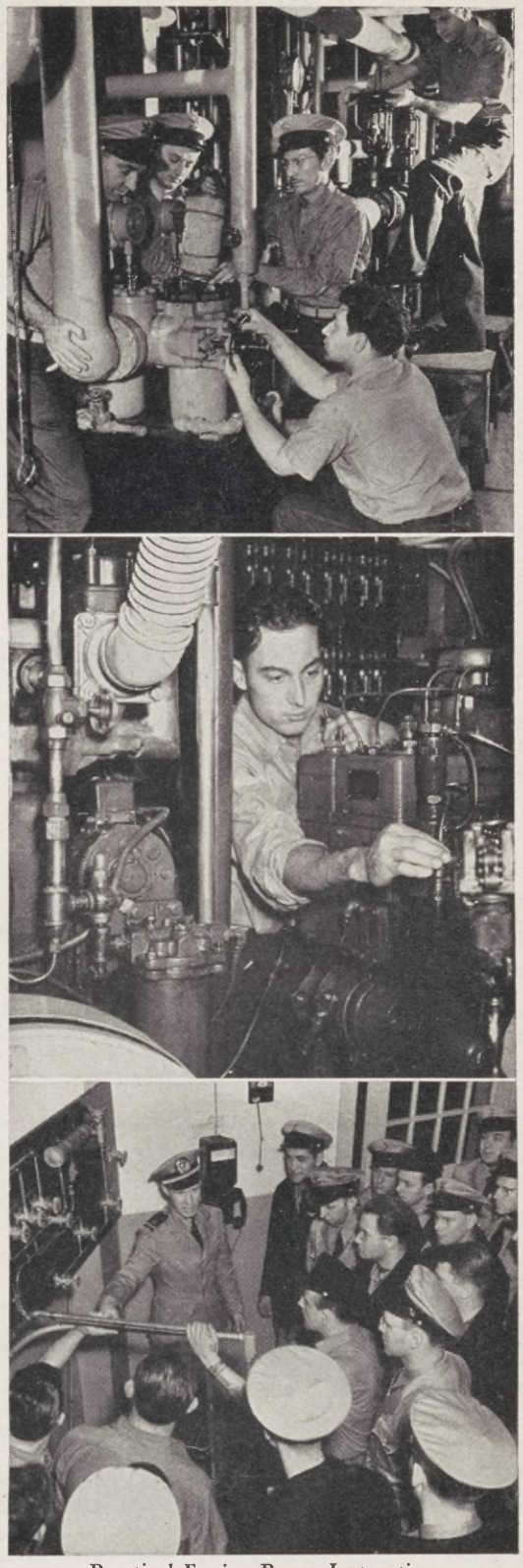
To qualify, men must be over 26 years of age and have qualifying experience as follows:

(a) Three years machinist trade apprenticeship, three months of which shall have been spent in construction, maintenance, *plus* 3 months' experience in construction, maintenance, and repair of marine engines and/or (b) completed a full 3 years' course in marine, mechanical or electrical engineering at an accredited school or college, or (c) have not less than 2 years experience as a *licensed* stationary engineer.

The experience of each applicant is accepted subject to the approval and endorsement of the Coast Guard Inspection Service. Men accepted for enrollment will be rated Fireman (2d class), and upon arrival at the training station will be advanced in grade to Chief Machinist's Mate (Acting).

All enrollees will be provided with transportation to the training station, unforms, textbooks, subsistence, and quarters. Basic pay while in training is $126 per month. Upon completion of the 6 weeks' training, some of which are spent aboard a training ship, enrollees are shipped via the Recruitment and Manning Organization of the War Shipping Administration for additional sea duty to enable them to qualify and sit for the examination prescribed for Third Assistant Engineers.

When the enrollee has successfully passed the Coast Guard examination he is licensed as a Third Assistant Engineer.



Practical Engine Room Instruction

# DIGEST OF REGULATIONS PRESCRIBING QUALIFICATIONS FOR U. S. MARITIME SERVICE TRAINING COURSES

| Minimum sea time required to qualify | Types of vessels | Minimum grade or capacity employed aboard ship | Rating obtained after successful completion of training course | Pay, etc., earned during course of training |
|---|---|---|---|---|
| **FOR MEN WITHOUT PREVIOUS SEA EXPERIENCE** | | | | |
| **APPRENTICE SEAMEN'S TRAINING COURSES** | | | | |
| None | None | | Seaman 2/c | $50 per month, plus food, lodging, uniforms and text books provided |
| **ENGINEER TRAINING COURSES** | | | | |
| MEN WHO HAVE COMPLETED 3-YEARS MARINE, MECHANICAL, OR ELECTRICAL ENGINEERING COURSES, OR POSSESS 3-YEAR MACHINIST TRADE APPRENTICESHIP | | | | |
| Of 3-year machinist trade apprentice. Must have at least 3 months in construction, or maintenance | None | | Third assistant engineer after minimum sea time specified by U. S. Coast Guard Merchant Marine Inspection Service | $126 per month. Food, lodging, textbooks and uniforms provided |
| MEN WITH NOT LESS THAN 2-YEARS EXPERIENCE AS LICENSED STATIONARY ENGINEERS | | | | |
| Must be an accredited school or college. Applies to 3-year engineering courses and not to stationary engineers | None | | Third assistant engineer after minimum sea time specified by U. S. Coast Guard Merchant Marine Inspection Service | $126 per month. Food, lodging, textbooks and uniforms provided |
| **FOR MEN WITH PREVIOUS SEA EXPERIENCE** | | | | |
| **ABLE-BODIED SEAMEN'S UPGRADE COURSES** | | | | |
| 30-DAY TRAINING COURSE | | | | |
| 6 months minimum experience in the deck department | Ocean-going, coastwise or Great Lakes vessels. Minimum 100 gross tons | Ordinary seaman | Able-bodied seaman | $66 per month plus $3 per day for food and lodging |
| 15-DAY TRAINING COURSE | | | | |
| 9 months minimum service in the deck department<br>or<br>Graduates of USMS training stations who have successfully completed Apprentice Seaman training course and possess minimum of 3 months' sea time in the deck department | Ocean-going, coastwise or Great Lakes vessels. Minimum 100 gross tons | Ordinary seaman | Able-bodied seaman | $66 per month plus $3 per day for food and lodging |
| **OFFICER-CANDIDATE TRAINING COURSES** | | | | |
| 14 months' minimum service in the deck or engine departments | Ocean-going, coastwise or Great Lakes vessels. Minimum 100 gross tons | Ordinary or able-bodied seaman or in the engine department as a qualified member | Third mate or third assistant engineer | $126 per month. Food, lodging, textbooks and uniform furnished |
| **COOKS AND BAKERS UPGRADE COURSES** | | | | |
| 4 months' minimum sea time in steward's department | Ocean-going, coastwise, Great Lakes, lakes, bays, river or sound vessels; minimum 100 gross tons | Messman or utility man or second cook and baker in the steward's department | Cook and baker | $54 per month plus $3 per day allowance for quarters and subsistence |

| Minimum sea time required to qualify | Types of vessels | Minimum grade or capacity employed aboard ship | Rating obtained after successful completion of training course | Pay, etc., earned during course of training |
|---|---|---|---|---|
| **UPGRADE TRAINING COURSE FOR SECOND MATES** | | | | |
| 6 months' minimum sea time while holding license as third mate | Ocean-going, coastwise or Great Lakes vessels. Minimum 100 gross tons | Third mate | Second mate | See page 50 for schedule of pay scale |
| 12 months' minimum sea time in the deck department | .....do..... | Assistant (junior watch officer) to the officer in charge of the watch | .....do..... | Do. |
| **UPGRADE TRAINING COURSE FOR CHIEF MATES** | | | | |
| 6 months' minimum sea time while holding license as second mate | Ocean-going, coastwise or Great Lakes vessels. Minimum 100 gross tons | Second mate | Chief Mate | See page 50 for schedule of pay scale |
| 12 months' minimum sea time while holding license as second mate | .....do..... | Third mate | .....do..... | Do. |
| 6 months' minimum sea time while holding license as master | Great Lakes | Master | .....do..... | Do. |
| 12 months' minimum sea time while holding license as master | Lakes, bays and sounds | Master | .....do..... | Do. |
| **UPGRADE TRAINING COURSE FOR SECOND ASSISTANT ENGINEERS** | | | | |
| 6 months' minimum sea time while holding license as third assistant engineer | Steam vessels in any waters, minimum 100 gross tons | Third assistant engineer | Second assistant engineer | See page 50 for schedule of pay scale |
| 3 months' minimum service in the engine department of steam vessel | .....do..... | Qualified member of engine department and holding 2nd assistant engineer (motor) license | .....do..... | Do. |
| **UPGRADE TRAINING COURSE FOR FIRST ASSISTANT ENGINEERS** | | | | |
| 6 months' minimum service in the engine department while holding license as second assistant engineer | Steam vessels in any waters, minimum 100 gross tons | Second assistant engineer | First assistant engineer | See page 50 for schedule of pay scale, etc. |
| 12 months' minimum service in the engine department while holding license as second assistant engineer | .....do..... | Third assistant engineer | .....do..... | Do. |
| 3 months' minimum service in engine department while holding license as 1st assistant engineer (motor) | .....do..... | First assistant engineer (motor) | .....do..... | Do. |

Age limits subject to revision. Present requirements are 17 to 35 years. Men 17 to 50 accepted for enrollment in the stewards, departments. All are subject to passing the U. S. Maritime Service physical examination, and must not have received notice to report for induction.

Upon completion of basic training at USMS Training station, selection is made for advanced apprentice seaman training in Deck, Engine, Radio, Hospital Corpsman-Assistant Purser and Steward departments.

Men on active duty in the United States Maritime Service receive base pay, rental and subsistence with dependents' allowance according to their commissioned grade.

# REGULATIONS ON APPOINTMENTS

## OF UNITED STATES MARITIME SERVICE OFFICERS

*Qualifications.* (a) An applicant for appointment in the deck or engine branch must be a licensed officer of the United States Merchant Marine, and must be serving on a vessel of not less than 1,000 gross tons, which vessel has been documented under the laws of the United States.

(b) The applicant must be employed in connection with the seafaring profession in a capacity connected with the operation or management of ships of the United States Merchant Marine, or in connection with the training of personnel for said Merchant Marine, or the applicant's services must be desired for special duty.

(c) An applicant in the staff branch must be serving under a license or certificate issued by appropriate authority and so qualifying him for the rating.

(d) An applicant, aboard ship, must have been employed in his present capacity for at least one year immediately preceding the filing of his application, unless considered otherwise qualified by the Director: *Provided, however,* That this requirement shall not apply to graduates of schools under the supervision of the Administrator of the War Shipping Administration.

(e) During wartime, the applicant must agree, if requested, to take such extension and correspondence courses under such rules and regulations and upon such terms as the Director may prescribe.

(f) (*See table on page 63.*)

(g) Lower age limits are placed on original appointment or promotion to ranks as indicated below:

| | |
|---|---|
| Captain | 34 |
| Commander | 30 |
| Lieutenant Commander | 27 |
| Lieutenant | 23 |
| Lieutenant (jg) | 20 |
| Ensign or Warrant Officer | 19 |

(h) Waivers may be granted by the Commandant to allow the issuance of provisional promotion to cover the proper ranking as prescribed by paragraph (f). Such provisional promotion shall be effective only during such time as the position held requires such rank.

(E. O. 9054, 7 F. R. 837; E. O. 9198, 7 F. R. 5383).

E. S. Land,
*Administrator.*

February 29, 1944.

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"Heading out to sea!"

## (f) TABLE OF MAXIMUM RANK FOR APPOINTMENT

| Duties—Merchant Marine | Passenger vessels (A) 15,000 gross tons and over | Passenger vessels (A) 6,500 gross tons and over | Cargo vessels 5,000 gross tons and over and passenger vessels (A) 4,500 gross tons and over | Vessels under 5,000 gross tons |
|---|---|---|---|---|
| Deck and Engine Departments— | | | | |
| First Ranking Officer: | | | | |
| (Master and Chief Engr.) | Captain (B) | Captain | Commander (D) | Lieut. Comdr. (F). |
| Second Ranking Officer | Commander | Commander | Lieut. Comdr | Lieutenant. |
| Third Ranking Officer | Lieut. Comdr | Lieut. Comdr | Lieutenant | Lieutenant (J. G.). |
| Fourth Ranking Officer | Lieutenant | Lieutenant | Lieutenant (J. G.) | Ensign. |
| Fifth Ranking Officer | Lieutenant (J. G.) | Lieutenant (J. G.) | Ensign. | |
| Sixth Ranking Officer | Ensign | Ensign. | | |
| Chief Electrician and Chief Refrigerating Engineer (C). | Lieutenant (J. G.) | Lieutenant (J. G.) | Ensign. | |
| Second Electrician and Second Refrigerating Engr. (C). | Ensign | Ensign. | | |
| Third Electrician and Third Refrigerating Engr. (C). | Warrant Electrician | Warrant Electrician | | |
| Staff and Steward Departments: | | | | |
| Chief Purser and Chief Steward (E). | Lieut. Comdr | Lieut. Comdr | Lieutenant (I) (M) | Lieut. (J. G.) (K) (M). |
| Second Ranking Officer and Chef (E). | Lieutenant | Lieutenant | Lieutenant (J. G.) (J) (M). | |
| Third Ranking Officer and Sous Chef (E). | Lieutenant (J. G.) | Lieutenant (J. G.) | | |
| Fourth Ranking Officer | Ensign | Ensign. | | |
| Chief Storekeeper | Warr. Ships Clerk. | | | |
| Medical Department: | | | | |
| Senior Medical Officer (L) | Commander | Lieut. Comdr | Lieutenant (J). | |
| Junior Medical Officer (L) | Lieut. Comdr | Lieutenant. | | |

| Radio department | Holders of first class radiotelegraph license | Holders of second class radiotelegraph license (N) |
|---|---|---|
| Chief radio operator | Lieutenant (G) | Ensign (H). |
| Second ranking radio operator | Lieutenant (J. G.) | Ensign. |
| Third ranking radio operator | Ensign | Ensign. |

NOTES

(A) Ocean-going vessels licensed to carry 100 or more passengers and which normally engage in passenger carrying trade.

(B) One rank higher for masters after 10 years service as master on this class vessel.

(C) Ocean-engineer license or certificate of service as electrician or refrigerating engineer, qualified member engine department required. Appointment limited to electricians obtaining required service aboard turbo-electric drive or motor vessels, and to refrigerating engineers obtaining required service aboard vessels with refrigerated cargo holds.

(D) One rank higher for masters and chief engineers after 10 years service as master or chief engineers vessels 2,500 gross tons or over. In no case shall chief engineers wear the insignia of a higher rank than that worn by the master.

(E) Chef and sous chef on passenger vessels 15,000 gross tons or over only.

(F) One rank higher after 10 years service as master or chief engineer vessels over 2,500 gross tons. Two ranks higher after 15 years service as master or chief engineer vessels over 2,500 gross tons. In no case shall chief engineers wear the insignia of a higher rank than that worn by the master.

(G) Five years service as chief or sole operator required, to be obtained while holding first-class license.

(H) After 1-year service on first-class radio telegraph license one rank higher.

(I) One rank lower unless 3 years service this capacity aboard this class vessel is obtained.

(J) Passenger vessels only.

(K) Off-shore and inter-coastal trades only. One rank lower unless 3 years service this capacity aboard vessels 2,400 gross tons or more secured, or if service this capacity is secured aboard vessels under 2,500 gross tons.

(L) License to practice medicine issued by State or Territory of the United States required.

(M) Service on Great Lakes and inland waterways not acceptable.

(N) Holders of temporary limited licenses one rank lower.



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