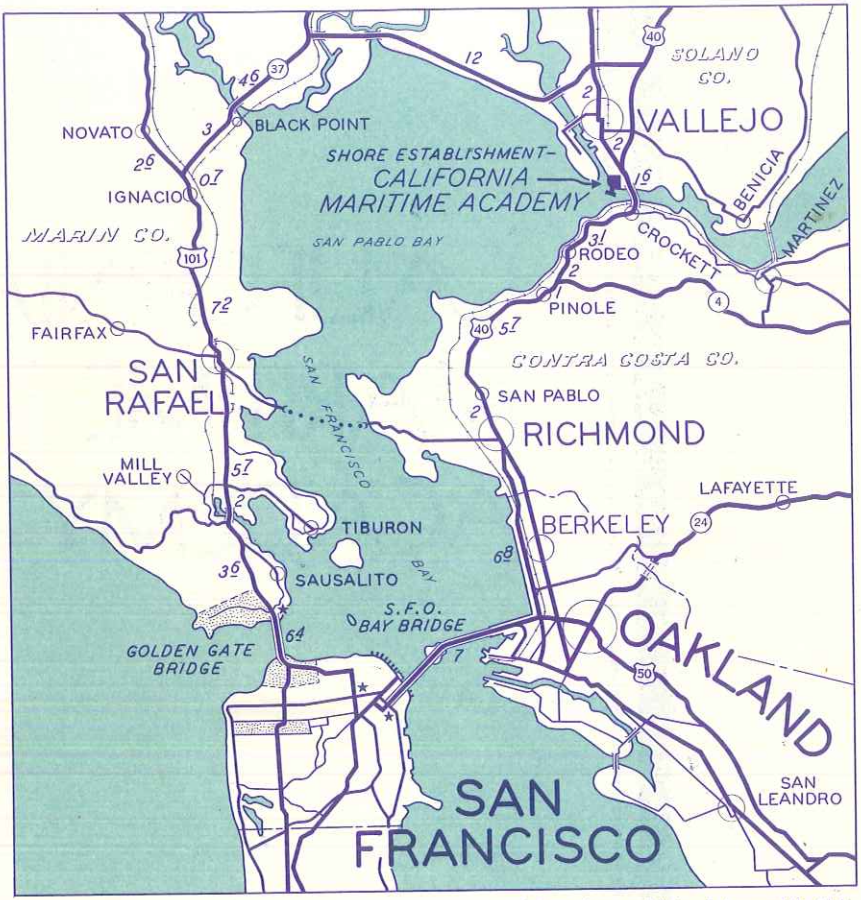
1941

CALIFORNIA MARITIME ACADEMY

OFFICE OF THE SECRETARY
SAN FRANCISCO

FORMERLY THE
CALIFORNIA
NAUTICAL
SCHOOL



Map—Courtesy National Automobile Club

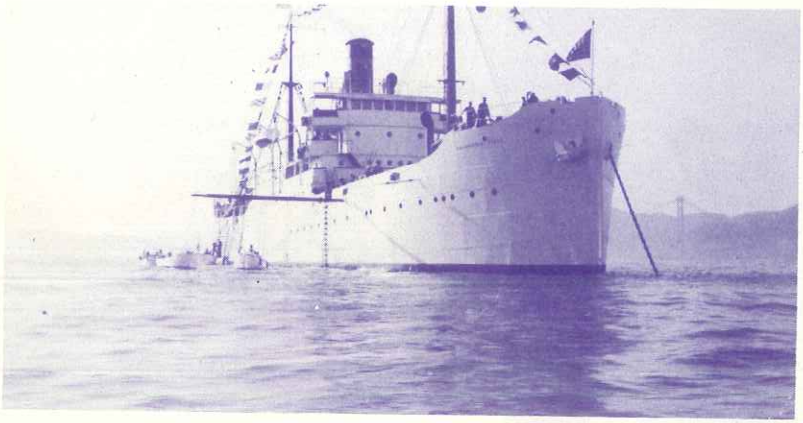
LOCATION

The shore establishment of the Academy is located in Solano County, within a forty-five minute drive of San Francisco and a five minute drive of the City of Vallejo. Located almost adjacent to Highway 40 and directly west of the north approach of Carquinez Bridge, transportation facilities are excellent.

Visitors are welcome on the Ship and Base on Saturday and Sunday afternoons from 1 to 4 p.m. Parents of cadets may visit the Academy at their pleasure. However, cadets are not excused from studies or duty to entertain visiting relatives or friends during class or duty periods.

All requests for information and applications for admission should be addressed to the Secretary, California Maritime Academy, 515 Van Ness Avenue, San Francisco.

Likewise communications for the Superintendent and other personnel of the Academy should be mailed to the California Maritime Academy, 515 Van Ness Avenue, San Francisco, California.



California Maritime Academy

FORMERLY KNOWN AS THE

CALIFORNIA NAUTICAL SCHOOL

STATE OF CALIFORNIA

CULBERT L. OLSON, Governor

DEPARTMENT OF EDUCATION

WALTER F. DEXTER, Director of Education

BOARD OF GOVERNORS

Robert Henderson, Captain, U. S. N. (Ret.), *Chairman*
Joel A. Burkman, *Vice Chairman*
Robert H. Fouke
Robert B. McPherson
William Rogers, Jr.
Walter F. Dexter, *Executive Member*
Carl Cleverdon, *Secretary*

OFFICE OF THE SECRETARY
California Building
515 Van Ness Avenue, San Francisco
California

SHORE ESTABLISHMENT
Morrow Cove
Vallejo, California

Foreword

The California Maritime Academy was established by legislation enacted in 1929 for the purpose of training young men for service as officers in the United States Merchant Marine. The Academy is financed by both Federal and State appropriations, the Federal Government having supplied a training ship and shore base, together with the necessary equipment.

The outstanding accomplishment of the California Maritime Academy is reflected in the list of its graduates who are now serving on board American ships as responsible officers, and the rapid advancement in licensed ratings. The value of the training and education received in this Academy becomes more apparent when graduates become eligible for higher licensed positions, due to the ever-increasing restrictions and requirements of the Federal Government. In the evolution of the Merchant Marine a point has been reached where a sound educational foundation is of paramount importance to the modern seaman who desires to forge ahead and become a captain or chief engineer on a large modern vessel.

As a result of the efforts of various governmental agencies to enlarge the United States Merchant Marine, there will be excellent opportunities for young officers who have been fortunate enough to graduate from the California Maritime Academy. It is believed the demand for these young officers will always exceed the supply—at least on the Pacific Coast.

Walter F Dexter

Director of Education

Introduction

Today, four State Nautical Schools are in operation, namely: New York Merchant Marine Academy, Fort Schuyler, Bronx, New York, successor to a nautical school established in 1875; Massachusetts Nautical School, 1893, Boston; Pennsylvania State Nautical School, 1919, Philadelphia, all furnishing two-year courses with the exception of New York, which school recently instituted a three-year course; and the present California Maritime Academy, on San Francisco Bay at Vallejo, established by legislation enacted by the State of California in 1929, offering a three-year collegiate course.

Sponsored by the C. C. Thomas Navy Post of the American Legion in 1928, the California Department of the American Legion in 1929, and many local and State-wide groups, former Governor C. C. Young, upon being convinced of the merit of the project and the need for the school, on June 3, 1929, signed the "California Nautical School Act" authorizing the creation of the California Nautical School, now known as the California Maritime Academy, appointed a Board of Governors, and requested the Secretary of the Navy to make available a suitable Navy ship for schoolship purposes.

Annual cruises, lasting about four months, required not only for practical training purposes, but to enable the cadet graduate to secure a third mate's license upon graduation, are made each year.

Invaluable training and practical experience is thus afforded students to familiarize themselves with actual port facilities and conditions in foreign countries, and to act as ambassadors of good will on behalf of California and the United States in ports visited.

Licenses as Third Mates or Third Assistant Engineers, a Bachelor of Science degree and Commissions as Merchant Marine Ensigns, U. S. Naval Reserve, are awarded to graduates.

However, it must be noted, that, with the exception of the other nautical schools, the academic standards, courses, and scholastic, physical and mental requirements, living, and other conditions must necessarily be more rigid and different than in the average institution of collegiate grade. Greater risk and responsibility for life and property upon graduation make such different standards and requirements imperative rather than merely discretionary, regardless of wishes to the contrary.

Estimates received indicate that about 80 per cent of all officers on American vessels have received no systematic training. In fact, only 10 per cent are graduates of State nautical schools whereas most of the officers of foreign nations are graduates of nautical schools.

Nautical schools maintained by other foreign nations include: Italy, 17; Norway, 15; Japan, 10; Holland, 12; France, 11; Sweden, 5; and Denmark, England and Germany, with 6, 4, and 2 schools, respectively, also maintain municipal and private nautical schools in large numbers.

The State of California contributes but approximately 40 per cent of total school costs, students 17 per cent (board, room, clothing, etc.) and the Federal Government 43 per cent in the form of an annual cash grant of $25,000 plus expenses for overhauling the ship each year.

Efficient training, superior to much of the training elsewhere, is provided by the California Maritime Academy at a cost of approximately one-half, and in some cases one-fourth, of the cost of similar and even inferior training. When other factors are included this cost differential is even much greater. The above facts indicate that the need for a trained merchant marine officer personnel was never greater than today.

Improvement in existing facilities will enable the California Maritime Academy to carry out one of its primary purposes and thereby more effectively and efficiently procure, educate and train a superior type of licensed merchant marine officer.

Young men must be trained in the science and practice of navigation, seamanship and marine engineering, for the purpose of making them capable and efficient officers of the American Merchant Marine in the future.

IN VIEW OF WORLD CONDITIONS AND PAST EXPERIENCES, IT IS IMPERATIVE THAT WE EDUCATE AND TRAIN OUR AMERICAN YOUTH TODAY TO MAN AND DEFEND OUR MERCHANT MARINE TOMORROW.

CALIFORNIA MARITIME ACADEMY

ADMINISTRATION

SUPERINTENDENT
CLAUDE B. MAYO, CAPTAIN, U. S. N. (Ret.)

SECRETARY
CARL CLEVERDON

Training Ship CALIFORNIA STATE

OFFICERS AND FACULTY

DECK DEPARTMENT

EXECUTIVE OFFICER
MR. BENNETT M. DODSON

DECK OFFICERS

MR. EDWIN C. MILLER
MR. MADETT N. ENGS
MR. CHESTER H. TUBBS

ENGINEERING DEPARTMENT

CHIEF ENGINEER
MR. RICHARD C. DWYER

ENGINEER OFFICERS
MR. DAVID WARWICK
MR. JOSEPH R. SHAFER

SUPPLY OFFICER
MR. JARRETTE M. CADWELL

MEDICAL OFFICER
SUBJECT TO ANNUAL CHANGE

COMMUNICATIONS OFFICER
MR. ELBERT L. ROBBERSON

Message from the Superintendent

CAPT. CLAUDE B. MAYO, U. S. N. (Ret.)
Superintendent

Your California Maritime Academy trains young men from the State for service as officers of the Merchant Marine. Its mission is to graduate good Third Mates and Third Assistant Engineers. We feel that the proper accomplishment of this mission is of no small importance to California.

Sea-borne commerce has from the beginning played a large part in the commercial and economic welfare of this State. Your California Maritime Academy does something more. It gives to California youths a splended opportunity for the earning of a good living in a profession which is steadily assuming greater importance in the economic system of the Nation. That this has already been recognized is proven by the creation of a Maritime Commission with an original construction program of $2,500,000,000 now greatly augumented.

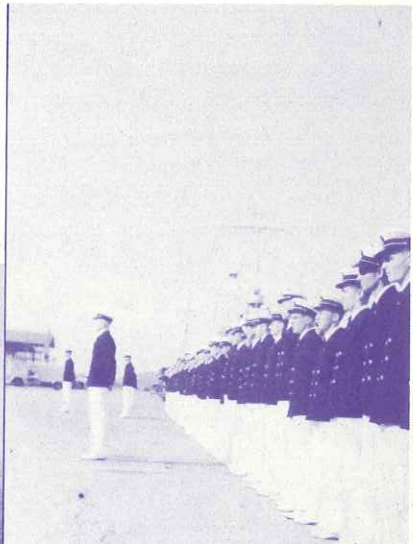
By the end of 1942 the Commission states that 317 fine fast vessels will be completed and delivered to American flag owners. Three thousand two hundred officers will be required to operate these ships in addition to the licensed personnel now available. The Maritime Commission's system of Cadet Training can not produce more than 75 of these officers; the four State training institutions only about 150 more at present capacity. Even when the emergency ceases to exist and in normal peace times, 1000 replacements per annum in young officer personnel will be needed. A scientific background is becoming more and more essential for our Merchant Marine officers if we are to meet foreign competition.

Our new ships are fast vessels, beautifully equipped, with the latest engineering, operational and navigational installations. Speed and economy require definite scientific knowledge of underlying principles on the part of ships officers. New electrical devices, steam, superheated, and at a pressure of 1200 pounds per square inch, are common features of our new ships. Our sea officers must know the basic theory of chemistry and physics as well as the practical operative routine of our American mechanical genius as expressed in these new installations if they are to be used to full advantage.

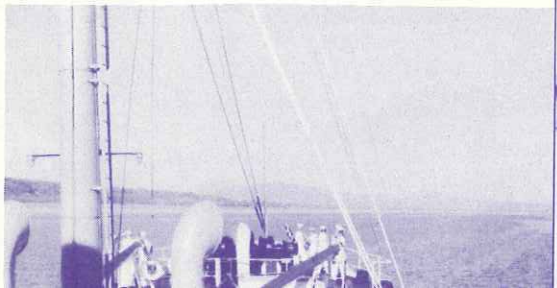
Thorough education for a California lad including uniforms, food, lodging, books, everything, costs him only about $300 per year. This is a privilege confined to California youth. If there are any vacancies, boys from other states may be admitted, but at a 66⅔ per cent advance in cost, or $500 per year.

In so far as one can predict in these moving times, the opportunity for instant employment (as now exists) at a substantial salary will increase rather than become less. Your Maritime Academy has earned a high place in the esteem of the shipping world. We welcome those of California's sons who desire to "go down to the sea in ships, to do business in great waters."

Cadets at Balboa, C. Z.



U. S. S. California Starting on its 1939 Training Cruise. Leaving San Diego, California



American Ambassadors of Good-Will

Visits to Foreign Ports

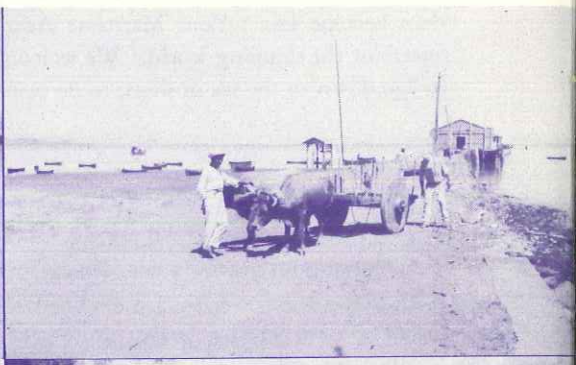
[Reading From Top Down]

(LEFT)

Street Scene, La Union, Salvador
"Where Do We Eat," La Union, Salvador
Not a Bathing Beach, La Union, Salvador
Shore Leave in Salvador

(RIGHT)

Scene in La Union, Salvador
"Sailors on Horseback"
Cadet Corps Assembly



The California Maritime Academy

PURPOSE

The California Maritime Academy is operated by the State of California, with the assistance and cooperation of various departments of the Federal Government, for the primary purpose of training and developing young men to become licensed officers of the U. S. Merchant Marine in a manner somewhat analogous to the methods employed in training midshipmen to become officers of the U. S. Navy.

The size, power, and speed of modern ocean-going ships and the growing importance of our Merchant Marine make mandatory the employment of intelligent and educated officers who have had sound basic training in understanding and handling the elaborate apparatus and devices used in navigating and in propelling various types of ocean-going vessels.

This Academy is organized to give that training, and furthermore, to develop in its students those qualities of obedience, initiative, leadership, loyalty, cooperation, and attention to duty which are so desirable and necessary in positions of responsibility.

ADMINISTRATION AND CONTROL

The Academy is a unit of the State Department of Education. A Board of Governors, composed of five members, four appointed by the Governor of the State of California, and the fifth being the State Superintendent of Public Instruction, is charged with the general operation, management and control of the institution.

ORGANIZATION

The active and immediate management and operation of the Academy is vested in the Superintendent, appointed by, and responsible to, the Board of Governors. The Superintendent is a retired U. S. Naval Officer, approved of by the Navy Department. The instructors are selected for qualities of practical experience and training in their specialties, their ability to impart their knowledge to the students, and their personality, including the ability to deal with young men without friction. These instructors in navigation and engineering subjects are all licensed officers of the U. S. Merchant Marine, and stand duty as such, both in port and while the Training Ship is on its training cruises.

The training of the Academy is separated into two main departments—the Deck Department and the Engineering Department. The corps of cadets

for matters of administration is divided into three "divisions" in charge of cadet officers and subdivided into "crews" in charge of cadet petty officers. These cadet officers and petty officers are chosen from the first class of cadets and because of their demonstrated fitness for these duties.

The course of instruction at the Academy is approximately three years, the cadets entering early in August and graduating in late June of the third year following. After the cadets have had some experience in both deck and engineering duties, each is permitted to select the branch he wishes to make his specialty. Throughout the courses of instruction a constant effort is made to develop in cadets such qualities as obedience, leadership, initiative, and attention to duty, and to that end each is given individual responsibilities in the training ship and the Academy organization commensurate with his experience and ability.

All of the work of maintaining and operating the Academy and the training ship is done by the cadets. This gives them the practical experience and knowledge which later, as licensed officers, will qualify them to direct and supervise similar work on board their ships. The saying "He who is not able to perform the duties of a seaman is not fit to be an officer" is appropriate to this School. The work is not easy, especially during the first year at the Academy. The discipline is strict but not over-exacting, and is maintained partly with a view of training the students to adjust themselves to the entirely new and restricted environment of living on board ship and of having to maintain orderly habits. Only young men who seriously intend

Boat Racing

to become licensed officers of the American Merchant Marine, and who are willing to undergo the apparent inconveniences of that profession are welcome at this institution. Because of the close contact of students with many others, a high standard of personal conduct is necessary and is expected.

Candidates who are not rugged in physique and able to work under trying conditions and to endure the general privation of a seafarer's life, which may also include long periods of confinement on shipboard, should not embark on a career at sea.

By congressional action, all cadets who qualify are permitted to enroll as Merchant Marine Cadets, U. S. Naval Reserve, and it is the policy of the Academy that such procedure be followed. After graduation and after having served as licensed officers on acceptable ships for three months they are qualified to become Merchant Marine Ensigns, U. S. Naval Reserve.

The *California State* is equipped with modern navigational and marine engineering devices, machine shop equipment and facilities, power, sailing and pulling boats, complete surgical equipment, modern laundry facilities, and radio equipment capable of world-wide communication. Nearly a quarter of a million dollars was expended in adapting the *California State* to its purpose as a training ship, and it now has comfortable accommodations including separate berthing, messing and recreation compartments for 132 cadets. A modern galley or kitchen is equipped with ample facilities for cooking and special attention is given to supplying cadets with abundant, wholesome food. The ship is 261 feet long and of 4500 tons displacement with a speed of 10 knots and a fuel oil capacity to enable it to cruise over 10,000 miles without refueling.

The Training Ship is used for annual cruises of about four months' duration. The itineraries of these cruises vary from year to year and are selected with the dual purpose of giving cadets the maximum amount of practical experience in the time available and of varying the waters and ports to be visited. In past cruises, the *California State* circumnavigated the globe, rounded South America, visited East Coast, Hawaiian, Samoan, Austrialian, and practically all available California ports.

The new shore establishment, now under construction at Morrow Cove, will have adequate classroom facilities, wharfage for the Training Ship and a small-boat basin, an additional machine shop, an electrical shop, a foundary, a sail-loft, an engineering laboratory, a drill ground and ample athletic and recreational facilities.

ADVANTAGES OF THE ACADEMY

The life of a Merchant Marine officer is not an easy one, and is subject to many and various inconveniences and even discomforts. Before a young man decides that he wants to become a Merchant Marine officer he should be quite sure that he is adapted to a sea-faring life and that he has the stamina to withstand its hardships. Having decided that he wants to become a Merchant Marine officer,

this Institution is the most direct route available to accomplish that ambition and the training and education received here will fit him not only for his first license as a deck officer or engineer, but for rapid advancement at sea and ashore.

FUTURE EMPLOYMENT OPPORTUNITIES

Upon graduation, cadets are licensed by the United States Bureau of Marine Inspection and Navigation as Third Mates or Third Assistant Engineers for unlimited tonnage on any ocean.

Several sources for securing employment are available.

The United States Maritime Commission has adapted the policy of enrolling graduates of State nautical schools as Cadet Officers. They are assigned to various ships of commercial steamship companies, the United States Coast and Geodetic Survey, and the United States Army Transport Service. While serving as Cadet Officers under the Maritime Commission they receive a salary of $75 per month with maintenance. They are quartered with the senior officers of the ships. Promotion to Third Officer or Third Assistant Engineer may be expected within approximately six months, at an average salary of $150 per month.

Some steamship companies seek graduates directly as junior officers at starting salaries averaging about $110 per month. The average graduate may expect to be promoted to Third Officer or Third Assistant Engineer within two to six months with an average salary of about $150.

Promotions and salaries thereafter vary somewhat with economic conditions and by the size and power of the vessel.

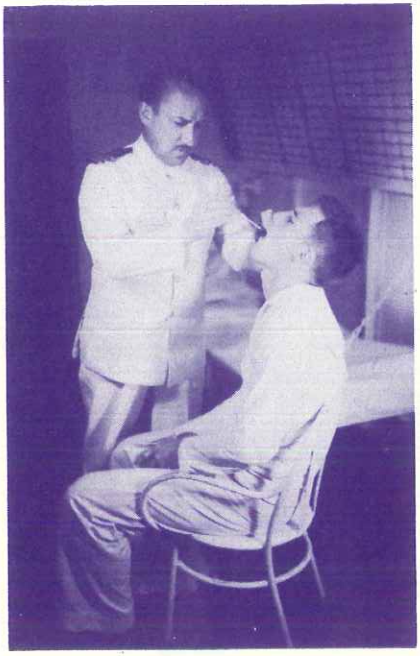
Approximate salaries for the average size cargo-passenger combination vessel are as follows:

	Per Month
Master	$400–$500
Chief Officer	215– 250
First Officer	190– 225
Second Officer	165– 200
Third Officer	150– 175
Junior Officer	115– 130
Chief Engineer	315– 350
First Assistant Engineer	215– 250
Second Assistant Engineer	190– 225
Third Assistant Engineer	165– 200
Fourth Assistant Engineer	150– 175
Junior Engineer	115– 130

Salaries on large liners are higher; on smaller vessels they are slightly lower. Various bonuses may increase the foregoing 25 per cent and more.

PROMOTION

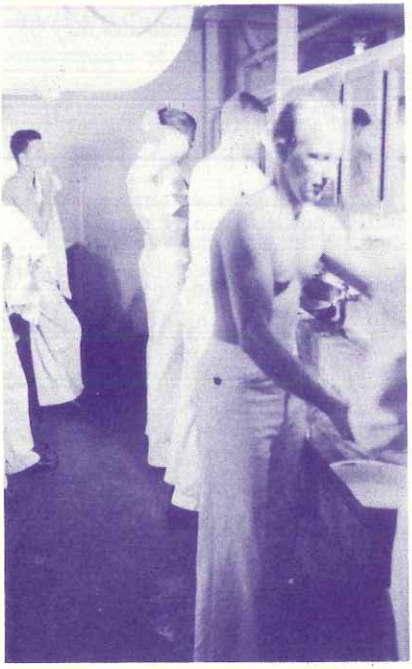
Promotion to officers of the Merchant Marine, and later to shore positions connecting to ocean shipping, is dependent upon personal qualifications and attendant conditions of employment. In general, promotion of graduates of nautical schools has been quite rapid. The vast increase of ships being constructed during the next 10 years tends to make for rapid promotion.



Health

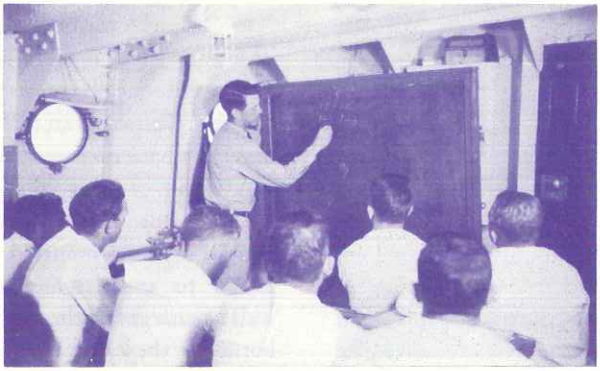
Ordinary medical service, both in port and at sea, is furnished the cadets gratis. Hospital services are furnished by the United States Public Health Service where such service is available.

In all cases of emergency, cadets will be sent to the nearest hospital, and all expenses incurred for transportation to and from the hospital, as well as charges at the hospital, must be borne by the cadet concerned.



The State of California, its officers, agents, or employees, assume no liability, expressed or implied, for the result of sickness or accident involving personal injury to any cadet, whether incidental to ship or school duties, or otherwise.

ENTRANCE REQUIREMENTS



In accordance with the law, the Board of Governors of the California Maritime Academy has established the conditions under which students may be admitted into the Academy as follows:

They must be of good repute. Three letters of recommendation, preferably from school officials or employers, must accompany applications for admission. They must be male citizens of the United States, unmarried, and have a high school education, or its equivalent.

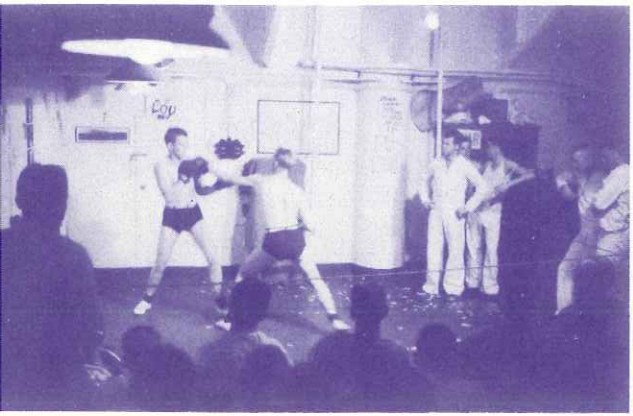
Upon entrance to the Academy they must be not less than 17 years of age, nor more than 25 years of age.

Applicants must be of normal size and weight, sound and robust in body and free from physical defects. Prior to admission to the Academy they may be required to present:

(a) Certificate of birth.
(b) Certificate of cowpox vaccination.
(c) Certificate of typhoid-paratyphoid inoculations.
(d) Certificate of dental surgeon showing teeth to be in sound condition.

Students must enter the Academy voluntarily with the fixed purpose of completing the course and serving in the United States Merchant Marine.

Before being admitted, applicants must pass a written examination in applied arithmetic; elementary algebra, including factoring and solution of simultaneous equations; applied plane geometry; English grammar and composition; United States history; civics; and general information. Spelling, penmanship and rhetoric will be considered in grading applicants.



Physical Requirements

The physical requirements for admission are based upon the standards of the United States Public Health Service and the United States Navy. Since all graduates are expected to become licensed officers of the United States Merchant Marine, and should become commissioned officers of the United States Naval Reserve, no waivers from these standards can be considered.

It is recommended that prospective candidates for admission be examined physically at home preliminary to making application for admission to the School. *PARTICULAR ATTENTION SHOULD BE PAID TO COLOR AND VISION ACUITY.*[1] This preliminary physical examination is for the information of the candidate only. A medical officer designated by the School will conduct the official medical examination. A fee of $3 will be collected at the time of the physical examination. The finding and decision of the designated medical officer will be considered final.

Standards of Height, Weight and Chest Measurements

The following table, giving the proper height, weight, and chest measurement of candidates, should be observed. Any marked deviations from the usual standard of weight may be considered cause for rejection.

Height		Weight	Allowance for under or over weight	Chest measurement		Height		Weight	Allowance for under or over weight	Chest measurement	
				At expiration	Mobility					At expiration	Mobility
Feet	*Inches*	*Pounds*	*Pounds*	*Inches*	*Inches*	*Feet*	*Inches*	*Pounds*	*Pounds*	*Inches*	*Inches*
5	4	128	8	32	2	5	11	162	20	34¼	2½
5	5	130	8	32½	2	6	0	169	20	34¾	3
5	6	132	8	32½	2	6	1	176	20	35¼	3
5	7	134	8	33	2	6	2	183	20	35¾	3½
5	8	141	12	33¼	2½	6	3	190	20	36¼	3½
5	9	148	15	33½	2½	6	4	197	20	36¾	3½
5	10	155	20	34	2½						

[1] Ishihara test for color perception required.

The following minimum physical standards are established:
Vision 20/20 in each eye *unaided by glasses*
Hearing 15/15 whispered voice, 40/40 watch tick
Heart rate not over 100 nor under 50 in reclining position
Blood pressure not over 140 systolic nor 95 diastolic.

Any of the following are causes for rejection: obesity, height more than 6 feet 4 inches or less than 5 feet 4 inches, deficient muscular development, color blindness, all diseases and conditions such as nutritional diseases, glandular or blood dyscrasia, tuberculosis, asthma, pleurisy, organic heart diseases, cardiac arrythmia, nephritis, venereal diseases.

The following specific conditions are causes for rejection:

Chronic conjunctivitis, disorganization of either eye, exophthalmos, pronounced mystabnus or well marked strabismus—diplopia or night blindness.

Disfiguring deformity of the ear—acute or chronic otitis media, suppurative or catarrhal—existing perforation of the membrana tympani.

Eczema, chronic impetigo, psoriasis. Deformities of the skull.

Any derangement of the nervous system, history of epilepsy or insanity in immediate family. Any evidence of disease of the brain, spinal cord, or peripheral nerves.

Unsightly deformities of the face.

Hare lip, malformation, partial loss or atrophy of tongue, and deformities atrophic or hypertropic interfering with speech or breathing.

Marked enlargement of or diseased tonsils. Laryngitis from any cause.

Extensive restorations by crown and bridges and teeth generally unsound.

Thyroid enlargements, adherent or disfiguring scars of neck.

Malocclusion.

Hernia of any variety.

Chronic disease of stomach, intestines, liver, gall bladder, spleen or pancreas.

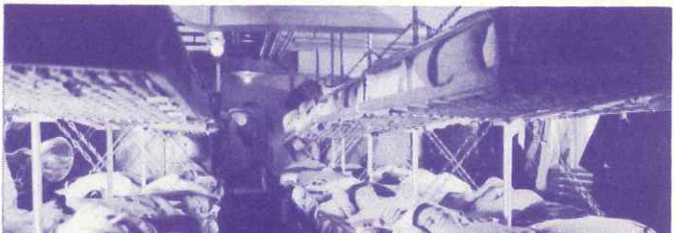
Hemorrhoids, stricture or prolapse of rectum—anal fistula.

Acute or chronic diseases of the genitourinary tract—phymosis varicocele—undescended testicle.

Atrophy of muscles of any part, knock knee, club feet, flat feet, hammer toe, ingrown toe nails. Spinal deformities—scoliosis—kyphosis or lordosis.

Should a cadet develop any of the above mentioned defects, it may be sufficient cause to require his resignation or discharge from the Academy.

Just before reveille



Educational Requirements

Written entrance examinations are conducted about July 1 each year at various cities in the state.

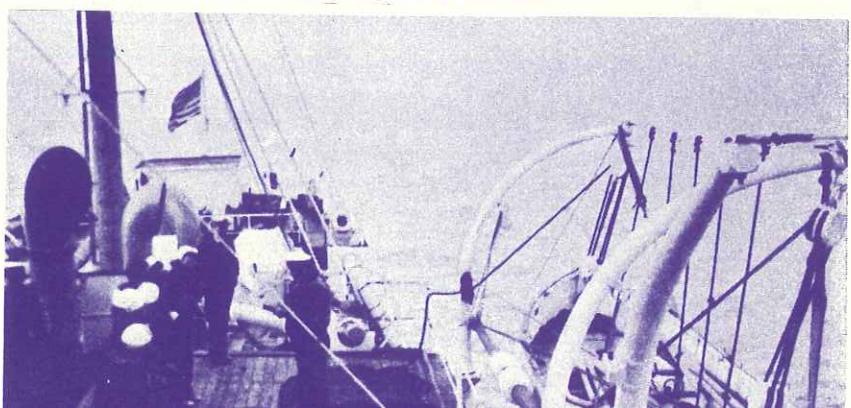
While the examination subjects are elementary, the examinations themselves are comprehensive. The character of the examination is such that anyone with a sound knowledge of principles should pass. Carelessness and inaccuracy are not allowed in the work of the California Maritime Academy and candidates severely jeopardize their chances for admission by submitting papers which are not their best.

Selection of the entering class is made from those candidates who stand highest in the written examination and meet the physical requirements. However, considerable weight is given to the individual's aptitude, as evidenced by recommendations and extra-school activities. At the time of examination all candidates are interviewed by the examining officer.

The examinations are competitive and consequently certificates from other schools can not be accepted in lieu of entrance examinations.

As soon after the examination as possible candidates will be informed as to whether they have passed or not. No applicant will be reexamined for admission to the same class; provided he meets all requirements he may apply for admission to subsequent classes.

Mustering the Life Boat Crew



Typical Entrance Examination

GENERAL

I

Accurately locate the following geographical entities:

(a) Galapagos Islands
(b) Mobile Bay
(c) Gulf of Aden
(d) Bilbao
(e) Colon
(f) Wake Island
(g) Republic of Georgia
(h) Mount McKinley
(i) Orinoco River
(j) Tientsin

II

(a) Briefly discuss the causes of the civil war in Spain.
(b) What recent step has the United States taken toward the enforcement of our neutrality in foreign wars?

III

Prepare a brief outline of a book that you have read recently. State when you read this book.

IV

What magazine or periodical do you regularly read? Why do you prefer this publication?

V

Discuss the organization and function of the United States Supreme Court.

VI

What are the sources of revenue of the government of California?

VII

Write a letter of application for employment in the job that you believe you can *now* most competently fill, addressing the letter to a firm that you know affords opportunity for that employment.

VIII

What do the following names signify to you?

(a) Oregon Trail
(b) Bear Flag
(c) Dust Bowl
(d) Mason-Dixon Line
(e) Alamo

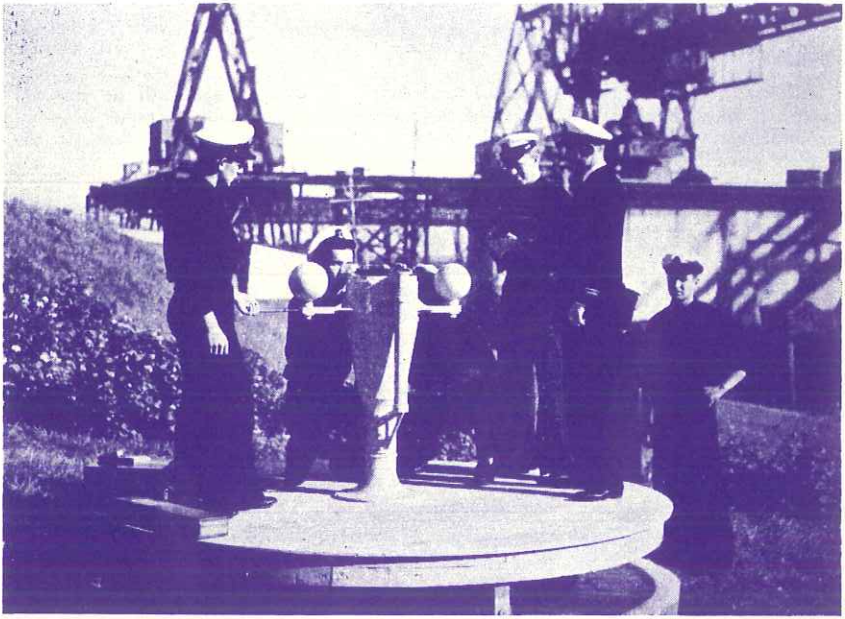
IX

Discuss the present program of the government, looking toward the reestablishment of the United States as a principal maritime power.

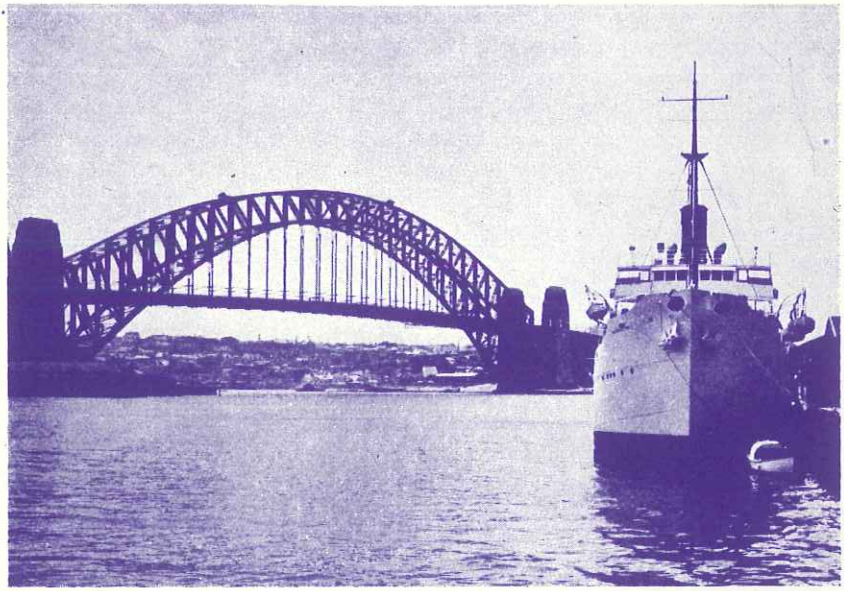
X

(a) Why is a fuse placed in an electrical circuit?
(b) Why is the California climate milder and more equable than that of the Atlantic coast of the United States within the same latitude range?
(c) What is the function of the carburetor of a gasoline engine?

A Class in Navigation Adjusting a Ship's Compass at the Shore Base



The Training Ship at Sydney, Australia



MATHEMATICS

Maximum Time: Three Hours

Instructions

All work will be done in notebook provided. No scratch paper will be provided or used. This examination will be graded for accuracy, neatness, and clarity of solutions.

Work every step of each problem involving decimals to three places of demicals, the last place being taken at the nearest true value.

I

Solve for values of x, y, and z.

$$\begin{cases} x^2 + y^2 = 25 - 2xy \\ z = 2x - 10 \\ y + 2z = 6 \end{cases}$$

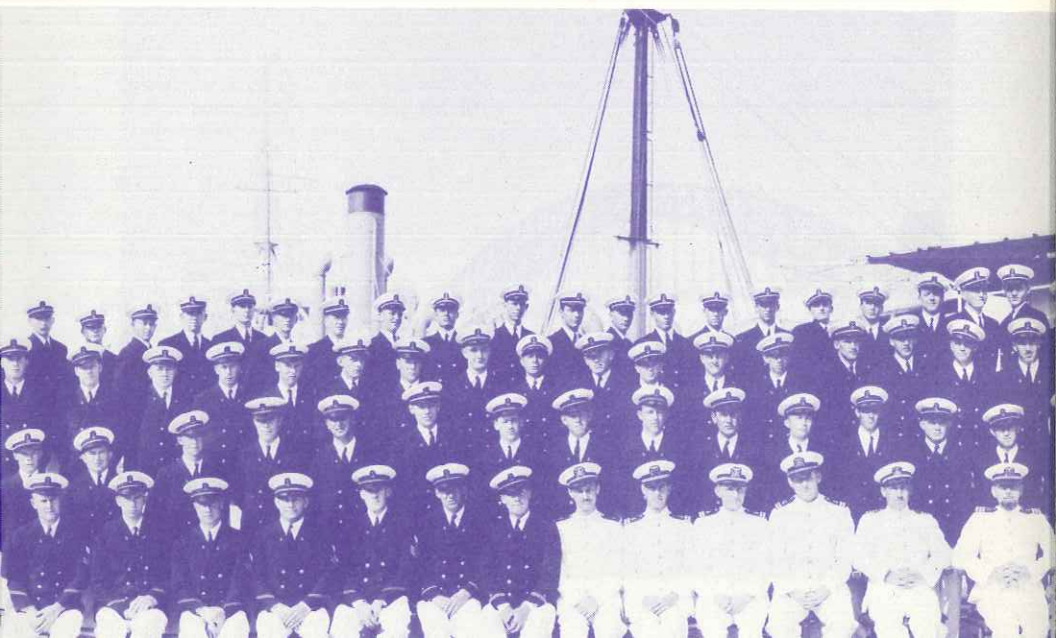
II

A satisfactory formula for white paint requires the following ingredients to make one gallon. The ingredients can be purchased at the prices stated.

White Lead	7 lbs. @ $10.45 per 100 lbs.
Linseed Oil	3 pts. @ 2.16 per gal.
Japan drier	2 oz. @ 1.12 per lb.
Prussian Blue	2 oz. required to make 100 gals. of paint, and procurable at $11.18 per. lb.

Using this paint, how much will it cost to paint a rectangular area measuring 26 ft. 3 in. by 47 ft. 6 in.? One gal. of paint covers 350 sq. ft. and 10% of the paint supplied will be wasted.

OFFICERS AND



III

(a) "A" has assets $11,000 greater than "B." If "A's" assets are doubled, and if "B" gains $5,000 their joint valuation will be $18,000. How much is "B" worth in the first place?

(b) Solve for values of x and y.

$$\begin{cases} \frac{1}{2}y + 2x = 2\text{-}1/3 \\ 2y + 4x = 5\text{-}2/3 \end{cases}$$

IV

Find the highest common factor of:

(a) $3y - 27 - 9x + xy$ and $3x + xy + 3y + 9$
(b) $x^2 + xy - 2y^2$ and $4y^2 - 10xy - 6x^2$

V

Find the square root, to the nearest three places of decimals, of 137,489

VI

The formula for the area of a circle is πr^2. What is the area of the largest circle that can be inscribed in a square having sides 32 inches long?

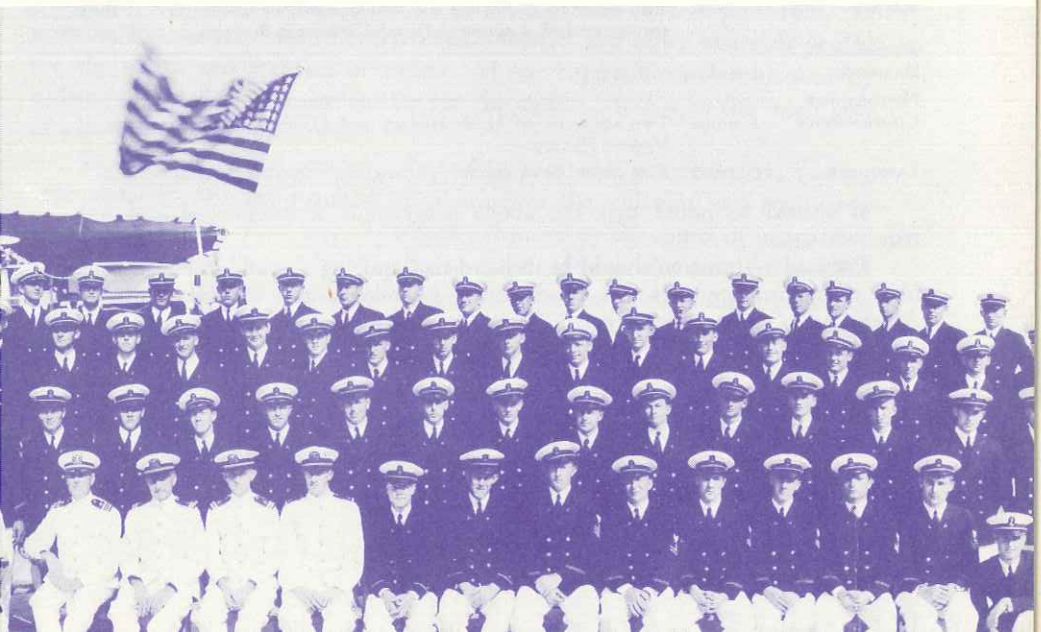
VII

Simplify:

(a) $\sqrt{25a^2b^4c^2} + \sqrt[3]{27a^3b^6c^3} - \sqrt[4]{81a^4b^8c^4} - \sqrt[5]{32a^6b^{10}c^5}$

(b) $\dfrac{4}{x-1} - \dfrac{3}{x-3} + \dfrac{x-15}{x^2-4+3}$

CADET CORPS



VIII

Ship "A" leaves San Francisco for Honolulu at 8:00 p.m., 28 June. The speed of "A" is 8 knots (nautical miles per hour). At 11:24 a.m., 29 June, ship "B" leaves Honolulu for San Francisco. The time at Honolulu, and that by which "B's" departure is scheduled, is two and one-half hours behind the standard used at San Francisco. The speed of ship "B" is 11 knots, and the distance from San Francisco to Honolulu is 2091 nautical miles. How far is the meeting point of these 2 vessels from San Francisco?

IX

The length of a room exceeds its breadth by 8 feet. If the length is diminished by 3 feet and the breadth increased by 2 feet, the area will remain the same. What is the area?

X

Simplify:

$$\frac{\dfrac{x^2y-2xy-8y-6x^2+12x+48}{xy-6x+2y-12}}{x-4}$$

PREPARATION FOR ADMISSION

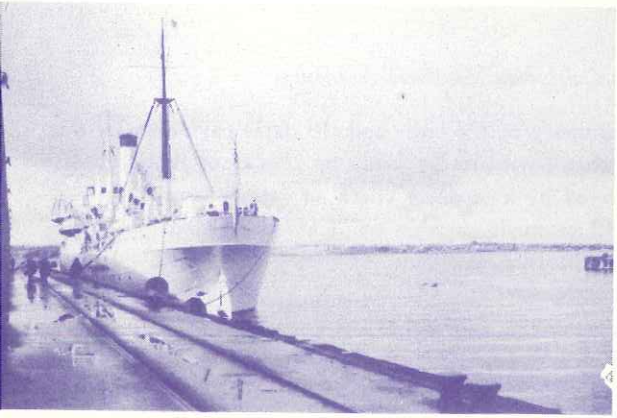
While the Academy does not specify pre-entrance high school credits, applicants with a well-rounded high school education are most likely to succeed in the entrance examinations and the course that follows.

The following program is suggested as desirable for applicants:

ENGLISH	3 units.	Any six semesters of English, Public Speaking, Journalism, Literature, or combined courses.
MATHEMATICS	3 units.	Two semesters of Algebra and four semesters of Advanced Algebra, Plane and Solid Geometry, or Trigonometry, as elected by the student.
SCIENCE	2 units.	Two semesters of Physics and two semesters of Chemistry. If these are not studied, a course in General Science is desirable.
MECHANICAL DRAWING	1 unit.	
HISTORY AND GOVERNMENT	2 units.	Two semesters of U. S. History and Civics and two semesters of Modern History.
LANGUAGE	2 units.	This should be in one foreign language. Spanish is recommended.

It should be noted that the above program is recommended and *not* required.

Particular attention should be devoted to acquiring a sound knowledge of high school mathematics. A fundamental knowledge and understanding of Algebra and Geometry is essential. Trigonometry is desirable.



Fees and Costs

The California Act which authorized the establishment of this Academy, as amended, requires an annual school fee of $225 from resident students of California "to cover part cost of the annual cruise, board and lodgings, uniforms, and equipment." This is *not* a tuition fee, nor does it fully cover the cost of those services, the greater part being included in state and federal appropriations. It should be obvious that the fee of $225 a year (less than $20 a month) is extremely moderate, especially when it is considered that in other schools or colleges, the cost of board and lodging alone would probably exceed $225 a year, exclusive of the cost of clothing, textbooks, medical service and other incidentals.

A deposit of $17 semiannually is required as a "Cadet Service Fund," to which all cadets must subscribe. The purpose of this fund is three-fold. It provides for the purchase of recreational, athletic, and other materials needed for the health and comfort of cadets and for entertainments controlled by cadets. It provides laundry service for the cadets. It covers the small cost of a special accident insurance.

Dress and undress uniforms, including caps and accoutrements costing approximately $75 are required in addition to the uniform and equipment included in the Academy fee. Textbooks, required by the course of instruction and which will no longer be of value to cadets after graduation, are supplied by the State. Other textbooks, drawing instruments, special tools, etc., which should be retained by the cadets after graduation must be purchased by the cadet. The estimated cost of such books and special equipment to be purchased by cadets is included in a fund designated, for brevity, as a "Uniform Fund," although its purpose is to cover the cost of the above mentioned textbooks and special equipment as well as the cost of uniforms.

The following is a summary of the costs and the dates payments are due. It is especially requested that payments be made by checks or money orders and that each fee be covered by a separate check or money order.

The school fee should be made payable to "California Maritime Academy," and addressed to California Maritime Academy, California Building, 515 Van Ness Avenue, San Francisco, California.

The fee for the Cadet Service Fund should be made payable to "Cadet Service Fund," and addressed to Supply Officer, California Maritime Academy, California Building, 515 Van Ness Avenue, San Francisco, California.

The fee for the Uniform Fund should be made payable to "Uniform Fund, C. M. A.," and addressed to Supply Officer, California Maritime Academy, California Building, 515 Van Ness Avenue, San Francisco, California.

Cadets should be provided with funds for purely personal items, such as barbering, tailoring, spending money for essentials, such as soap, writing paper, stamps, etc. The sums required for these items must be determined by the individual, but parents are requested not to encourage sons in the Academy to extravagance. Ten dollars a month is sufficient and fifteen dollars a month is considered ample under ordinary conditions.

During the annual training cruise, it is desirable that cadets have money for spending in ports to be visited. The Superintendent will, prior to the commencement of the cruise, recommend to parents a maximum and a minimum sum that should be supplied for that purpose and will, if so desired by the parent, arrange to receive for safe-keeping and to disburse to cadets, the sums entrusted to him.

Applicants should note that the Academy does not have a program which permits cadets to earn either part of, or all, their costs while attending the Academy. Consequently, all applicants must be financially able to pay their expenses during the three-year course.

Instruction In Operation of Radio Direction-Finder

Tabulation of Fees

FIRST YEAR

	Residents			Non-residents		
	On entering	Dec. 1	Total	On entering	Dec. 1	Total
School fee	$225 00		$225 00	$500 00		$500 00
Uniform fund*	110 00		110 00	110 00		110 00
Cadet service fund	13 00	$17 00	30 00	13 00	$17 00	30 00
Totals			$365 00			$640 00

SECOND YEAR

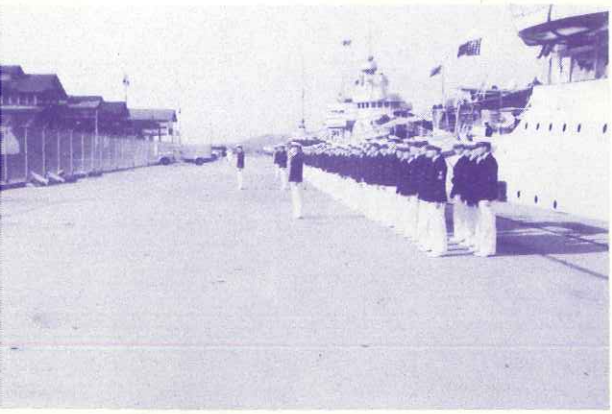
	Residents			Non-residents		
	June 1	Dec. 1	Total	June 1	Dec. 1	Total
School fee	$225 00		$225 00	$500 00		$500 00
Uniform fund*	25 00	$10 00	35 00	25 00	$10 00	35 00
Cadet service fund	17 00	17 00	34 00	17 00	17 00	34 00
Totals			$294 00			$569 00

THIRD YEAR

	Residents			Non-residents		
	June 1	Dec. 1	Total	June 1	Dec. 1	Total
School fee	$225 00		$225 00	$500 00		$500 00
Uniform fund*	15 00	$10 00	25 00	15 00	$10 00	25 00
Cadet service fund	17 00	17 00	34 00	17 00	17 00	34 00
Totals			$284 00			$559 00

* NOTE.—This so-called Uniform Fund includes cost of books that are to be retained by the cadet; also, special equipment, including drawing instruments and privately-owned tools. Costs in connection with this fund have been carefully estimated. However, due to changing price levels, such estimates are subject to change.

Any balance remaining at the end of the first and second years is placed to the credit of the cadet and the balance at the end of the course is returned to the cadet.



Clothing

Cadets are required to wear uniforms throughout their course of instruction and are not permitted to retain civilian clothing aboard the training ship or to wear civilian clothing while in the Academy reservation.

At entrance, the appointee is supplied by the school with:

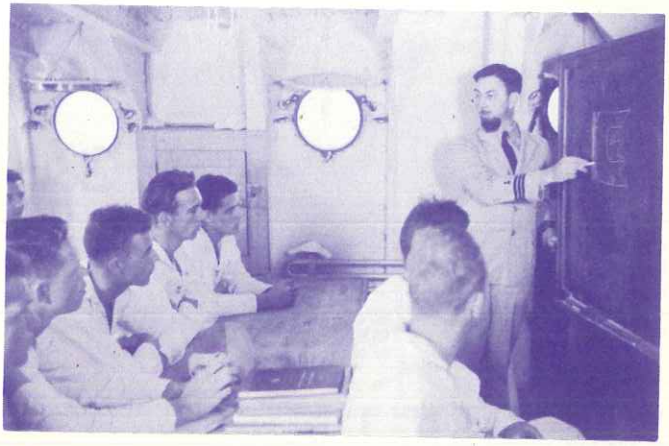
Bed linen, blankets, and towels
4 apprentice marks, white
4 pairs trousers, dungaree
4 shirts, working, cambray
4 caps, blue denim

These articles will be replaced or augmented by the Academy as necessary, except that an undue amount of replacement evidently caused by a cadet's neglect or indifference must be borne by the cadet.

At entrance, the appointee is required to purchase in accordance with the direction of the Academy the following additional articles of uniform and equipment at a cost of approximately $95.00.

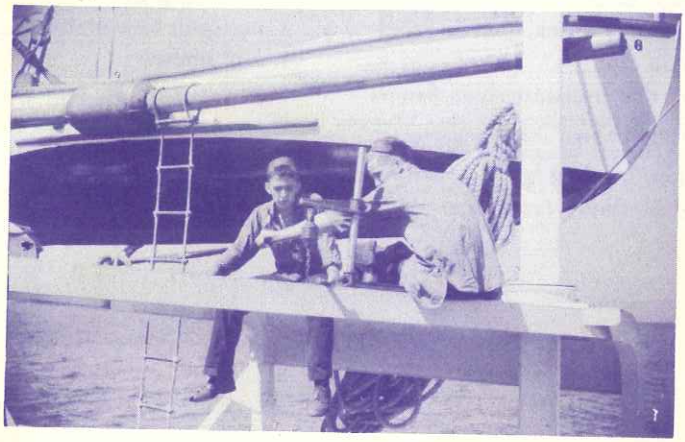
1 uniform, dress, blue
2 uniforms, dress, white
1 cap, dress
2 neckties, black, four-in-hand
1 rain coat
1 Arctic overshirt, blue flannel
2 padlocks
1 neckerchief
4 uniforms, white, undress
1 pair shoes, gym., white
1 uniform, blue undress
1 cap, undress
1 pair leggings

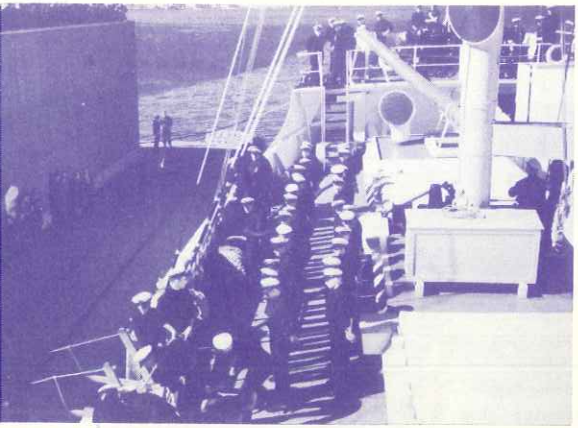
Most of these articles, with reasonable care, will not need replacement during the three year course.



The following items are procurable at ordinary dealers and need not be of a regulation type. They must be supplied and maintained by each cadet.

1 pr. shoes, white with plain toe 5.00
2 prs. shoes, low, black (it is recommended that an extra pair with rubber heels for work be provided) 10.00
6 shirts, white, without attached collars 17.00
8 collars, white, semi-soft 3.00
2 collars, white, stiff .50
2 prs. trousers, white duck 5.00
4 undershirts, white with short sleeves 7.00
4 drawers, white, athletic style 7.00
1 jack knife
1 pr. rubbers, low
6 prs. socks, black (cotton or silk) 2.00
1 pr. bathing trunks 7.95
2 prs. pajamas, white 4.00
8 handkerchiefs 1.00
3 belts, black
1 whisk broom .15
1 shoe-polish set, black .35
1 sewing kit, including buttons and scissors
Toilet articles as required
Collar and cuff buttons .40





Admission Procedure

After having decided that he wants to become a Merchant Marine officer and be a candidate for this Academy, a young man should obtain an application blank. This may be obtained at any time either by oral or written request to:

The Secretary
CALIFORNIA MARITIME ACADEMY
California Building
515 Van Ness Avenue
SAN FRANCISCO, CALIFORNIA

This form should be completely filled out and returned to the above mentioned address, and acknowledgment of its receipt will be made. In sufficient time before the actual date of the mental examination the candidate will be informed of the date and hour and the city and address of the examination. As soon as practicable after his papers have been examined he will be informed whether or not he has been selected to fill one of the vacancies in the Academy. He will then be notified of the name of the examining physician and the time and place to report for his physical examination.

Some candidates, after passing the mental examination, fail to satisfy the physical requirements and consequently a certain number of alternates will be required to replace these. If a candidate is chosen for the status of alternate he will be so notified and should be prepared to take a physical examination when so directed.

Assuming a candidate has fulfilled all the requirements for entrance, he will be given a form to fill out which will supply the necessary data from which to order his uniforms other than his dress uniform, for which he will be measured by a qualified tailor after reporting at the Academy.

Further information of special interest to the successful candidates will be furnished in ample time for compliance.

Academic Calendar

January 3—Leave period for second cadet group ends.

January 5—Overhaul of training ship completed; returns to base.

January 15—Annual training cruise begins.

May 1—Annual cruise of training ship is completed. Leave granted, in two groups, to second and third classmen.

May 5—First class graduates.

June 16—Scholastic term begins.

June 28—Entrance examinations.

July 4 and 5—Fourth of July holiday.

August 6—Third class enters.

August 30-September 3—Recess.

November 15—Scholastic term ends.

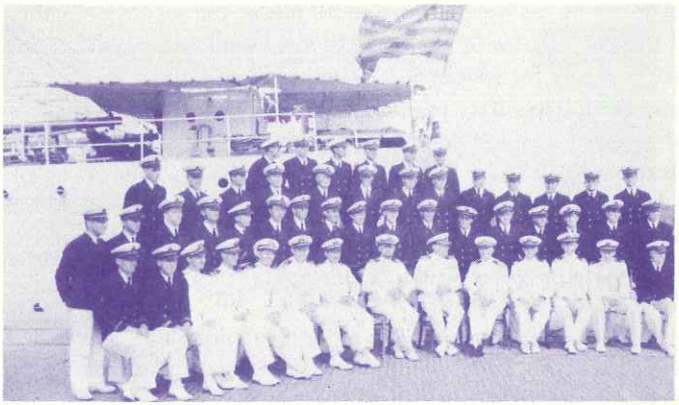
December 2 (about)—Annual overhaul of training ship begins.

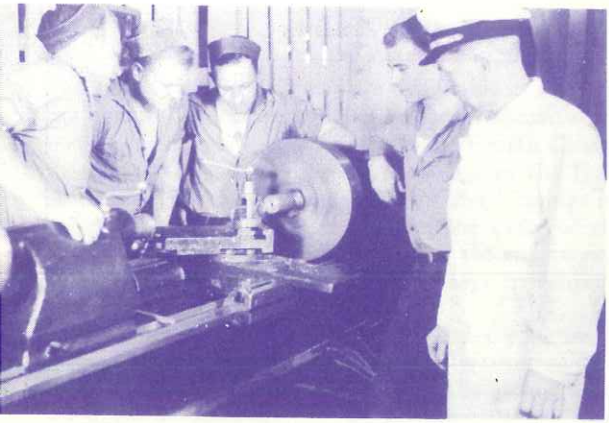
December 9—Leaves begin.

This calendar is typical but is subject to minor changes that may be required by adjustments of the overhaul and cruising periods.

The cruise itineraries are subject to approval of the Navy Department and the U. S. Department of State. As diplomatic arrangements for the visits in foreign ports must be made prior to publication of a cruise schedule, persons interested can not be advised until about two months before commencement of a cruise.

Cadets of the First Class and Ship's Officers, Balboa, C. Z.





Curriculum

The course of study at the California Maritime Academy is primarily professional, and is designed to prepare the graduate for immediate service as a junior officer in the deck or engineering department of an ocean-going ship. Additional courses build a foundation of understanding of the entire problem of shipping operation. As it is to the advantage of graduates to enroll as officers of the United States Naval Reserve, the organization of the Academy is essentially military, and courses in naval subjects are included in the curriculum.

It is the intention that this course be the equivalent in academic standards to a full college course. The three-year course (three years of eleven months each) is in fact longer than the usual college course (four years of eight months each). A college degree of Bachelor of Science (B.S.) is awarded with the diploma upon graduation. Likewise, graduates are commissioned as Merchant Marine Ensigns, U. S. Naval Reserve.

Completion of the course of instruction requires three years. The incoming class enters the Academy about August 1st each year. This class is organized and given preliminary practical and military instruction during the first two weeks in the Academy. Then follows a three-month scholastic term, devoted to instruction in fundamental subjects of both the deck and engineering departments of the Academy.

The Training Ship *California State* departs from San Francisco Bay shortly after January 1st each year for the annual training cruise of about four months' duration. These cruises are largely devoted to practical instruction, applying (for each cadet) the class-room work of the previous scholastic term. Instruction and duties aboard the ship, both at sea and in port, are organized so that the individual cadet's responsibilities progressively increase through his succession of cruises. In his final cruise the cadet performs all of the duties of a junior officer in the department of his selection.

Classes in the Academy are designated as Fourth, Second and First Classes, the Fourth Class corresponding to the Freshman in college.

In his first cruise, the cadet of the Fourth Class is rotated in duty between the deck and the engineering departments of the Training Ship, and he is given elementary instruction in the duties of all ratings in each department. At a point, about midway on the cruise, the cadet of this class selects his future specialization, the deck department or the engineering department. From this point his instruction is specialized except in subjects that concern officers of both departments aboard ship.

Following the first cruise the cadet commences his first full scholastic term of twenty-one weeks' duration. Instruction in this term is largely devoted to professional subjects required by the junior officer and the lower ratings aboard ship. On his second cruise the cadet practices the subjects of the preceding scholastic term, and he stands the watches and performs the duties, within his own department, of petty officers and lower ratings.

For cadets of both departments the final scholastic term is devoted to perfecting performance of the junior officer's duties, to elementary instruction in the broader aspects of shipping operation and management, and to training in military subjects required for his commission as an officer in the United States Naval Reserve.

The cadet's final cruise is devoted to performance of responsible duties within the ship organization, including the standing of a regular rotation of officer's watches. Special emphasis is laid on training in leadership.

Cruises of the Training Ship end about May 1 annually. The graduating class remains at the Academy at the conclusion of this cruise and is then examined by officers of the United States Bureau of Marine Inspection and Navigation for license as Third Mate or as Third Assistant Engineer of ocean-going ships. Graduation from the Academy is intended to follow soon after the completion, by the class, of these examinations.

HONORARY DEGREES

In addition to awarding Bachelor of Science degrees to graduates, honorary degrees of Doctor of Laws are conferred upon distinguished citizens, academic leaders and Government officials in recognition of outstanding services and contributions in maritime activities and affairs. Recipients of this degree include:

Rear Admiral Emory S. Land, Chairman, U. S. Maritime Commission.
Roger D. Lapham, President, American-Hawaiian S. S. Company.
Arthur M. Tode, Honorary President, Propeller of the United States.
Joseph A. Moore, President, Moore Dry Dock Company.
Rear Admiral Russell R. Waesche, Commandant, U. S. Coast Guard.

Practical Instructions

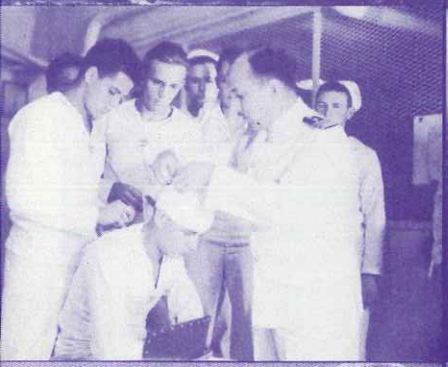
[Reading From Top Down]

(LEFT)

Daily Inspection of Cadet Corps
Practical Instruction in Use of Sails
Cadets Receiving First Aid Instruction
Cadets Receiving Practical Instruction in the Use of the Sextant

(RIGHT)

Cadets Practice Approved Method of "Resuscitation"
Cadets at Dinner on Board the CALIFORNIA STATE
Theoretical Instruction in Navigation During Training Cruise



Syllabus of Instruction

FIRST YEAR

Academic Term

Navigation III
Seamanship III
Mechanical Drawing III
Physics
Metallurgical Processes
Communications (visual signaling)
Boat Practice (rowing and sailing)
Practical Marlinspike Seamanship
Engineering Laboratory
Naval Science III

Cruising Term

Navigation III
Seamanship III
Physics
Practical Marine Engineering
Visual Signaling (blinker and semaphore)
Practical Seamanship
Watches (fireman, oiler, helmsman, lookout, storekeeper)
Boat Practice (rowing and sailing)

SECOND YEAR

Academic Term

Deck Department—

Navigation II
Seamanship II
Mathematics II
Ship Construction and Stability II
Marine Engineering—Deck II
Communication II
Visual Signaling
Boat Practice (power, rowing, sailing)
Cargo Handling and Stowage II
Practical Seamanship
Naval Science II

Engineering Department—

Propulsion II
Steam Engineering II
Electricity II
Mechanical Drawing II
Engineering Chemistry II
Ship Construction and Stability II
Naval Science II
Boat Practice (power, rowing and sailing)

SECOND YEAR

Cruising Term

Deck Department—

Navigation II
Seamanship II
Visual Signaling
Medical First Aid and Hygiene
Meteorology
Cargo Stowage
Practical Seamanship
Boat Practice (lifeboat, rowing, sailing and power)
Naval Science II
Watches (quartermaster, signalman)

Engineering Department—

Applied Marine Engineering
Medical First Aid and Hygiene
Naval Science II
Boat Practice (lifeboat, rowing, sailing and power)
Machine Shop Practice
Watches (fireman, oiler, electrician, storekeeper)

THIRD YEAR
Academic Term

Deck Department—

Navigation I
Seamanship I
Ship Construction and Stability I
Maritime Law
Ocean Transportation and Ship's Business
Communications I
Visual Signaling
Cargo Handling and Stowage I
Gyroscopics
Naval Science I
Practical Seamanship
Boat Handling (all types)
Applied Navigation and Compass Compensation

Engineering Department—

Propulsion I
Steam Engineering I
Electricity I
Diesel Engineering I
Engineering Chemistry I
Naval Science I
Practical Marine Engineering
Boat Practice (all types)
Shop Practice

THIRD YEAR
Cruising Term

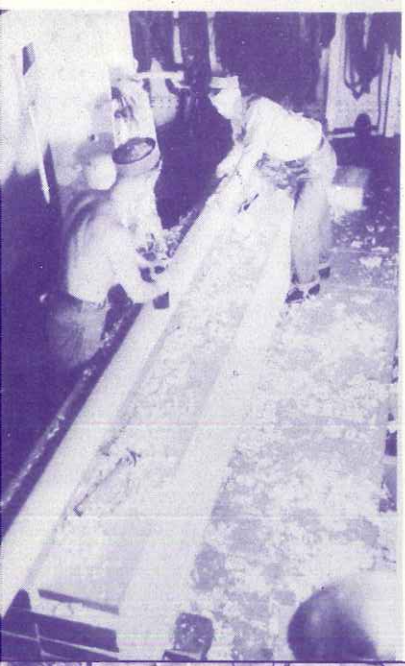
Deck Department—

Navigation I
Seamanship I
Marine Inspection Regulations
Maritime Law
Naval Science
Communications I
Signaling I
Cargo Handling and Stowage
Ship Handling
Meteorology
Medical First Aid and Hygiene
Boat Handling (all types)
Watches (watch officer, navigator, quartermaster, mate)

Engineering Department—

Applied Marine Engineering
Medical First Aid and Hygiene
Naval Science I
Marine Inspection Regulations
Maritime Law
Boat Handling (all types)
Machine Shop Practice
Watches (watch engineer, electrician, machinist, deck engineer, throttle watch)

In addition to class and practical instruction listed above, all cadets engage in ship repair and maintenance work, and all cadets are employed in a constant routine of ship operating duties. Likewise, a course in Constitutional Government is given during the cruise period.



Practical Instructions

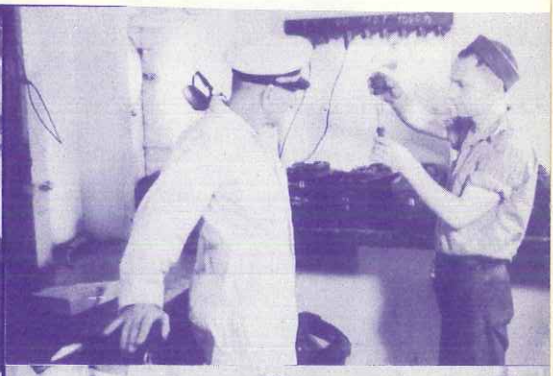
[Reading From Top Down]

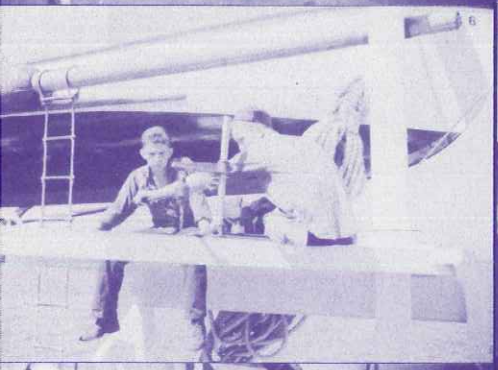
(LEFT)

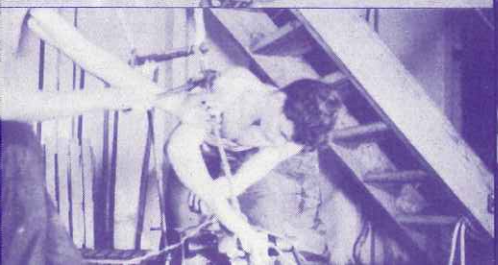
Making a Round "Strong Back" From Heavy Timber
Seamanship Instruction
Cadets Constructing Safety Platform for Boats
Deck Cadets Constructing Jacobs Ladder
Wire Rope

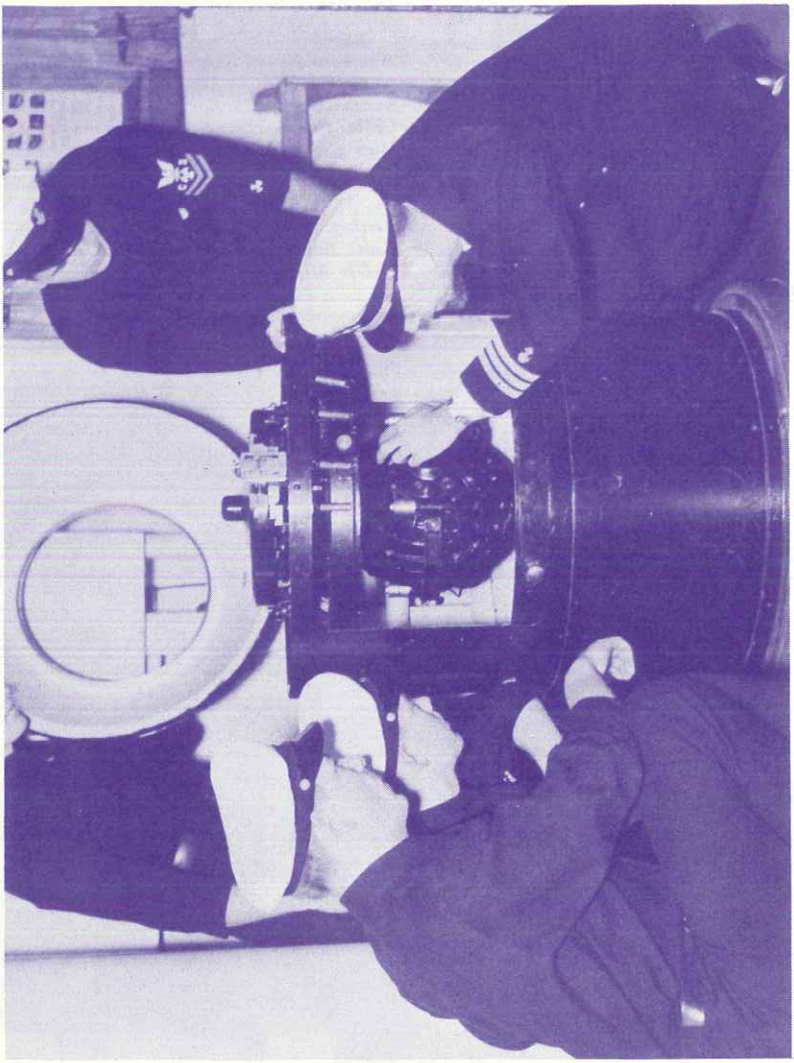
(RIGHT)

Testing Batteries After Recharging
Cadet Engineers' Practical Instruction
Cadets Mixing Paints in Ship's Paint Locker

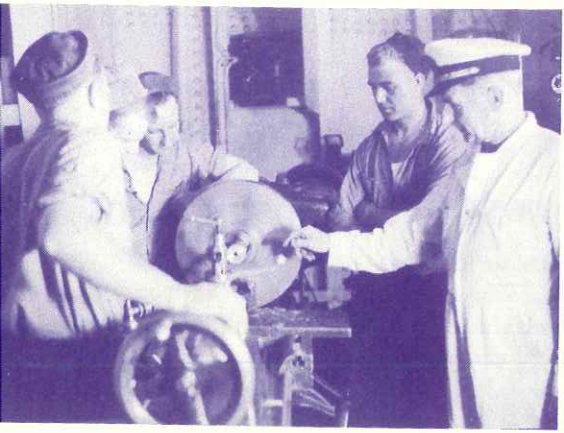








Cadets Receiving Instruction In Operation of the Gyro-Compass



Practical Engineering

Throughout the course of instruction engineer cadets receive practice, under supervision, in the maintenance, operation, and routine repair of the engineering equipment of the training ship and the shore base of the Academy. This, coordinated with class-room instruction, insures that the engineering cadet, at graduation, is competent to assume the duties of an engineer officer of a merchant ship.

All cadets of the Fourth Class are employed, in a regular rotation of duty, in the performance of elementary tasks in the engineering department of the Academy and Training Ship. These cadets become competent to perform the duties of lower ratings in the engineering department, and can better determine their aptitude for further training in the engineering department.

Engineering cadets, having selected this specialization, receive applied instruction and are assigned to duties of increasing importance in their department throughout the entire course. The Second Classman, upon completion of his second cruise, is proficient in all of the duties of a petty-officer of the engineering department of a merchant ship. Throughout this year he has received instruction in the machine-shop and forge-shop, and he is competent to perform simple tasks of metal manufacture and repair.

In the First Class year engineering cadets have duties of a junior engineer officer in the operation of the ship's engine, boilers, distilling plant, electrical machinery, and refrigerating machinery. Throughout this year these cadets are assigned to tasks in the machine-shop, forge-shop, and foundry, requiring skill. All work performed by Second and Fourth Classmen is directly supervised by cadets of the First Class, and these cadets are trained in leadership. The facilities of the ship and shore-base permit the performance of manufacturing and repair work not ordinarily undertaken aboard ship, and engineer cadets, under supervision, carry out these tasks usually done in a ship-yard. On the final cruise engineer cadets of the graduating class assume watches as engineer officers and senior officers of this department. Although advised by an instructor, cadets in these positions are required to assume full responsibility and exercise complete initiative.

Practical Instructions

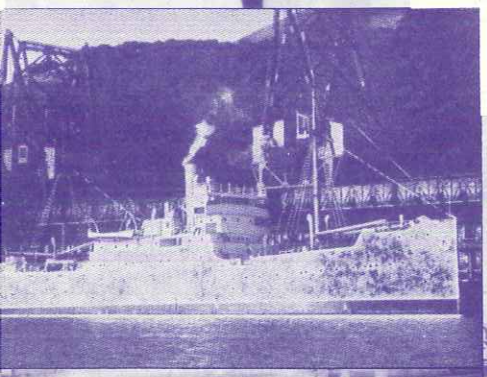
[Reading From Top Down]

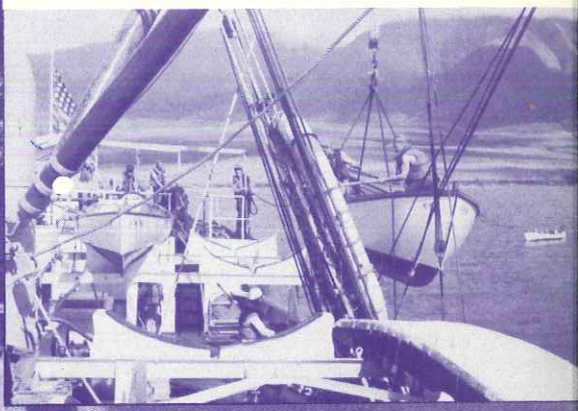
(LEFT)

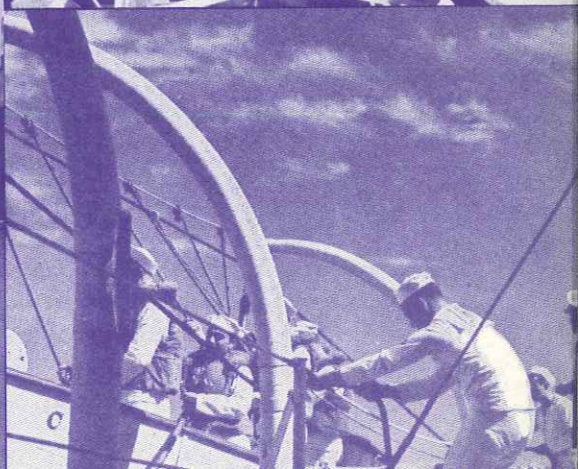
Cadets at Morning Inspection at Sea
Training Ship at Tiburon Base
Cadets at Dinner During Training Cruise
Semaphore or Flag Signaling Practice

(RIGHT)

Abandon Ship Drill
Life Boat Drill and Launching







Practical Seamanship

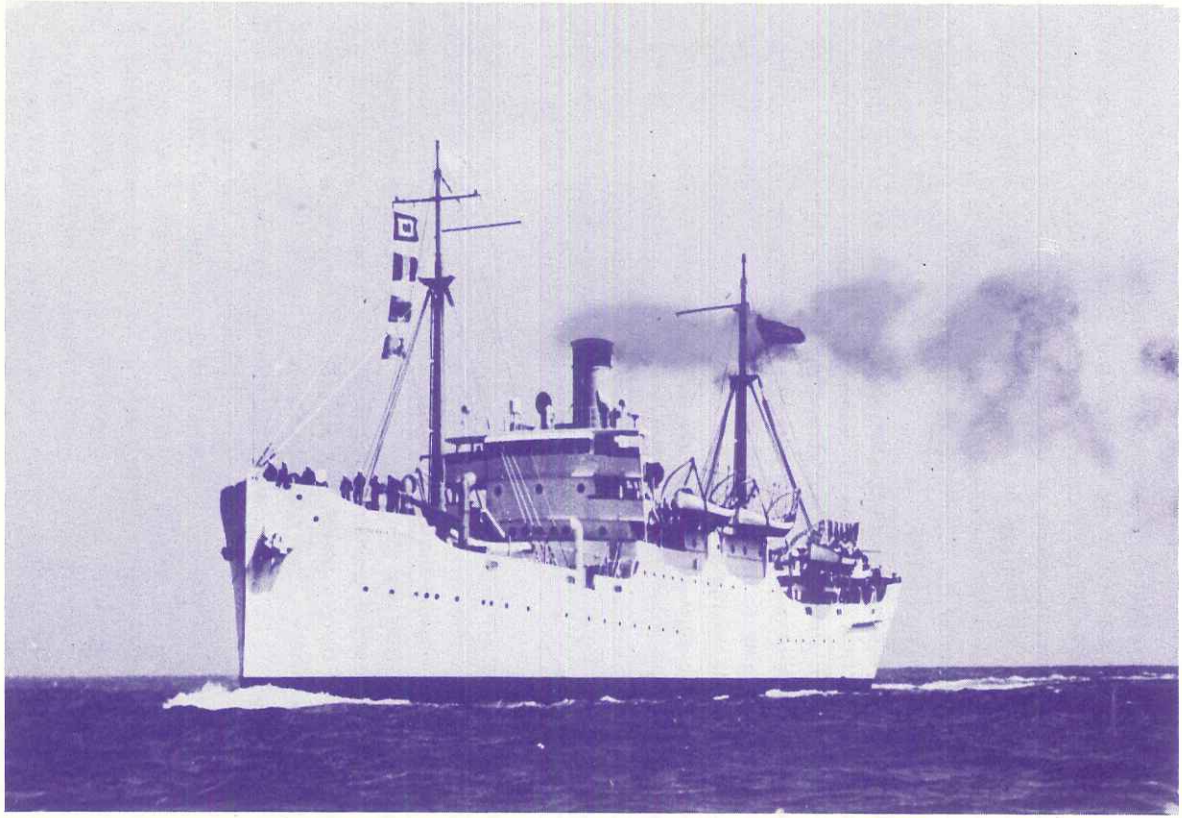
All Fourth Class cadets, and deck cadets of the First and Second Classes receive continuous instruction in the application of Seamanship. This instruction is divided into two phases: routine maintenance and watch-keeping; and instruction in technical problems of the ship's officer.

Cadets perform all routine work of the training ship, with entering cadets performing nonskilled tasks, and second class cadets performing tasks of an Able Seaman under the supervision of cadets of the First Class, planned and supervised by a ship's officer.

Throughout the course of instruction cadets are trained, in groups and classes, in the practical application of Seamanship. Groups are under constant instruction, in the sail-loft and aboard the training ship, in the art of marlinspike-seamanship, working with wire rope, cordage, and canvas. Cadets are exercised in rigging to handle heavy weights, and in work aloft. Groups are instructed in the mixing of paints and their uses, and cadets of the upper classes are rotated in duty in charge of the ship's paint and boatswain's storerooms. Daily, while at the shore base of the Academy, cadets are exercised in small boats, under oars and sail; and motorboats are operated on schedules between the base and the nearby city of Vallejo to serve the Academy. While cruising, boats are in constant use when the ship is in port, and all boats are manned by cadet crews.

A great deal of attention is given to instruction in safety measures for protection of the individual at work, and constant drills—amplified by lectures—teach and discipline the cadet to effectiveness in combatting hazards to ship and personnel at sea. In fire and abandon-ship drills every effort is made to simulate actual emergency conditions. All cadets are drilled in the use of gas and oxygen masks, and all cadets participate in drill in the launching of boats under emergency conditions.

All watches and other routine duties performed by a seaman, petty-officer, or officer of a merchant ship, are carried out by cadets, with the duty assignments graduated to the degree of training reached by the individual. Although instructors are constantly on duty, in an advisory capacity, cadets of the First Class are assigned to duties performed by officers of merchant ships and these cadets are given the fullest opportunity to exercise leadership and responsibility. The objective of the instruction in practical seamanship is two-fold: That deck cadets of the Second Class be competent to perform any duty required of a seaman or petty-officer of the deck department; and that graduating cadets of this department be competent junior officers, with practice in meeting the responsibilities or emergencies that may later confront them as senior officers of merchant ships.



The Training Ship Returning to its Base

Cadet Routine

The college year is divided into three distinct periods—about 7 months are spent at the Base, 1 month to six weeks at a shipyard, and 3½ to 4 months are spent on the annual training cruise. Reasonable periods of leave are granted to cadets during the first two of these periods; about three weeks immediately after the termination of the cruise, about 10 days during the Christmas and New Year holidays, and short periods of one or two days when practicable. Week-end holiday is granted to the cadets throughout the year providing they are not on duty or have not been penalized because of deficiency in studies or conduct. Leave and holidays at times other than regularly provided for will not be granted except in case of unusual circumstances. Unauthorized absence from the Academy will result in immediate dismissal.

During the period the cadet corps is at the Base, the forenoons of week days are spent in classroom work and the afternoons in practical work. A recreation period of one and a half hours is provided before supper and a study period of about the same length of time is given after supper.

During the period the training vessel is at the shipyard for its annual overhaul and docking to clean and paint the underwater part of the hull, cadets are engaged in all manner of ship work and, generally, drills and study periods are suspended. This period, which coincides closely with the Christmas and New Year holiday period, is utilized to permit cadets in two groups to take about ten days' vacation.

During the training cruise, each cadet is given a tour of duty in positions required to be filled on board a vessel at sea and in port, such as watch officer, navigator, helmsman, lookout, etc., for deck cadets; and watch engineer, oiler, watertender, fireman, etc., for engineer cadets. When not detailed to such special duties instruction and studies are prescribed both forenoon and afternoon periods.

During the time the Training Ship is in a foreign port while on the training cruise, cadets are given leave to visit the port as often as the requirements of ship work and their watches on board will permit; and in so far as is practicable ports to be visited during the cruise are chosen for their interest, historic or educational value.

Cadets of the Fourth Class are required to return aboard each night at 10 p.m.; Second Class cadets, at 11 p.m.; First Class cadets at 11.30 p.m.; and cadet officers and cadet petty officers at midnight. Over-night liberty or leave is not granted in foreign ports except under very special circumstances.

Graduates

Below is a list of our most recent graduates and the vessels on which they are, or have been, employed as officers.

Abbott, R. H.	S.S. Mexican
Clague, J.	U.S.S. Yorktown
Chapman, W. F.	S.S. K. R. Kingsbury
Davis, L. E.	S.S. L. P. St. Clair
Foot, F. V.	S.S. Monterey
Fox, W. M.	S.S. Anniston City
Gallant, A. E., Jr.	U.S.S. Nitro
Gendreau, E. A., Jr.	U.S.S. Brazos
Gilchrist, F. C.	S.S. Monterey
Greer, R. H.	S.S. Edward B. De Golia
Haas, D. M.	S.S. Matsonia
Meeker, R.	S.S. Victor H. Kelly
Miller, C. H. J.	U.S.S. Neuces
Peck, William J.	U.S.S. Altair
Puckett, R. C.	U.S.S. Yorktown
Racouillatt, R. W.	S.S. Mariposa
Schulman, D.	S.S. Flying Cloud
Shreve, J. E., Jr.	S.S.. Lurline
Smullen, S.	S.S. Mariposa
Snyder, R. R.	S.S. Utacarbon
Sonneman, R. H.	S.S. F. H. Hillman
Thompson, F. V.	S.S. Mormacstar
Trantum, W. E.	S.S. Carolinian
Urbani, V. N.	S.S. Van Buren
Welch, F. J.	S.S. Alaskan
Wilkie, R. B.	S.S. President Pierce
Wilson, J. E.	S.S. Columbian

The California Maritime Academy enjoys a high reputation. The demand for graduates exceeds the supply, and the Academy is recognized as a prime source of officers for the Merchant Marine. Many cadets have positions waiting for them upon graduation. Within a few weeks after graduation, all cadets of the past few years have been employed and requests for many more could not be met, indicating that present facilities are inadequate to meet the demand for trained Merchant Marine officer material.

Shore and Other Positions

Former Merchant Marine officers, with the necessary sea service and other qualifications, may be found in shore and other positions, including:

Marine superintendents, superintendent engineers, personnel directors, port captains, and port engineers of steamship companies;

Executives of engineering companies, shipyards, and marine equipment suppliers;

Officials of officers' and shipowners' associations;

Marine surveyors for insurance companies, ship classification societies, and port authorities; salvage officers of salvage companies;

Executives and superintendents of stevedoring companies;

Port agents, in various ports of the world, for steamship companies;

Marine inspectors for utility companies;

Compass adjusters;

Technical advisors and research assistants;

Chairmen of boards, directors, presidents, vice-presidents, secretaries, operating managers, and officials of steamship and miscellaneous maritime and other corporations;

Commandants, executive officers, chief engineers and instructors at State nautical schools, maritime academies, and other institutions; professors at universities;

Nautical scientists in the Hydrographic Office of the United States Navy Department, and the United States Coast and Geodetic Survey;

Pilots at the Panama Canal;

Pilots for coasts and harbors;

Naval architects and draftsmen;

Personnel consultants;

Officers of the United States Navy, United States Marine Corps, United States Coast Guard (including Lighthouse Service) and United States Maritime Service;

Officers of the United States Army Transport Service and in the Consular Service of the United States;

Directors, surveyors, naval architects, operating officials, marine superintendents, superintendent engineers, district managers, nautical experts, supervisor and assistant supervisors of cadet training, district training instructors and inspectors of the United States Maritime Commission; assistant directors, traveling inspectors, nautical experts, hull inspectors, boiler inspectors, and examiners of the United States Bureau of Marine Inspection and Navigation.

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