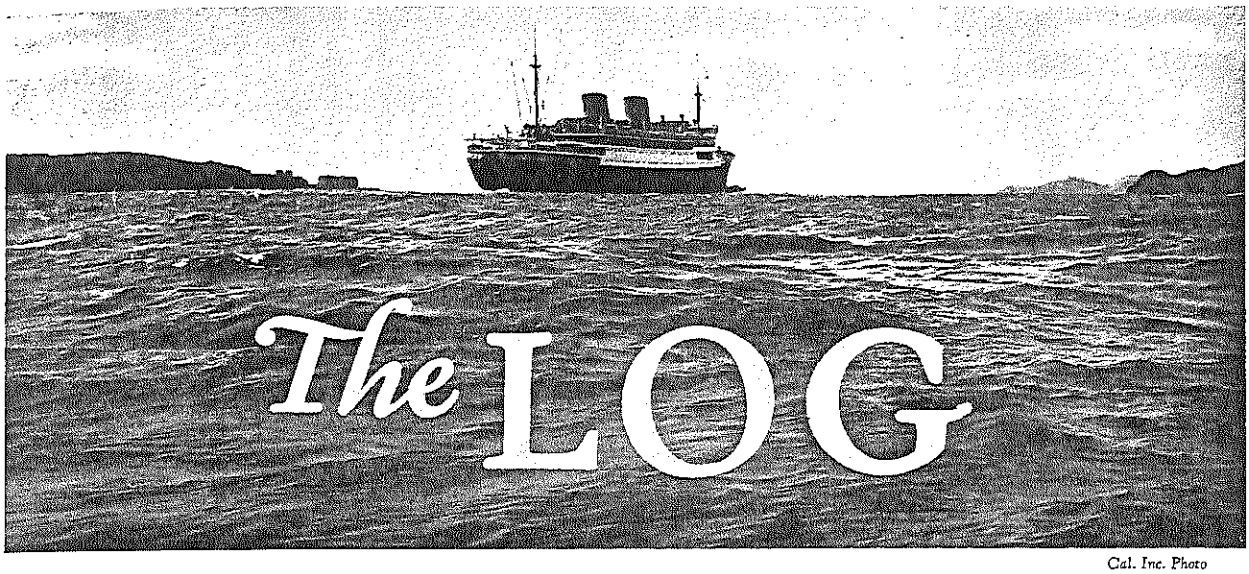

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The California Nautical School

What It Has Done and What It Is Doing to Train Young Men to Become Merchant Marine Officers

By Captain Emile Topp
Superintendent-Commander, California Nautical School

(WRITTEN EXPRESSLY FOR THE LOG)

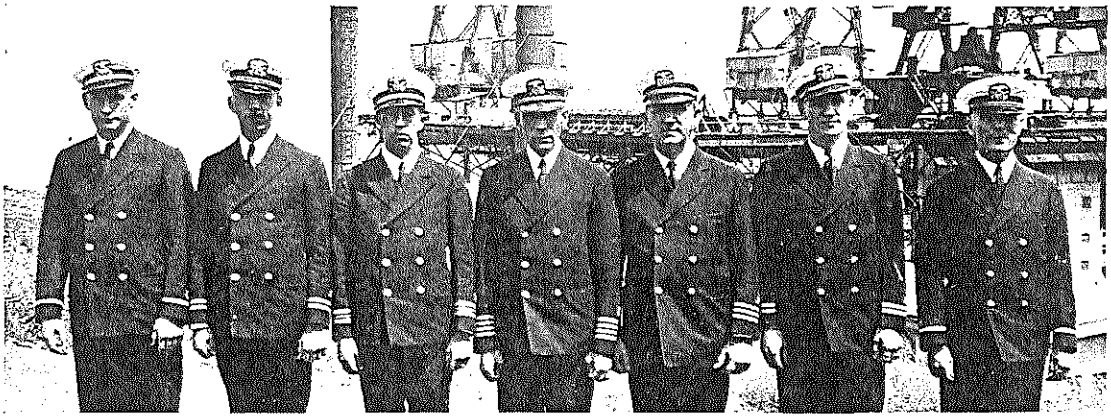
Capt. Emile Topp

UNDER varied conditions of wind, weather and temperature the training ship *California State* recently completed her first cruise, a service test of some 22,000 miles of steaming. She left San Francisco last December, circled South America to New York and returned via the Canal at the end of May. Large enough to be comfortable, small enough to be economical, dependable and seaworthy, it has been demonstrated that the vessel is well suited for her purpose.

Under the skillful guidance of Chief Engineer Richard C. Dwyer, the 3-cylinder triple-expansion engine ground out a steady 9.2 knots. Fuel consumption under way averaged 110 barrels a day, which not only provided steam for propulsion but took care of many auxiliaries not ordinarily found in a ship of this size.

Tight joints, careful attention to packing, workable traps, and the blessing of a tight condenser, all aided in extremely low make-up feed requirements. Culinary water consumption was high, some 1,200 gallons a day being diverted to the laundry. Thanks to the installation of additional tanks, the water stowage was adequate; except for tests and instruction it was unnecessary to operate the new low-pressure distillers.

Four additional fuel oil tanks were installed during the conversion period. These tanks aided materially in a practical solution of the ballast problem, and so increased the cruising radius that the ship may seek good fuel oil markets and avoid purchases where quotations



Seven of the ten officers of the California Nautical School. From left to right: R. M. Sheaf, Third Officer; George Barkley, Second Officer; M. E. Crossman, Chief Executive; Capt. Emile Topp, Superintendent-Commander; R. C. Dwyer, Chief Engineer; E. F. Jaeger, First Assistant Engineer; J. M. Cadwell, Commissary

are high. During the cruise, for example, oil was quoted in South American ports in excess of $2.00 gold per barrel—without the tanks it would have been mandatory to purchase some oil at this price; with the tanks it was possible to delay purchases until arrival at Trinidad, where the price was only sixty cents.

At some time or other all cadets served in the engine room. Not only did they observe at first hand, but they materially contributed to the operation of the plant. As might be expected, many a swab and oil can fell into the crank pit—many a bearing was not only lubricated, but bathed in oil—but with it all not a single accident to personnel marred the voyage.

For gaining engineering sense it is particularly fortunate that the ship has a reciprocating engine; cadets soon gained that sense of confidence in themselves and in their machinery which perhaps does not come as easily with the more prosaic, though more efficient box-shaped turbine casing. With nothing more serious than an occasional hot bearing this venture into operation with inexperienced though intelligent and interested personnel proved sound.

Great interest was manifested and much creditable work was turned out by the cadets in the machine shop. Augmenting the practical work, lectures and instruction were given in the theory of elementary steam engineering and in fundamental physical concepts. Perhaps the cadets did not receive as much benefit from this theoretical work as might be expected. Strange environment, the disorder of a ship just out of the shipyard, seasickness, all contributed to make conditions not particularly conducive to study. It is believed that the cruises should be given over largely to practical work, and in the main, academic instruction be confined to the shore term at the base.

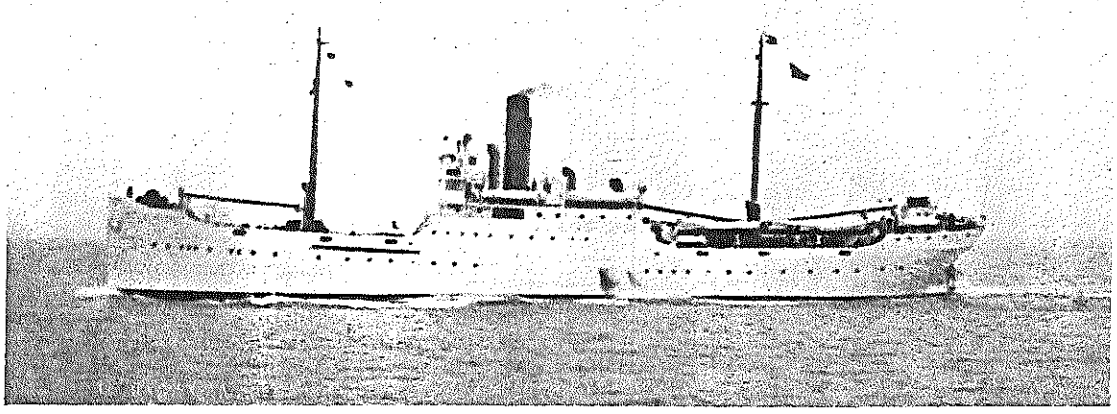
The California Nautical School has a three-year course. It is assumed that the major portion of the entering cadets have had no experience at sea. The first year of the course, therefore, is given over to a general introduction to all phases of ship's life. At the conclusion of the first year cadets are permitted to elect whether they desire to become deck officers or engineering officers, and the last two years of the course are confined to the specialties they choose.

It is the desire of the staff to have the cadets make their decision based on observation and experience, and particular efforts are made to avoid influencing any cadet in making a choice. It is interesting to note that the present senior class, in electing a specialty, has divided itself practically in half.

Every effort is made to give sound instruction in fundamentals and to top that off with a development in the practical application of these fundamentals. It can be expected that the graduates of this school will take with them habits of industry, sound technical knowledge and a spirit which will advance not only the establishment, but of greater importance the maintenance, of a truly adequate American Merchant Marine.

The California Nautical School has its shore base at California City, with ample buildings and facilities for the efficient conduct of academic and shop instructions for 120 cadets drawn from all parts of the state. So

(*Continued on Page 36*)



Comfortable, dependable and seaworthy, the 9-knot schoolship *California State*