Crane placing mast on concrete foundation.

FIG. 1

Close-up view of mast on concrete foundation.

FIG. 2

wet. Conferences were held with local engineers to obtain data concerning the allowable bearing capacity of the soil in this location; as a result of these conferences, it was decided to use a bearing capacity for this soil of 1,000 pounds per sq. ft. in designing the mast foundations. Calculations were made to insure that the resultant fell within the middle third under the worst loading condition, and that stresses were within allowable limits. The factor of safety against overturning was checked.

Fig. 2 also shows an extension consisting of a steel cylinder welded to the bottom of the mast to provide for anchorage in the concrete base and pedestal and to give full mast height above the top deck of the ship.

The second mast was lifted and placed as seen in Fig. 3. Framing of the sides of the ship is also shown. Fig. 4 shows the forms built about the lower portion of the masts for pouring of the reinforced concrete pedestals. The design of the pedestals was checked to maintain stresses within safe limits. A completed pedestal with booms and gear mounted in illustrated in Fig. 5. This picture also shows an operator handling the steam-operated winches. Winch-handling was the key operation in the stevedore

The second mast is lifted and placed on base.

FIG. 3

Forms for concrete pedestals.

FIG. 4

Completed pedestal with booms and gear. Operation of winches. Boiler house at right.

FIG. 5

training program. A boiler plant built for generating steam for the winches is shown at the right.

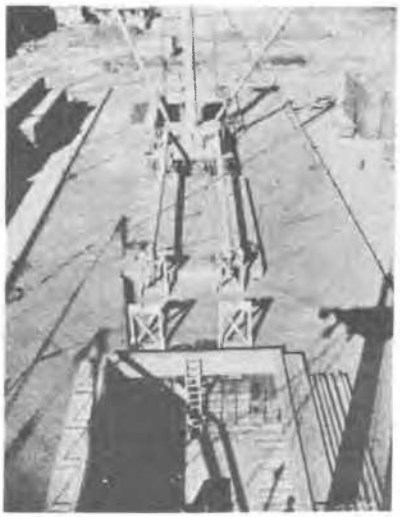
Progress in the construction of the sides

Construction of Stevedore Training Ship in progress.

FIG. 6

"Jumbo" boom in operation handling LCM and LCVP boat mockups.

FIG. 8



Longitudinal view of Stevedore Training Ship.

FIG. 7

Night operation of Stevedore Training Ship.

FIG. 9

and deck of the ship is shown in Fig. 6. Fig. 7 is a longitudinal view of the completed ship; in the foreground may be seen a hatch with cargo placed in it. In the background, a mast may be seen with hatch covers on the near hatch and the booms secured for sea; in the distance the booms are in position for loading cargo over the side of the ship into the far hatch.

A "jumbo" boom was installed as shown in Fig. 8. This boom was full size and rigged to be moved both horizontally and vertically for handling both cargo and boats. The picture shows the handling of mockups of boats of the LCM and LCVP types. Navy men of the general service were trained in handling boats on and off the training ship by means of the jumbo boom so they would be proficient in this work when later assigned to duty on board ships. One of the special features of this training ship was that full-sized masts, booms and gear were used throughout and handled as on board ship. It was the policy to make it possible for the men to become thoroughly familiar with the handling of long, heavy booms so they would not be nervous when they were called upon to handle this type of equipment on board ship at sea and in combat areas. All features were simulated except the "roll of the ship".

Fig. 9 shows the completed training ship in full operation at night. The lighting system was installed to make possible training on the ship 24 hours a day, seven days a week. Hundreds of men were trained by means of these facilities. One of the worst bottlenecks in the prosecution of the war in the Pacific was the unloading of cargo from ships. Because the stevedore battalions were trained to "keep the hook moving", they were able to increase the tonnages unloading from ships in the forward areas and thus greatly improved this situation.

Involved in the design and construction of this training ship were both structural and ship construction problems. Captain H.P. Needham, CEC, USN, Officer-in-Charge of the Advance Base Depot was in general charge. The author, as Training Officer, supervised the construction, and Lieutenant R.P. Morris, CEC, USNR, Stevedore Training Officer, was responsible for many features. Captain H.R. Patterson, USNR, was consultant on stevedoring methods. The contractor was the Pacific Naval Air Bases Company. The construction work and training program were under the direction of the Bureau of Yards and Docks of the U.S. Navy.

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