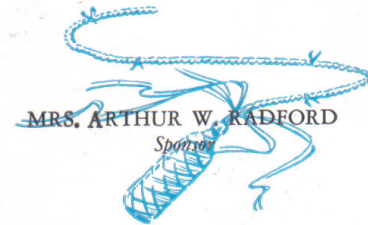


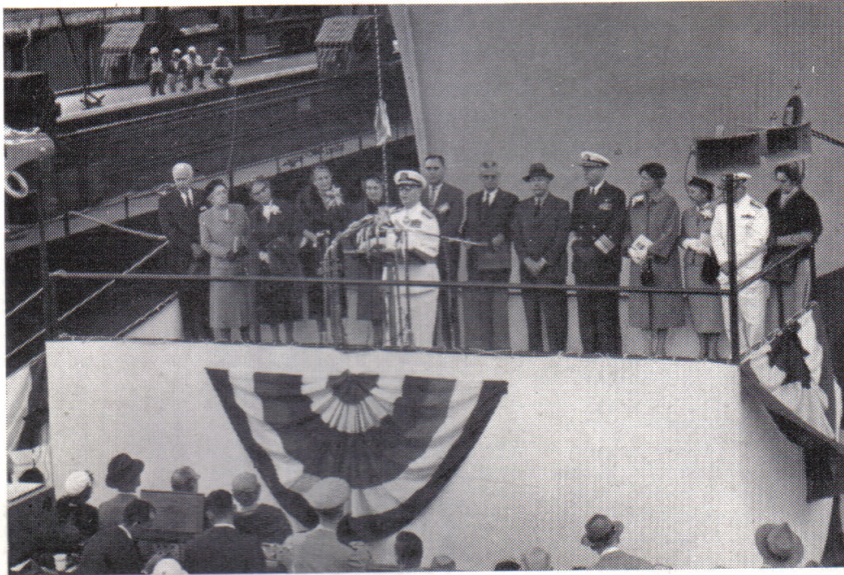
THE U.S.S. RANGER

NEWPORT NEWS SHIPBUILDING AND DRY DOCK CO.



Christening of
The USS RANGER
September 29, 1956





Admiral Arleigh A. Burke, Chief of Naval Operations, speaking during the ceremonies for the christening of the RANGER on September 29, 1956.

U. S. S. RANGER

The *U. S. S. RANGER* was christened at 12:30 P. M., on September 29, 1956. The Sponsor was Mrs. Arthur W. Radford, wife of the Chairman of the Joint Chiefs of Staff.

The *RANGER* is the world's most modern aircraft carrier. Her facilities not only include all the improvements built into her sister ship, the *SARATOGA*, but also major improvements in her weapon handling equipment and an all-welded aluminum elevator. This port side elevator, weighing 105 tons, is the largest and heaviest all-welded aluminum structure

ever built. It represents a substantial weight reduction as compared to a conventional type elevator.

An unusual event in the construction of the *RANGER* was the fact that she was built in two docks at Newport News. To expedite her building, work was started in a smaller dock. About four months later, when the *FORRESTAL* was launched, the partially completed hull of the *RANGER* was floated into the larger facility vacated by the *FORRESTAL*.



The *RANGER* is the 3rd *FORRESTAL* Class Aircraft Carrier launched thus far by the U. S. Navy in their six-ship program of this Class. She is the 17th aircraft carrier built at Newport News since the construction of the 1st vessel bearing that name at Newport News in 1933. Her delivery in the summer of 1957, well ahead of schedule, marks a new construction record for carriers of the *FORRESTAL* Class.

The keel for the *RANGER* was laid on August 2, 1954. Thousands of shipyard workmen fabricated, assembled and constructed almost 52,000 tons of steel to form this great vessel. Other thousands of workmen accomplished the remarkable task of outfitting the giant vessel and installing her machinery in a period of just over ten months from launching.

Despite her tremendous size, the *RANGER* represents no radical departure from accepted and proven principles of aircraft carrier design and construction. She is the product of evolution as logical and inexorable as the process by which man learned to stand erect.

Like every fighting ship, the *RANGER*'s only reason for existence is the job she can do. The most



Mrs. Arthur W. Radford, sponsor of the RANGER, is shown with Admiral Radford, Chairman of the Joint Chiefs of Staff, and Mrs. Frederick M. Trapnell, Matron of Honor.



View of the crowd assembled for the christening of the RANGER.

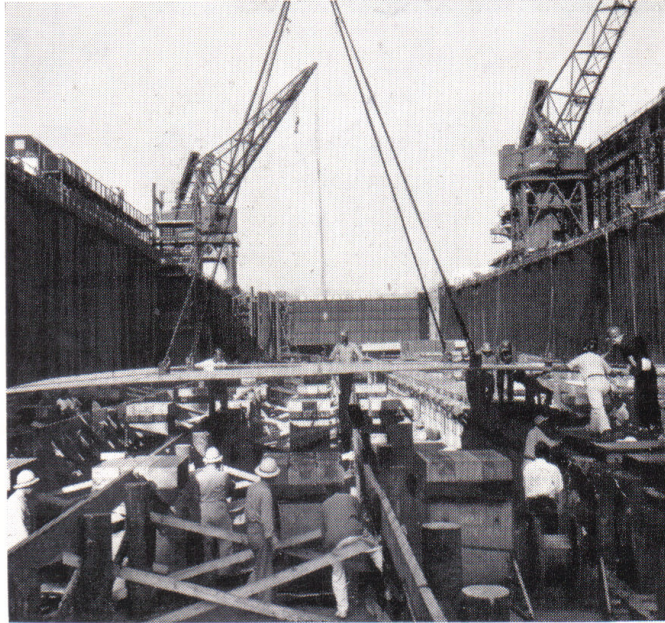
important factor in determining her design and size was the development of jet aircraft. Today's supersonic planes are bigger and heavier than those of World War II. For example, the heaviest carrier-based plane of the war was the Navy TBM, a propeller-driven torpedo bomber that weighed about 18,000 pounds fully loaded. Today's A3D jet-powered Sky Warrior weighs about 70,000 with a full load of fuel and ammunition. The problems of getting these big, fast planes into the air are overwhelming. World War II planes landed at about 80 miles per hour. Today's carrier aircraft hit the deck at well over 100 miles per hour. And the jets burn fuel at three times the rate of the earlier planes.

RANGER PROPELLERS AND RUDDERS

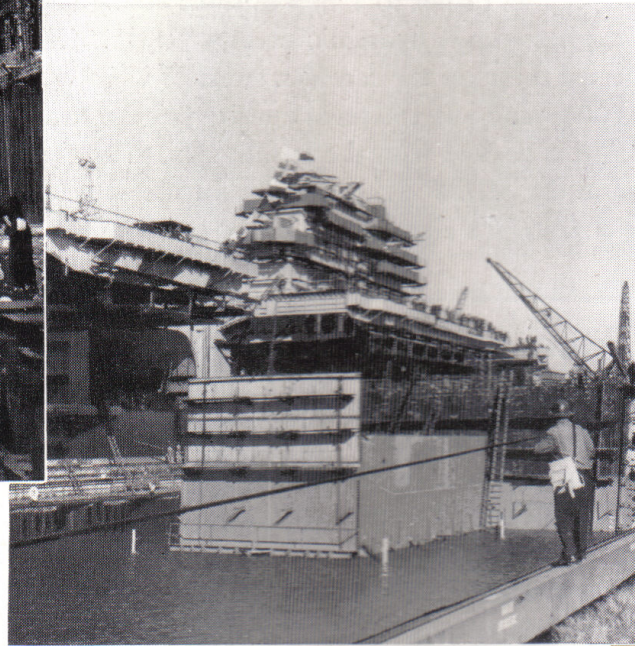
The *RANGER*'s four propellers are each 22 feet across. Almost the height of a two-story house. Each of her two rudders weighs 45 tons and equals the floor area of a two-bedroom house.



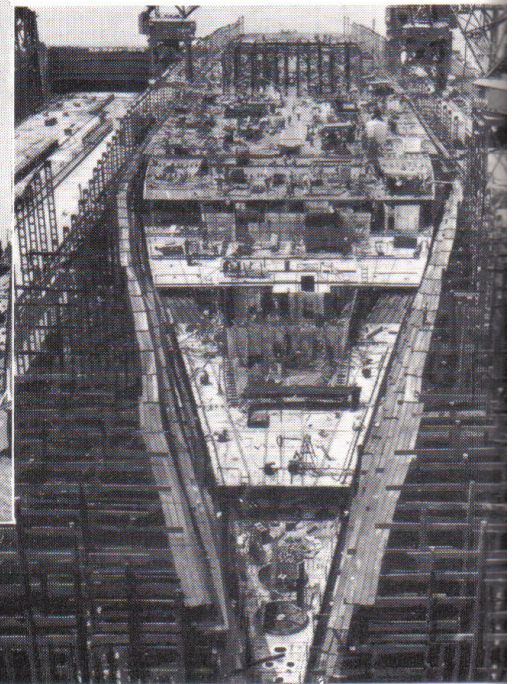
Partially constructed hull of the RANGER is shown in the foreground with the FORRESTAL in the background. The RANGER was placed in the dock vacated by the FORRESTAL for completion.



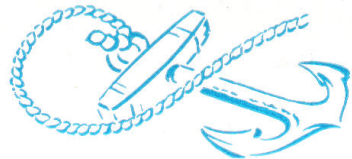
View of keel laying on August 2, 1954.



Partially completed hull being removed from dock.



RANGER during construction.

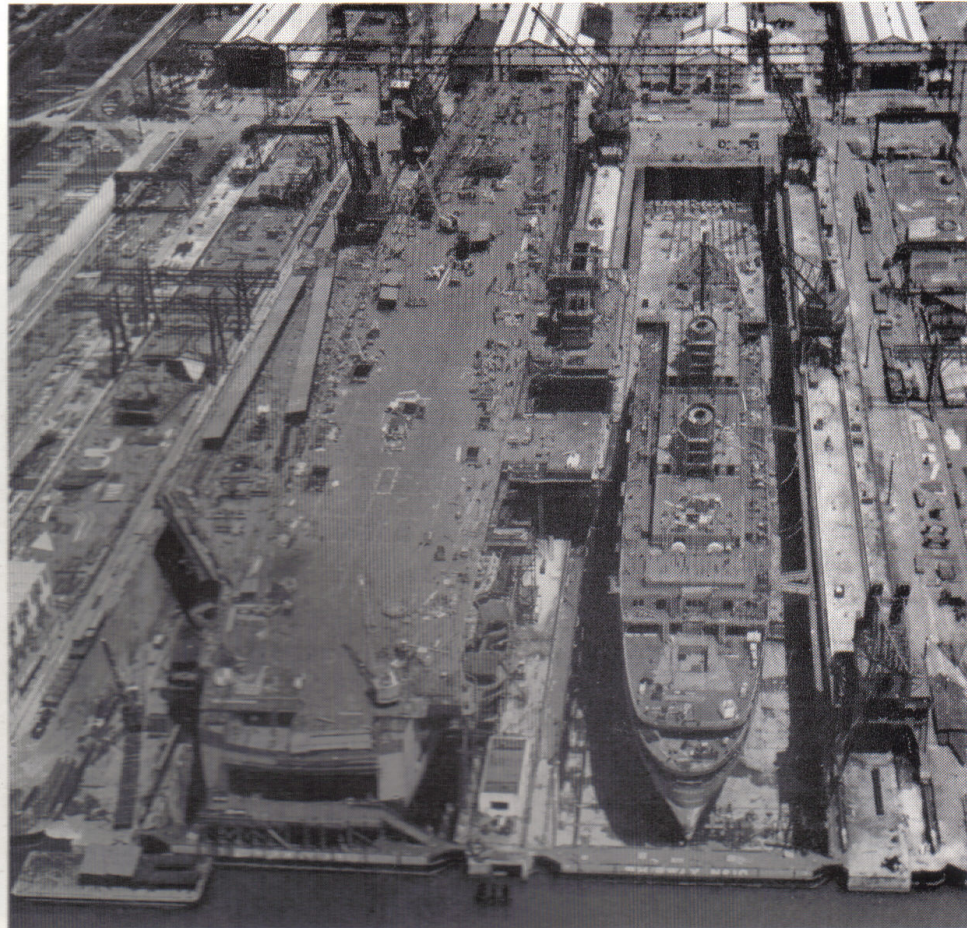




speed up the rate of plane launching, four elevators were installed instead of three as on the *MIDWAY* class. Likewise, the *RANGER* has four launching catapults to the *MIDWAY*'s two. These, interestingly enough, are operated by steam instead of the hydraulic power used in other modern U. S. carriers.

The increase in number as well as size of the catapults would have dictated a hydraulic system of such increased size as to cause a space and weight problem inside the ship. Power was needed to operate the catapults and there is a tremendous amount of steam power in the boilers of a ship. While she is launching planes this power is not being fully used for propulsion. An excellent steam catapult design developed by the British, was modified for the *FORRESTAL* class carrier's purposes.

The result is that the *RANGER* and her sister ships can launch planes faster than any other carrier in the world.



RANGER nearing christening date with passenger liner *MATSONIA* in adjacent dock.