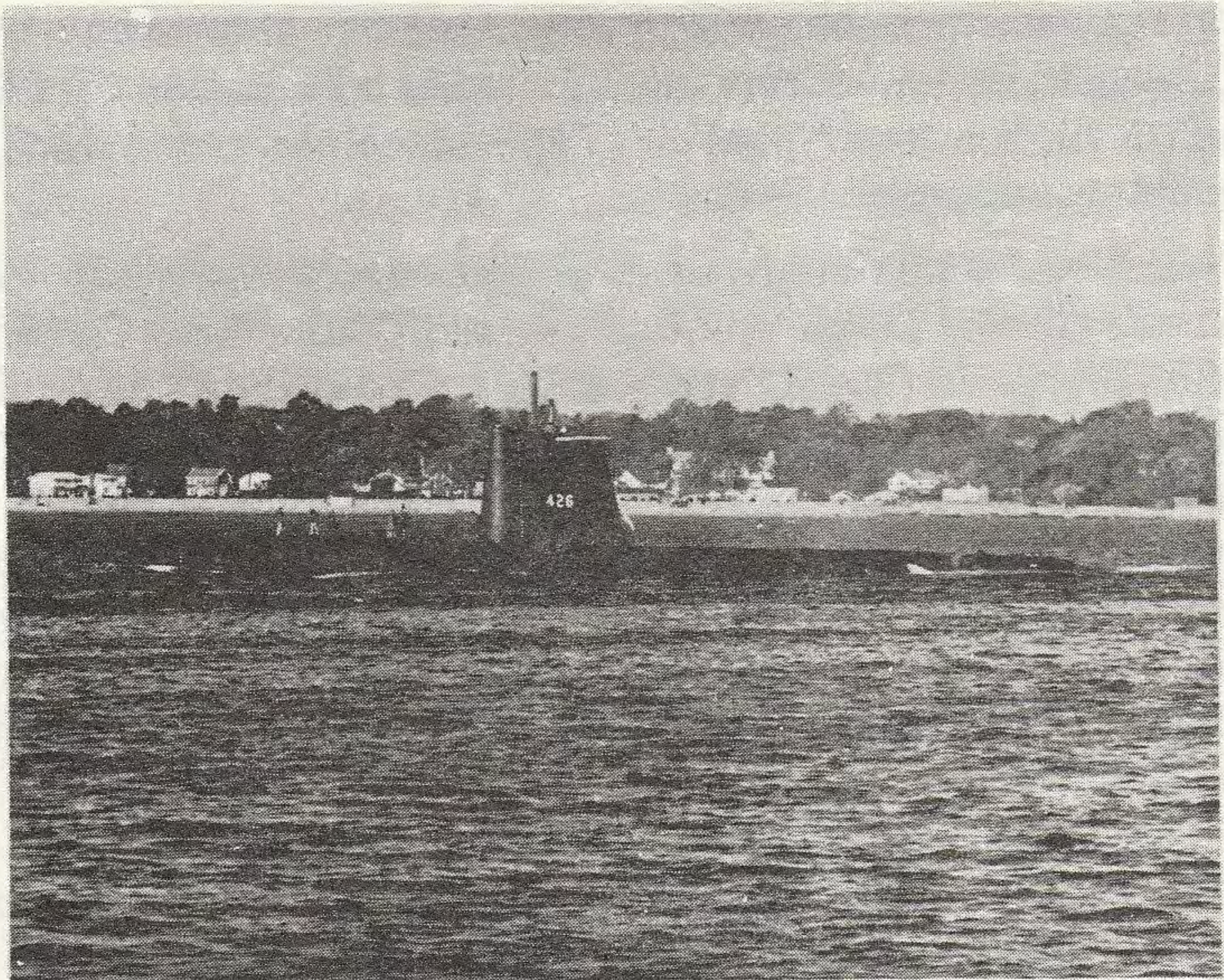


USS TUSK (SS426)



Welcome Aboard!

SHIP'S HISTORY

The USS TUSK (SS426) was the 14th and last submarine to be built by the Cramp Shipbuilding Company of Philadelphia, Pennsylvania, during World War II. TUSK was sponsored by Mrs. Carolyn Park Mills, wife of Rear Admiral E. W. Mills, and was commissioned as a fleet type submarine on April 11, 1946.

During 1947, the Portsmouth Naval Shipyard completed extensive alterations which converted the ship to the Guppy II Classification. Alterations included installation of a Snorkel, a high capacity battery, and streamlining to facilitate greater submerged speed.

In 1949, while engaged in a training cruise north of the Arctic Circle, TUSK went to the aid of the USS COCHINO (SS345) when COCHINO's battery exploded and caught fire. Incident to providing medical supplies to her sister ship by life raft, one raft carrying a COCHINO officer and a civil service employee capsized in the heavy seas. Both men were recovered, but while artificial respiration was being administered, a huge wave carried the civilian and 11 TUSK crewmen over the side. The civilian and 6 sailors were never recovered. Later, enroute to Hammarfast, Norway, the COCHINO was again rocked by an explosion in her after battery. TUSK was lashed to the COCHINO and succeeded in taking aboard all of the crew. Minutes later the COCHINO went down.

Throughout the 1950's, TUSK was assigned to Submarine Squadron TEN and took part in various U.S. and NATO training exercises as well as extended cruises to the Mediterranean and Caribbean. TUSK enjoyed two interesting and challenging operations by participating in Submarine Ice Exercises in 1960 and 1962. In the early 60's TUSK was engaged in the development of new torpedo firing techniques and evaluation of special equipment.

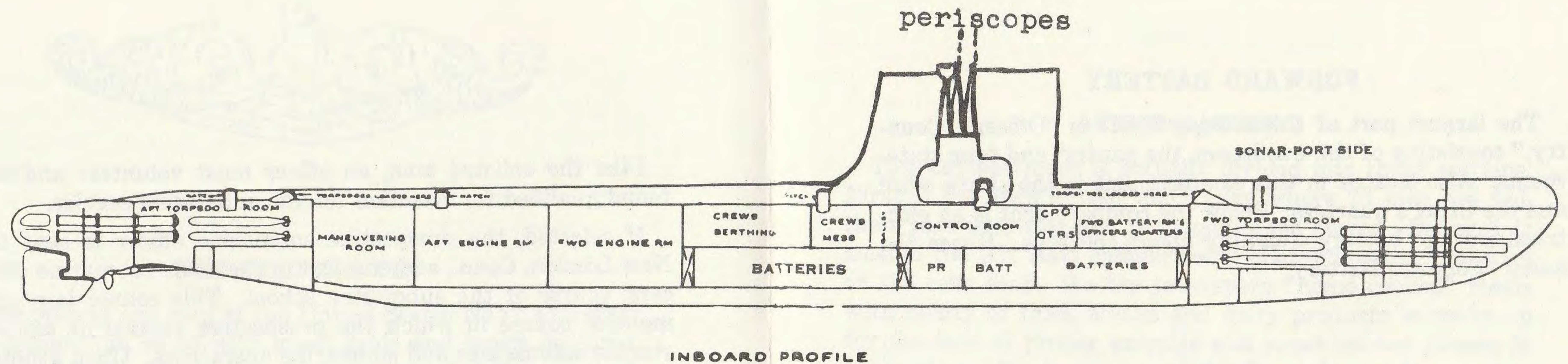
Through continuous training utilizing modern equipment and techniques during realistic exercises TUSK stands ready for all emergencies.

TUSK entered the Philadelphia Naval Shipyard in June 1965 to undergo a major shipyard overhaul. Her configuration was changed with the addition of a new high plastic conning tower fairwater, the purpose of which is to provide room for more electronic masts, provide easier visual observation of the deck, and greater comfort for the TUSK's watchstanders. In addition, TUSK received the PRAIRIE-MASKER system, increased air-conditioning capacity, additional storerooms, and additional fresh water tanks. Upon completion of overhaul in January 1966, TUSK was transferred from Submarine Squadron TEN to Submarine Squadron EIGHT. In December 1969, TUSK was transferred to Submarine Squadron TWO.

Throughout her 20-plus years of service, TUSK has traveled extensively in the waters of the North Atlantic, Mediterranean and Caribbean, and has been privileged to visit 19 foreign countries.

Since 1945 the Commanding Officers of the TUSK have been:

CDR R. A. MOORE
CDR M. G. AUSTIN
CDR H. F. GUGGLIOTTA
CDR R. K. WORTHINGTON
LCDR A. H. WARNER
CDR C. T. COOPER, III
LCDR J. P. WISE
LCDR H. S. MORGAN, JR.
LCDR J. C. SMITH
LCDR A. B. CRABTREE
LCDR J. A. DAVI
LCDR R. G. BILLS
CDR H. J. WISEMAN
CDR G. D. McCARTHY
CDR C. J. ZADD
CDR A.M. KOSTER IV



SUBMARINE STRUCTURE

The main hull, or "pressure hull" of the submarine is basically a cylinder closed at both ends and is built to stand the great pressures of deep depths. Atop the pressure hull is another small cylinder of equal strength called the "conning tower." It is within these two cylinders that all the machinery, weapons, working and living spaces are located. Around the pressure hull is another hull. It is between these two hulls that the ship's ballast and fuel tanks are located. On top of this outer hull is a built-up walking deck which is free flooding (hence all the holes). It is only this portion of the submarine that can be seen while it is on the surface, which tends to make it appear smaller than it actually is. The main pressure hull is almost completely below the water.

To aid you in understanding what you see as you walk through TUSK, we shall briefly describe the compartments in their sequence beginning at the forward end and proceeding aft.

FORWARD TORPEDO ROOM

The bow "nest" of torpedo tubes occupy the forward part of this section, sometimes referred to as the "business end" of the submarine. Here 16 members of the crew sleep, live, and stow their clothes and personal gear. In this space are carried all the spare torpedoes for the forward tubes and it is here that these torpedoes are maintained and repaired. The crew's berths are fitted over, under and around the torpedoes and must be removed whenever torpedoes are moved or worked on. The torpedoes are brought on board through a loading hatch in the overhead in the after part of the section. Hydraulic oil, alcohol, and fresh water tanks are also located in this section. As you enter or leave the ship by this section you will pass through the escape trunk. Having a hatch at the top and bottom and an escape door at one side permits three or four men at a time to leave the submarine submerged. This is used for Frogman operations or as a means of escape using the new Buoyant Ascent method.

FORWARD BATTERY

The largest part of this compartment is "Officers' Country," consisting of the wardroom, the pantry, and four state-rooms. Also located in this compartment is the ship's office and the Chief's quarters. Below the compartment is an electrical storage battery weighing about 150 tons. Hence the name "Forward Battery."

CONTROL ROOM

In this room you will see practically all the controls for diving the submarine, controlling it while submerged and surfacing it. The ship's main gyro compass is located in the center of the room. The "Hull Opening Indicator Board," usually referred to as the Christmas Tree, located just over the hydraulic manifold indicates whether openings in the hull are shut (green board) or open (red board). We must have a "green board" before we dive. The Officer of the Deck Submerged, whose station is in the conning tower, directs the movement of the ship by issuing orders to the "Diving" Officer in the Control Room. The radio room is located in the after part of the Control Room.

CONNING TOWER

The small pressure-proof "BARREL" which sits atop the pressure hull, contains the major ship and torpedo fire control stations on board. From here the Commanding Officer directs all maneuvers and conducts battle problems. The "CONN" also contains the ship's underwater eyes, two periscopes, and therefore truly is TUSK's submerged bridge.

AFTER BATTERY

This compartment is actually divided into three sections. First is the crew's mess and galley where 70 men are fed, their food prepared and perishable food stored. Below it is located the Aft Batt compartment containing two batteries of 126 cells each. We try to prepare "home cooked" meals with plenty of thick steaks and dairy products to make up for the lack of proper exercise and sunshine one misses in submarines. Meals are served family style and the crew is served effectively in about three settings. Officers enjoy the same food as the crew because of the single galley. Next is the crew's berthing space where 36 men sleep and live. The third space is the crew's washroom.

FORWARD AND AFTER ENGINE ROOMS

These rooms contain three main diesel engines. Attached to each engine is a large electrical generator which can produce electrical power either for propelling the ship or for charging batteries. In the forward end of the Forward Engine Room are two distilling plants which make fresh water from sea water for drinking, washing, and for the batteries. On the lower level in the After Engine Room is the ship's air-conditioning plant which provides humidity and temperature control for the crew's habitability and the efficient operation of the great amounts of electrical and electronic equipments.

FORWARD BATTERY

MANEUVERING ROOM

The electrical power from the engine rooms is brought into the big switchbox or "cubicle" that occupies the sides of this compartment. The two Electrician's Mates on watch can, by pulling various levers, direct the electricity into the batteries or the main motors, or from the batteries to the main motors. They also control the direction and speed of the main motors and propellers. The motors and associated machinery are located in the lower part of this compartment. The diesel engines are also controlled remotely from this room.

AFTER TORPEDO ROOM

This room is smaller but otherwise similar to the forward torpedo room. Here there are four torpedo tubes. On the after port bulkhead is the signal ejector which permits launching of various flare and smoke signals while submerged.

FACTS AND FIGURES

USS TUSK (SS426)

Displacement Surfaced	1900 tons
Displacement Submerged	2300 tons
Length Overall	306 feet
Width	27.4 feet

Propulsion Plant:

Three Diesel Engines of 1600 hp. each.
Four Storage Batteries of 126 cells each.
Three Propulsion Generators of 1100 Kilowatts each.
Four Electric Motors of 1350 hp. each.

Armament:

Two nests of 21-inch torpedo tubes—six tubes forward and four tubes aft.

Maneuverability:

Elapsed time from fully surfaced to fully submerged condition: Approximately 35 seconds.
Maximum speed on surface: 18 knots.
Maximum endurance at sea: Over 60 days.

Complement:

Officers: 9 Crew: 70

Special Features:

TUSK is equipped with the snorkel mechanism, streamlined sail, and all the latest in sonar and radar equipments.

Number of Dives to Date:

About 9900

