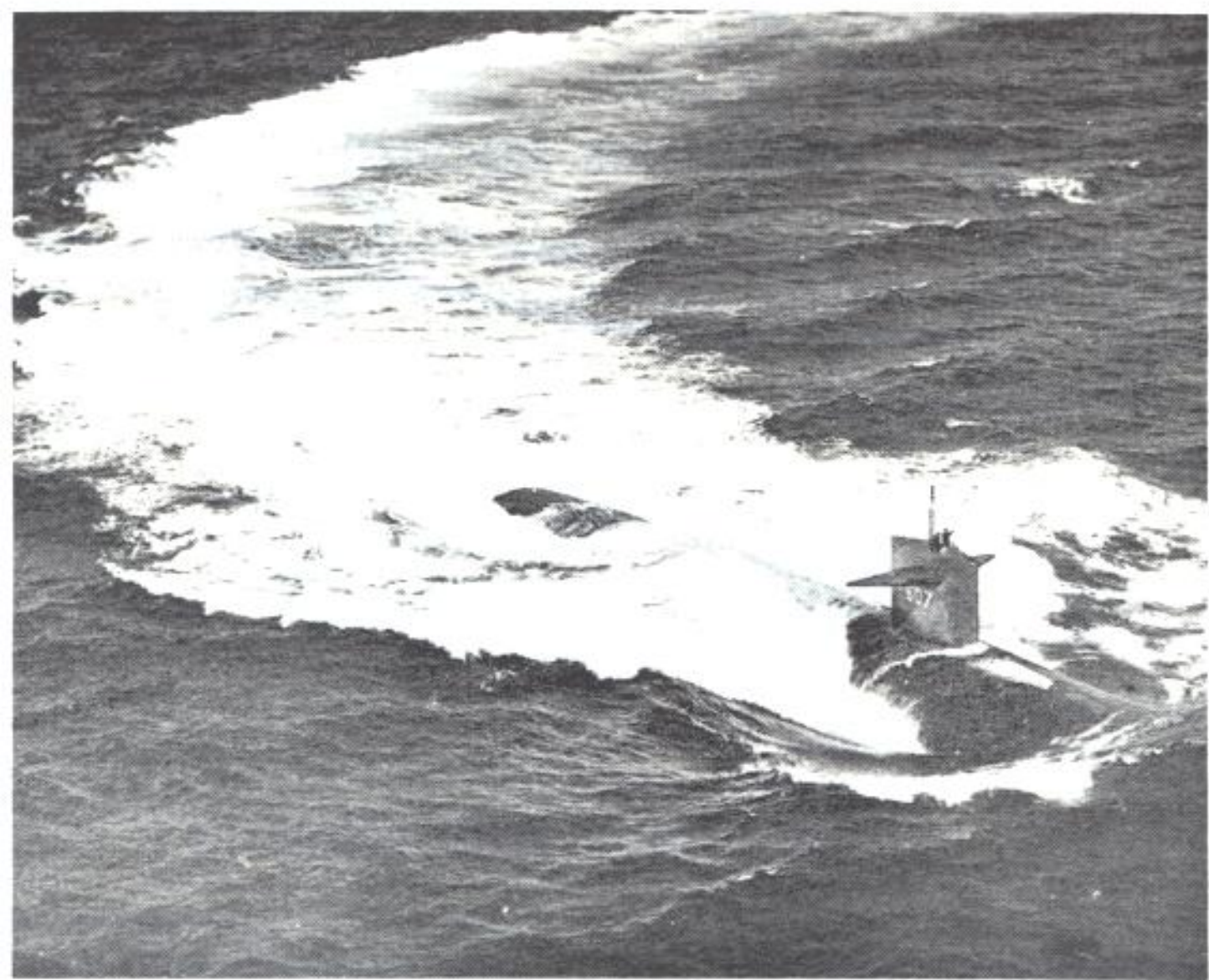
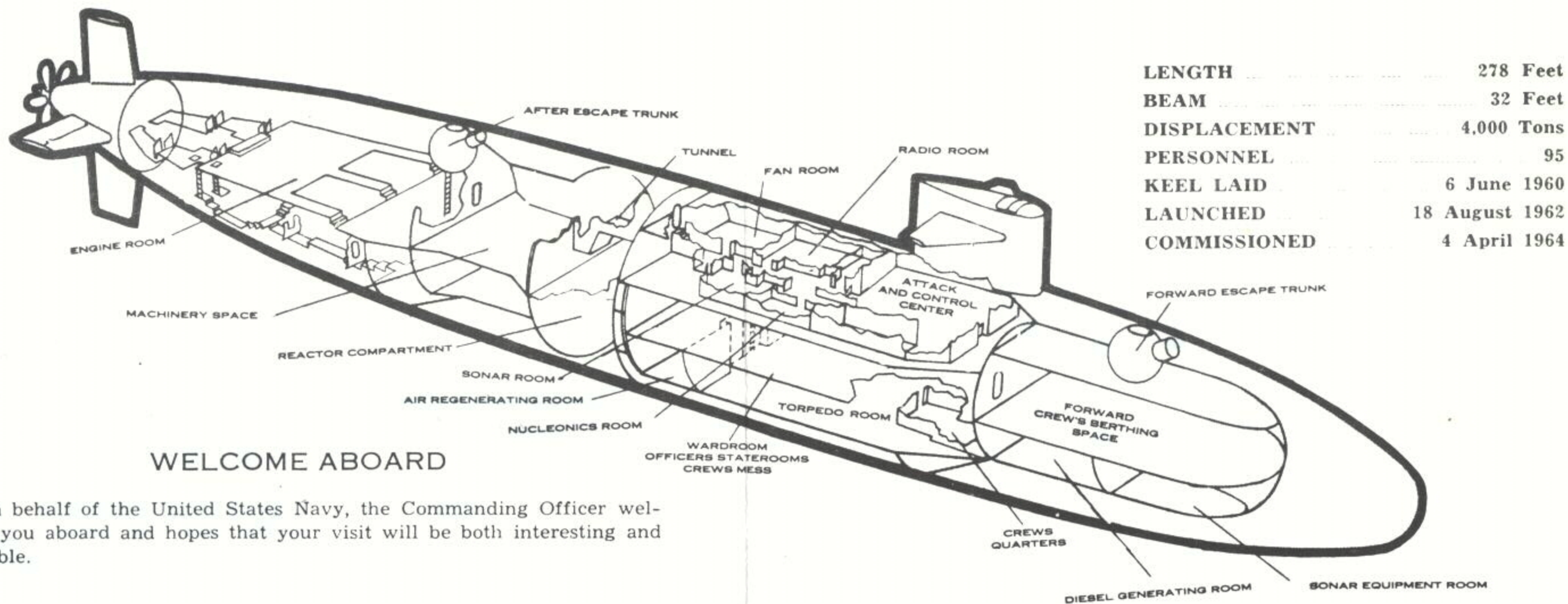


WELCOME ABOARD



USS DACE (SSN 607)



WELCOME ABOARD

On behalf of the United States Navy, the Commanding Officer welcomes you aboard and hopes that your visit will be both interesting and enjoyable.



DACE, OLD AND NEW

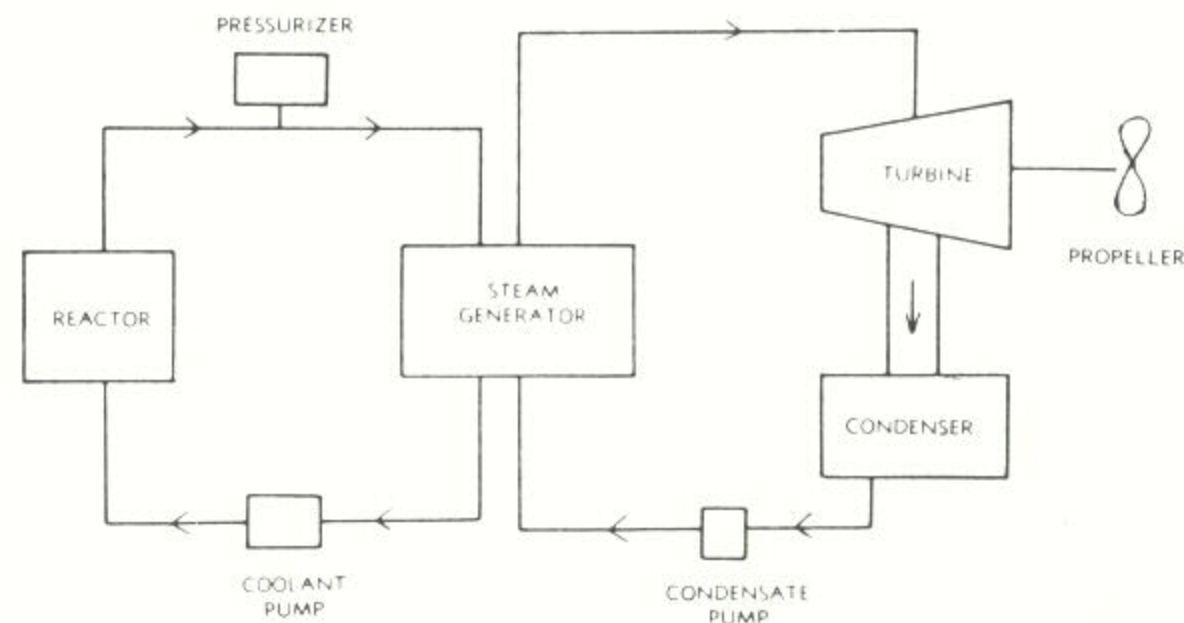
The first DACE (SS-247) was commissioned 23 July 1943 at Electric Boat Company in Groton, Connecticut. After seven successful war patrols in the Pacific during which DACE was credited with sinking nine enemy vessels totaling 41,600 tons, and damaging five others totaling 32,283 tons, she returned home in the fall of 1945 and was subsequently decommissioned in January 1947. DACE was recommissioned in 1951 and was transferred to the Italian Navy in 1955 where she now serves as LEONARDO da VINCI.

The new DACE, which you are aboard today, is a THRESHER class attack submarine designed primarily to seek out and destroy enemy submarines. To this end DACE is equipped with a highly complex sonar system and the most modern scientific methods have been used to make both ship and machinery as quiet as possible. DACE is capable of firing the Navy's newest submarine weapons, including SUBROC, an anti-submarine missile. With the atmosphere control equipment which is carried on board DACE can remain submerged for extended periods, completely independent of the earth's atmosphere.

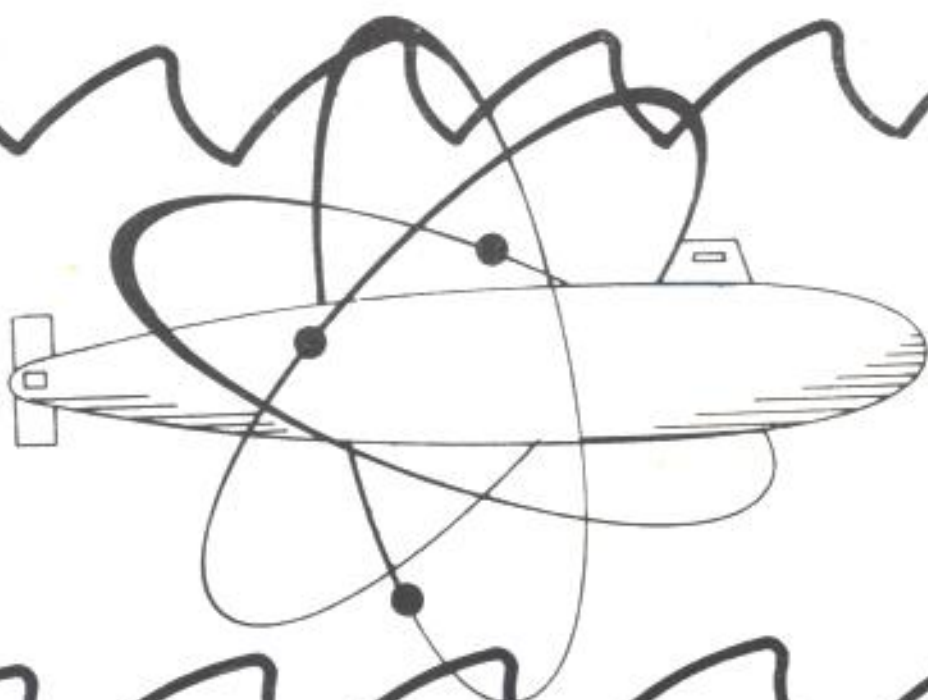
NUCLEAR PROPULSION

The advent of nuclear propulsion brought about the development of the true submersible because external air was no longer required for the operation of the propulsion plant.

The nuclear propulsion plant consists, basically, of two closed systems. In the primary system the pressurized water is heated in the reactor vessel by the controlled nuclear reaction of the uranium fuel. This water is in turn circulated by pumps through a steam generator or heat exchanger where it gives up its heat to the water on the secondary side. This water is boiled to produce steam for operating the propulsion turbines and other auxiliary equipment. After passing through the turbines this steam is then condensed and returned to the steam generator to be converted to steam again.

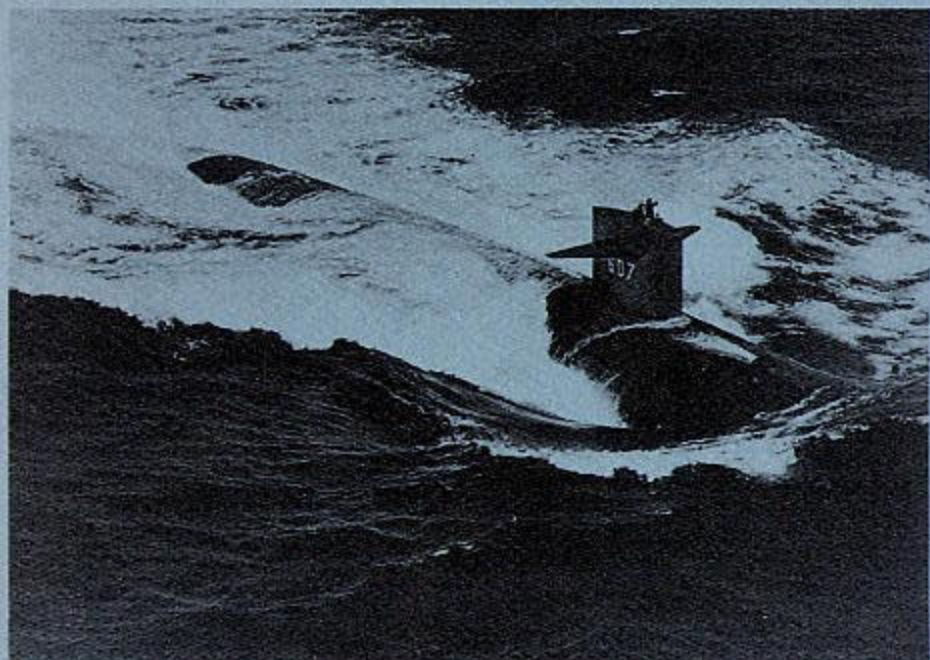


USS DACE



SSN 607

welcome aboard



USS DACE



SSN 607



USS DACE (SS247)



USS DACE, OLD AND NEW

The first DACE (SS247) was commissioned 23 July 1943 at Electric Boat Company in Groton, Connecticut. After seven successful war patrols in the Pacific during which DACE was credited with sinking nine enemy vessels totaling 41,600 tons, and damaging five others totaling 32,283 tons, she returned home in the fall of 1945 and was subsequently decommissioned in January 1947. DACE was recommissioned in 1951 and was transferred to the Italian Navy in 1955 where she now serves as LEONARDO da VINCI.

The new DACE (SSN607), which you are aboard today, is a PERMIT class attack submarine designed primarily to seek out and destroy enemy submarines. To this end DACE is equipped with a highly complex sonar system and the most modern scientific methods have been used to make both ship and machinery as quiet as possible. DACE is capable of firing the Navy's newest submarine weapons, including HARPOON, an antisurface-ship cruise missile. With the atmosphere control equipment which is carried on board, DACE can remain submerged for extended periods, completely independent of the earth's atmosphere.

SHIP'S HISTORY

USS DACE (SSN607) is a nuclear powered attack submarine attached to Submarine Squadron TEN, at New London, Connecticut and was built by Ingalls Shipbuilding Company at Pascagoula, Mississippi.

Commissioned in April 1964, DACE served in Submarine Development Group TWO until October 1967. As a member of the Development Group, DACE became the standard for a continuing program aimed at establishing the ASW capability of our modern nuclear submarines. In the process, DACE made significant contributions in the field of tactics, weapons employment, and the development of modern submarine sonar systems. Many of the tactics, procedures, and equipment now used by our first line attack submarines trace their origin to DACE's participation in this program.

During Late 1967 and 1968, DACE conducted two highly successful independent submarine operations and was awarded two Navy Unit Commendations. In further recognition of DACE's performance, Commander Submarine Force, Atlantic Fleet nominated USS DACE (SSN607) as "The Ship of the Year - 1968."

In July 1969, DACE completed a routine overhaul at the Electric Boat Division of General Dynamics. DACE joined Submarine Squadron TEN following overhaul and continued her role of testing and development of new submarine tactics and equipments.

The caliber of her response to these demands was evidenced by the fact that DACE had been awarded the Battle Efficiency Pennant (E) and the (E) for Excellence in Weapons Employment and Fire Control during seven of these eight years of commissioned service.

DACE has made six deployments to the Mediterranean, completing the sixth deployment on 10 October 1978.

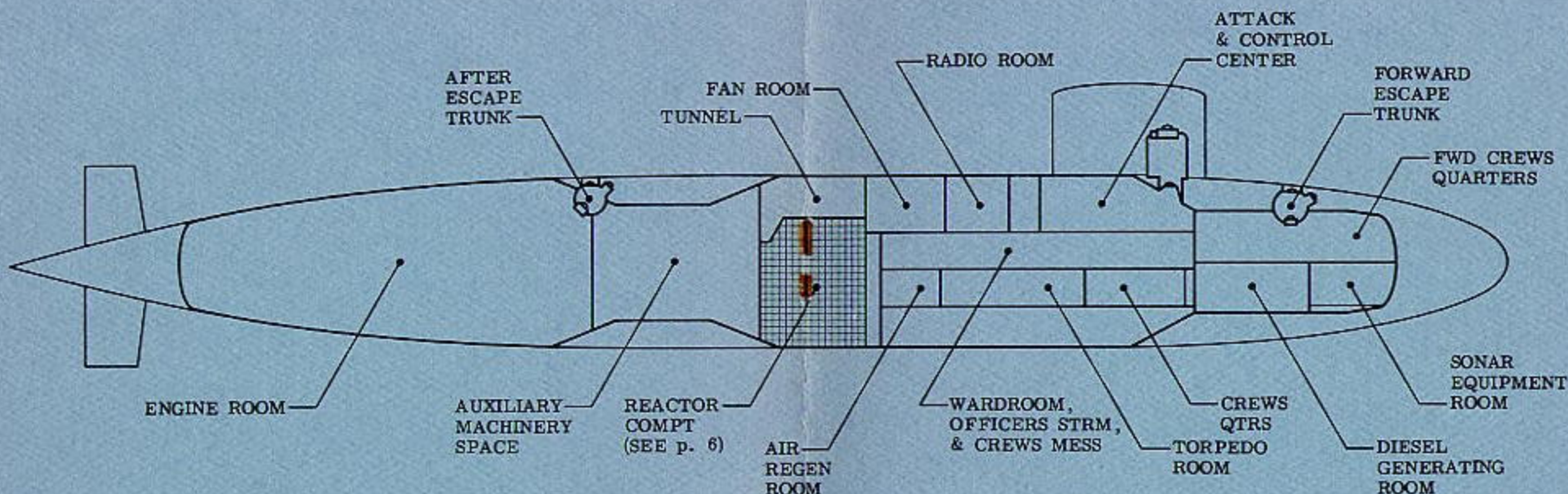
From October 1972 to April 1975, DACE underwent a major overhaul at Electric Boat Division of General Dynamics. DACE then conducted extensive post-overhaul shakedown testing. In December of 1975, DACE began its first post-overhaul Mediterranean deployment.

Subsequently DACE underwent a period of tender availabilities, short underway missions, and two Mediterranean deployments.

In October 1979, DACE commenced an AN/BQ-5(A) Sonar System/MK117 Fire Control System backfit and a Subsafe Certification overhaul. Upon completion of the overhaul in summer 1981, DACE returned to New London and rejoined Submarine Squadron TEN.

USS DACE has a proud history of achievement having been awarded three Navy Unit Commendations, a Meritorious Unit Commendation, and a Golden Anchor Award for outstanding service as a fleet unit.

SHIP'S ARRANGEMENT



LEGEND

DISPLACEMENT _____ 4,000 TONS
 PERSONNEL _____ 105
 KEEL LAID _____ 6 JUNE 1960
 LAUNCHED _____ 18 AUGUST 1962
 COMMISSIONED _____ 4 APRIL 1964

LENGTH _____ 278 FEET
 BEAM _____ 32 FEET
 SPEED _____ IN EXCESS OF 20 KNOTS
 DEPTH _____ GREATER THAN 400 FEET
 SPONSOR _____ MRS. GERALD R. FORD

HOW NUCLEAR POWER OPERATES A SUBMARINE

The power plant of a nuclear submarine is based upon a nuclear reactor which provides heat for the generation of steam. This, in turn, drives the main propulsion turbines and the ship's turbo-generators for electric power.

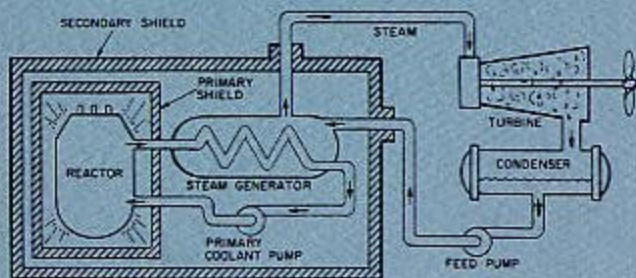
The primary system is a circulating water cycle and consists of the reactor, loops of piping, primary coolant pumps, and steam generators. Heat produced in the reactor by nuclear fission is transferred to the circulating primary coolant water which is pressurized to prevent boiling. This water is then pumped through the steam generator and back into the reactor by the primary coolant pumps for reheating in the next cycle.

In the steam generator, the heat of the pressurized water is transferred to a secondary system to boil water into steam. This secondary system is isolated from the primary system.

From the steam generators, steam flows to the engine room where it drives the turbo-generators, which supply the ship with electricity, and the main propulsion turbines, which drive the propeller. After passing through the turbines, the steam is condensed and the water is fed back to the steam generators by the feed pumps.

There is no step in the generation of this power which requires the presence of air or oxygen. This fact alone allows the ship to operate completely independent from the earth's atmosphere for extended periods of time.

During the operation of the nuclear power plant, high levels of radiation exist around the reactor and personnel are not permitted to enter the reactor compartment. Heavy shielding protects the crew so that the crew member receives less radiation on submerged patrol than he would receive from natural sources ashore.

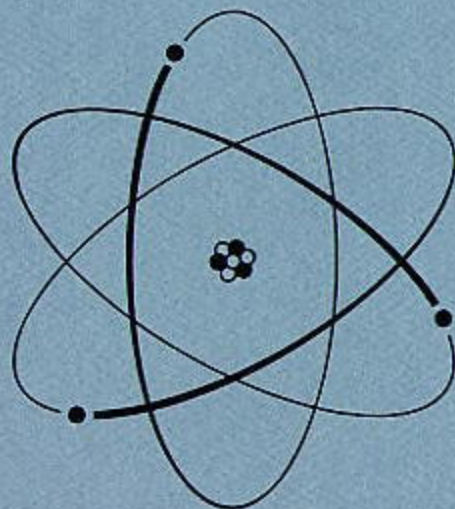


DACE

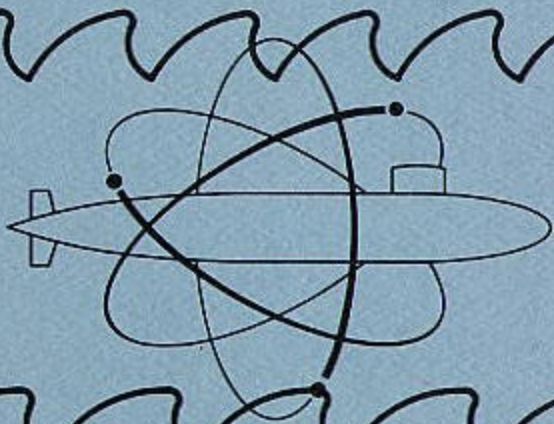


The "dace" is a small freshwater fish found in many habitats throughout the world. Most North American dace are found in cold, rocky, and fast-flowing streams.

The dace are among the most brightly-colored and showiest of North American fishes. They can be kept in aquariums but tend to lose their bright color.



USS DACE



SSN 607