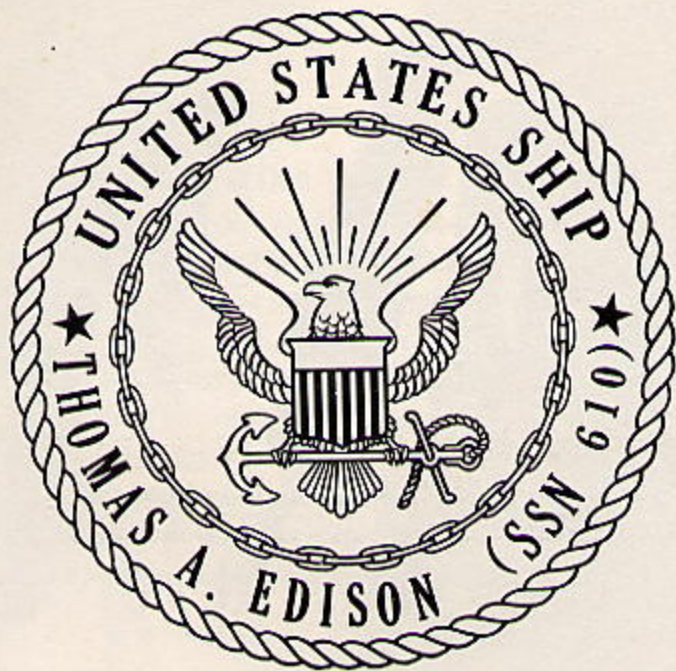
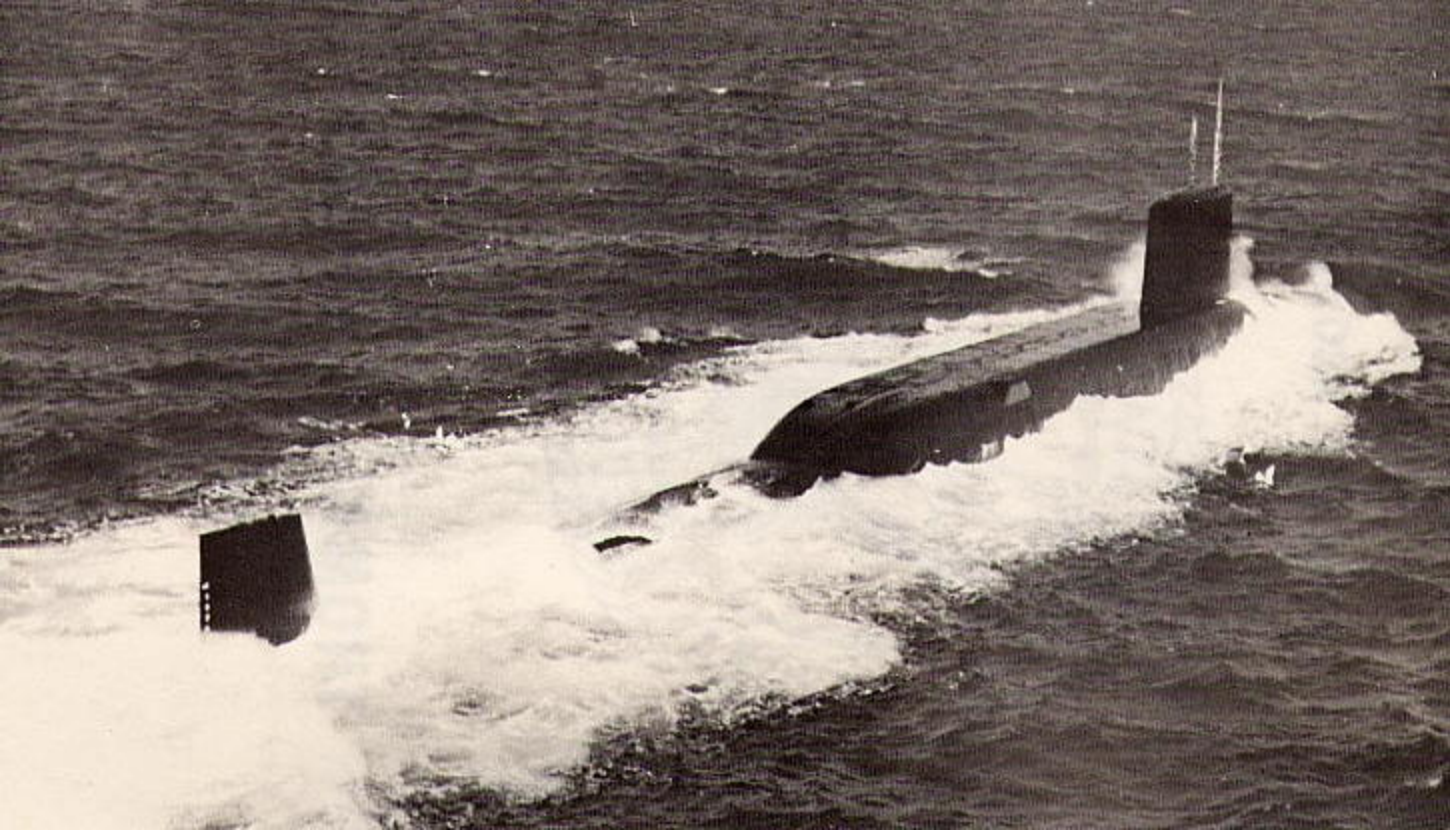


WELCOME ABOARD



THOMAS A. EDISON

SSN 610



WELCOME ABOARD

The officers and men of USS Thomas A. Edison are glad to have you aboard as our guest. We are eager to show you one of the finest submarines in the Navy and how it accomplishes its dual missions as a major deterrent to war and a powerful retaliatory force in the event of attack.

Please feel free to ask questions. Submariners are proud of their service and anxious for you to know about it. We hope you will carry away with you a bit of submarine lore and a better understanding of how we function, both in our complex systems and machinery and in the intangible bonds of esprit de corps that mark all submariners.

May your visit be an enjoyable and memorable one.

THOMAS ALVA EDISON INVENTOR

The Thomas A. Edison is the first U.S. Navy submarine to carry the name of an inventor—as well as an honorary Admiral.

For while Thomas Alva Edison invented the electric light bulb, the phonograph and 1,150 other items, the “Wizard of Menlo Park” also served with the Navy during World War I as a top civilian “officer”.

The late Josephus Daniels, then Secretary of the Navy, called Edison to Washington in 1915 to head a group of 22 scientists who comprised the Navy’s first Naval Consulting Board—later to become the Office of Naval Research. Charged with designing new methods and devices to combat the U-boat menace and advising the Navy in scientific matters, the group eventually became known as the Edison Consulting Board.

Daniels later said that “at first without authority I called Mr. Edison Captain, then Commodore, and then promoted Commodore to an Admiral. After the war, the Congress voted him the highest honors.”

The Edison Board’s contributions included surface ship listening devices designed to detect U-boats and the installation of loudspeaker telephones aboard ship.

The most far-reaching accomplishment of the consulting group, however, was in Edison’s convincing Congress to appropriate money for the country’s defense.

Built near Washington, D. C., the Naval Research Laboratory has been instrumental in the development of radar and scores of other discoveries vitally important to the country’s defense.

The commissioning plaque of the ship which bears his name reads, “Thomas A. Edison, the Father of Naval Research—a man motivated and dedicated to helping mankind live a better life.” The name of the famous inventor and “Admiral” is once more placed on active duty.

USS THOMAS ALVA EDISON SSN610

The Thomas A. Edison is 410 feet long and displaces 6,900 tons. She is powered by a nuclear reactor and carries equipment unknown a few years ago, such as satellite and inertial navigation systems which enable the ship's position to be determined with pinpoint accuracy.

An advanced design Fleet Ballistic Missile submarine, the Thomas A. Edison was a member of our nation's prime deterrent force. When on station, she remained hidden in the depths of the ocean virtually immune from attack. Always ready to answer aggression with devastation, she served as a constant reminder that free men have the willingness and the ability to defend their freedom. Her motto, "Potentia Tenebras Repellendi" (Power to Repel the Darkness), well summarized her mission.

Authorized by the Congress of the United States in 1958, the keel for the Thomas A. Edison was laid on March 15, 1960. During the keel laying ceremony, the keel plate was initialed by Peter Edison Sloane, grandson of Thomas A. Edison.

The ship was launched June 15, 1961, and was sponsored by Mrs. John Eyre Sloane, Mr. Edison's daughter. The Thomas A. Edison became an operational ship of the United States Navy during commissioning ceremonies on March 10, 1962.

USS Thomas A. Edison is divided into six watertight compartments. The torpedo room houses the torpedoes and torpedo tubes. The operations compartment has three levels: the upper level contains the ship's control, navigation and torpedo fire control stations; the middle level provides space for officers' and chief petty officers' quarters and the crew's dining/recreation areas; and the lower level contains the crew's berthing area and a Polaris missile fire control center. The missile compartment is the ship's largest, housing sixteen missile tubes. The remaining three compartments contain the engineering plant and provide the ship's propulsion and electrical needs from the nuclear reactor.

Major breakthroughs in technology were required to produce submarines capable of submerged patrols lasting several months in duration. The nuclear reactor generates propulsive and electrical power without requiring oxygen or giving off exhaust, as internal combustion engines do. Life support systems include the generation of oxygen from sea water, the expulsion of contaminating gasses and particles, and the automatic control of temperature and humidity. Abundant fresh water is distilled from sea water. Highly accurate navigation systems have been developed to provide precise position information, allowing the submarine to traverse the oceans of the world while remaining submerged and undetected. Considerable thought and effort has also been devoted to providing good food, recreation and living conditions for the crew.

ENGINEERING PLANT

Energy for propulsion of the ship and for the generation of electricity and other vital services is obtained in the nuclear reactor from the fissioning of uranium. Heat resulting from the fission process is transferred through the medium of pressurized pure water to steam generators where the heat is given up to secondary water. Steam produced in the secondary system is used to power the propulsion and electrical generator turbines. As a result of the care with which the engineering plant has been designed and constructed, personnel on the Thomas A. Edison will receive on the average less radiation than would result from normal exposure to natural cosmic radiation, natural radioactivity present in small quantity in virtually all substances, and routine medical and dental X-rays.

NAVIGATION SYSTEM

Several navigation methods are employed onboard Edison. At the heart of the system is the Ships' Inertial Navigation System (SINS). The SINS gyros "feel" each movement of the ship and electronically integrate these movements or accelerations to give continuous and accurate position information. The ship has two SINS, each checking the other for any error. Similar systems guided USS Nautilus and Skate on their historic voyages beneath the polar ice cap in 1958, Triton on her submerged circumnavigation of the globe, Seadragon's submerged transit through the Northwest Passage and Seadragon and Skate in their rendezvous at the North Pole in the summer of 1962.



FIFTY-FOUR FOR PEACE

With the advent of the newer, more powerful Trident class FBM submarine, the Polaris Fleet will eventually be converted to support other naval missions. July 1980 marked the final strategic deterrent patrol for Edison, her fifty-fourth. Edison (Blue) Commanding Officer, John M. Gluck, brought her back to Pearl Harbor, Hawaii, to begin the process of merging Blue and Gold crews into one Edison crew and the off-loading of her nuclear arsenal. Thus marks the end of nearly twenty years of America's foremost guaranters of peace through deterrence.

Length	410 feet
Displacement	6,900 tons
Builder	General Dynamics/Electric Boat
Keel Laid	March 15, 1960
Launched	June 15, 1961
Commissioned	March 10, 1962
Sponsor	Mrs. John Eyre Sloane
First Commanding Officer	Captain Charles Young (Blue) Commander Walter Dedrick (Gold)

