U.S.S.

Robert E. Lee

SSBN-601

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Welcome Aboard

the

Nuclear Powered Fleet Ballistic Missile Submarine

ROBERT E. LEE (SSBN 601)

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COMMANDER JAMES D. MURRAY, JR. USN
BLUE CREW COMMANDING OFFICER

Commander James D. MURRAY, Jr., U.S. Navy, is the Commanding Officer of the BLUE Crew of the nuclear-powered POLARIS Submarine ROBERT E. LEE (SSBN601). Before assuming command of ROBERT E. LEE, Commander MURRAY was Commanding Officer of the conventional fast-attack submarine WAHOO. He has also served in the diesel electric submarines IREX and THREADFIN, in the destroyer MANSFIELD, and on the Staff of the Pacific Submarine Force Commander.

Commander MURRAY graduated from the United States Naval Academy in 1949. He received a Master of Science degree in Engineering Electronics from the U.S. Naval Postgraduate School in Monterey, California in 1958. Before attending the Naval Academy, he graduated from Garden City High School, Garden City, Long Island, and attended Wesleyan University, Middletown, Connecticut in the Navy's V-12 Program.

He is the son of Mrs. James D. MURRAY, Sr., 76 DeHaven Drive, Yonkers, New York. His wife is the former Margaret Louise FISK, daughter of Mr. and Mrs. Howard W. FISK, 37 Granite Street, New London, Connecticut. Commander and Mrs. MURRAY have two children a daughter Carol, and a son James.

COMMANDER RICHARD M. HOOVER USN
GOLD CREW COMMANDING OFFICER

Commander Richard M. HOOVER, U.S. Navy, is the Commanding Officer of the Gold Crew of the nuclear-powered POLARIS Submarine, ROBERT E. LEE (SSBN601). Before reporting to ROBERT E. LEE, he served in the diesel-electric submarines HALFBEAK and BLENNY and as Executive Officer of the POLARIS Submarine ALEXANDER HAMILTON. He also has served on the Staff of Commander Submarine Squadron TWO, New London, Connecticut, and the Staff of the Atlantic Fleet Submarine Force Commander.

Commander HOOVER graduated from the United States Naval Academy in 1951. He graduated from Richmond High School, Richmond, Indiana, and attended Earlham College (Richmond, Indiana) before he went to the Naval Academy. He received a Master of Science Degree in Mechanical Engineering from the U.S. Naval Postgraduate School in Monterey, California in 1962.

He is the son of Mrs. Clarence W. HOOVER, 13-1/2 North Sixteenth Street, Richmond, Indiana. His wife is the former Jane Selden Loye, daughter of Mrs. Laura P. Loye, 1164 Whitney Avenue, Hamden, Connecticut.

U.S.S. ROBERT E. LEE (SSBN 601)

History. ROBERT E. LEE is one of five first generation nuclear-powered fleet ballistic missile submarines. The ship is the first U.S. Navy ship to bear the name of the famous confederate general and the first nuclear submarine to have been built in the South. Mrs. Hanson E. Ely, Jr., granddaughter of General Robert E. Lee, was the sponsor of the ship at the December 18, 1959 launching at Newport News Shipbuilding and Dry Dock Company, Newport News, Virginia. Another descendent of General Lee, Vice Admiral Fitzhugh Lee, USN, was the principal speaker when the ship was commissioned on September 16, 1960. Commissioning commanding officers were Cdr. R. F. Woodall, USN (Blue Crew) and Cdr. J. Williams Jr., USN (Gold Crew). After conducting sixteen Polaris deterrent patrols, ROBERT E. LEE was overhauled in 1965 and 1966 by the San Francisco Bay Naval Shipyard. During this overhaul, the nuclear reactor was refueled, many ship's systems were re-engineered to provide greater safety of operation and reliability, and the weapons system was modified to give the ship the capability of firing the A-3 Polaris missile.

The Ship is longer than a football field, taller than a five-story building, and more than three times as heavy as the fleet-type submarines which played a significant role in the Pacific in World War II. She carries a crew of 124 enlisted men and 13 officers. The air conditioning and atmosphere control equipment maintain the air within the ship at optimum temperature, relative humidity and composition for the comfort of the crew on prolonged submerged operations. The capacity of the sea water distilling units is more than adequate to provide makeup water for the propulsion plant, the requirements of the galley and scullery, and a shower a day for every man on board.

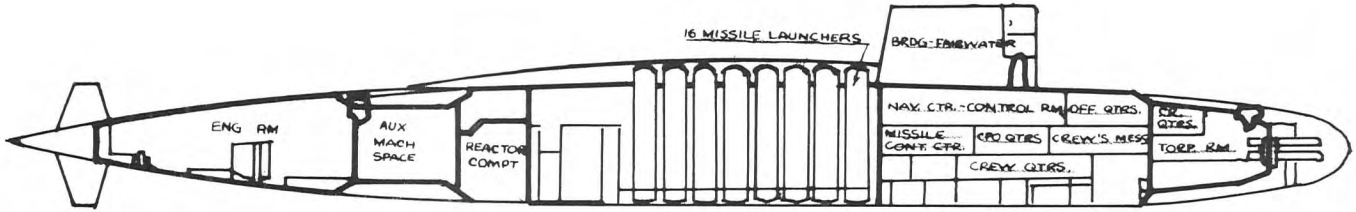
The Missile. ROBERT E. LEE was built to carry sixteen of the 1200-mile A-1 Polaris missiles. The launcher and fire control system have since been modified to shoot the more sophisticated 2500-mile A-3 Polaris missile. The A-3 missile is 31 feet long and 54 inches in diameter and carries a nuclear warhead. It is a two-stage, solid propellant ballistic missile which employs an inertial guidance system to steer the missile to the target. The missiles can be fired from the surface or submerged. The destructive power of the sixteen A-3 missiles carried by ROBERT E. LEE is greater than all the bombs dropped during World War II. It is this tremendous potential for destruction which makes the Polaris Weapons System the credible deterrent to aggression that it is.

The Nuclear Reactor. The heart of the propulsion system of ROBERT E. LEE is its nuclear reactor. The reactor is of the pressurized water design in which the energy released by nuclear fission heats the highly purified water in the primary coolant system. The primary coolant then transfers its heat to the secondary water which forms the steam which is used in the propulsion turbines and the ship's turbo-generators. Nuclear propulsion enables ROBERT E. LEE to steam indefinitely at high speeds, completely submerged.

Navigation. Two positions must be known accurately for a successful missile launching - the position of the target and the position of the launcher. Since the launcher is in the ship which is constantly in motion, determining the position of the ship continuously and accurately is a formidable task. Several methods are used to complement each other in ROBERT E. LEE to provide a high order of accuracy in determining the ship's position. The heart of the system is the Ship's Inertial Navigation Systems (SINS), a complex arrangement of gyroscopes and accelerometers, which senses ship motions in all directions and keeps track of true north. Ship's position is continuously available from SINS.

Polaris Operations. Two crews of ROBERT E. LEE conduct alternate patrols from Holy Loch in Scotland. Between Polaris patrols there is a period alongside a submarine tender for upkeep, repair and maintenance. While one crew is on the ship on patrol or in Holy Loch, the other crew is on leave or making preparations in New London, Connecticut (our homeport) for the next patrol. Other Polaris submarines conduct similar patrols from bases at Rota, Spain, Apra Harbor, Guam and from Charleston, South Carolina.

Photo Courtesy of Newport News Shipbuilding.



U.S.S. ROBERT E. LEE (SSBN 601) Inboard Profile

Launched	December 18, 1959
Sponsor	Mrs. Hanson E. Ely, Jr.
Commissioned	September 16, 1960
Builder	Newport News Shipbuilding and Drydock Company
Length	380 Feet
Beam	33 Feet
Surface Displacement	5900 Tons


U.S.S. ROBERT E LEE (SSBN 601)
PAX DETERRENDO

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