



THE AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

The San Diego Section Presents:

Arleigh Burke Class (Aegis) Destroyer Tour* Saturday August 19th, 2000

The first Arleigh Burke Class Aegis destroyer was commissioned in 1991. Contracts for the destroyers have been split between the Litton subsidiary Ingalls Shipbuilding, based in Pascagoula, Mississippi and the General Dynamics subsidiary, Bath Iron Works, based in Maine. The first 21 ships (DDG51-DDG71) are categorized as Flight I and the remaining seven (DDG72-DDG78) as Flight II. The revised Flight IIA ships entered production in late 1997. Contracts have been awarded to Ingalls for eight ships and Bath Iron Works for six. Improvements over the previous Flights include hangars for two SH-60B/F LAMPS helicopters, an enlarged flight deck, the Evolved Sea Sparrow missile, the Kingfisher mine detection sonar, Kollmorgen optronic periscope and upgrade of the Aegis radar system.



DESIGN: The entire ship (except the two aluminum funnels) is constructed from steel, with vital areas protected by two layers of steel and 70 tons of Kevlar armor. There is a platform for re-arming and re-fuelling a LAMPS III SH-60B/F helicopter (with ASW capabilities). This is the first US Navy class to be fitted out with anti-NBC warfare protection.

AEGIS SYSTEM: The Arleigh Burke class destroyers are equipped with the Aegis Combat System which integrates the ship's sensors and weapons systems to engage anti-ship missile threats. The Aegis system has a federated architecture with four subsystems - AN/SPY-1 multifunction radar, Command and Decision System (CDS), Aegis Display System (ADS) and the Weapon Control System (WCS). The CDS receives data from ship and external sensors via satellite communications and provides command, control and threat assessment. The WCS receives engagement instruction from the CDS, selects weapons and interfaces with the weapon fire control systems. The weapons control systems include a SWG-1A for Harpoon, SWG-3 for Tomahawk Mk 99 Mod 3 missile fire control system, GWS34 Mod 0 gun fire control system and Mk 116 Mod 7 fire control system for anti-submarine systems.

WEAPONS: The ships are armed with 56 Raytheon Tomahawk cruise missiles, with a combination of land-attack (TLAM) missiles with a Tercom Aided Navigation System, and anti-ship missiles with inertial guidance. The Standard SM-2MR Block 4 surface-to-air missiles with command/inertial guidance remain at the center of the Aegis system. Both Tomahawk and Standard missiles are fired from two Lockheed Martin Mk 41 vertical launch systems. There are also eight Boeing Harpoon surface-to-surface missiles and Lockheed Martin ASROC vertical launch anti-submarine systems, armed with the Mark 50 or Mark 46 torpedo. ASROC is launched from the Mark 41 VLS. There is one United Defense 127 mm Mk 45 gun and two Raytheon/General Dynamics 20mm 6-barrelled Phalanx Mk 15 close-in weapon systems (CIWS). The destroyers are fitted with 6 (2 triple) 324 mm Mk 32 Mod 14 torpedo tubes, which launch Alliant Techsystems Mk 46 or Mk 50 active/passive homing anti-submarine torpedoes.

PROPULSION: The destroyers are powered by four GE LM 2500 gas turbines each rated at 33,600 hp with a power turbine speed of 3,600 rpm, driving two shafts, with controllable pitch propellers.

Where: 32nd St. Naval Base

When: Saturday, August 19th, 2000, 1-4PM

Advance reservations are mandatory for base access, please call or e-mail Keith Glassman at (619)545-3736; glassmankf@navair.navy.mil, no later than Friday, August 18th.

* Type of ship could vary depending upon Naval Operations