NAVSEA Success Stories Continue on USS Anzio

Story Number: NNS030808-13
Release Date: 8/8/2003 10:59:00 PM

From Naval Sea Systems Command Public Affairs

030703-N-7097H-001 Norfolk Naval Base, Norfolk Va. (July 3, 2003) -- The guided missile cruiser USS Anzio (CG 68) approaches the pier at its homeport at Norfolk Naval Base, Norfolk Va., after a six-month deployment to the Arabian Gulf in support of Operation Iraqi Freedom. U.S. Navy photo by Photographer's Mate 3rd Class Sondra Howett. (RELEASED)

WASHINGTON (NNS) -- The guided-missile cruiser USS Anzio (CG 68) continues to be a fleet showcase for engineering improvements developed by the Naval Sea Systems Command (NAVSEA).

Anzio has received four varied and innovative new technologies from NAVSEA during the last 15 months. These include the S4 stainless steel head, magnetic couplings, gas barrier seals for fuel oil pumps, and cloth ventilation vent filters.

Completing a successful tour as Anzio's Commanding Officer (CO), Capt. Mark Nesselrode praised the new technologies.

“Each of them has performed beyond my expectations,” he said. “They are nothing short of spectacular.”

The S4 head is part of NAVSEA’s Maintenance Process Improvement program, which incorporates more than 20 different initiatives, all of which have the goal of reducing Sailors' workload. The S4 is a complete sanitary space refurbishment that replaces current porcelain with high-performance maintenance, and corrosion-free stainless steel components and fixtures.

Importantly, it reduces the time Sailors must spend cleaning them by one-half. With Anzio currently having two S4’s installed, one in 1st Division and in one in Engineering, Nesselrode said he would outfit the entire ship if given the opportunity.

“The heads are probably the hardest,” said Nesselrode. “They are expensive, but having to rework all the heads for a carrier during my tour as engineer, then finding out that within one deployment, almost all of the heads had to be reworked says that something needs to be done. We save more by a good installation that can be maintained and is a bit more impervious to heat, humidity, and hard use than just redoing the heads every avail.”

The magnetic coupling installed on Anzio’s number 1 seawater service (SWS) pump, the ship’s workhorse pump, also performed superbly. Magnetic couplings use two precision-machined aluminum rotors and high-energy magnets to transmit torque through air. Since the pump and motor never come in contact with each other, even with the pump running 24/7 for 18 months, the pumps and bearing have shown little, if any, decline in performance.

If possible, Nesselrode says he would have magnetic couplings installed on all SWS pumps, as well as any other water system pump. After 15 months with no leaks, Nesselrode sees the gas barrier seals as a “godsend.”

Textile ducting replaces the traditional metal ventilation with an easy to clean and maintain cloth-like material. According to Nesselrode, Anzio’s latest deployment saw her travel through every type of environment. Whenever textile ducting installed throughout the ship began to get dirty, it was simply taken down, washed in the ship’s laundry and replaced – a far cry from the labor-intensive maintenance necessary for the old style air filters used on many ships.

These new NAVSEA technologies also received notice and support at the Department of Defense (DoD) level. Presenting at the recent DoD forum on Reducing Total Ownership Cost, Petter Kristiansen, program manager for NAVSEA's Maintenance Process Improvement Office (SEA 05N1), highlighted these and other emerging technologies.

“DoD’s support helps the Navy lead the way in significantly reducing Sailor workload and in saving the fleet millions of dollars in maintenance costs,” Kristiansen said.

Summing up his experiences with NAVSEA's innovations, Nesselrode noted, "From one outgoing CO, I believe that the Surface Navy needs to pursue some of the new technologies that actually help Sailors. There are other things out there that are also successes, but for my money, the four we had installed on Anzio are the best."

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