

# Surface Warfare

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CURRENT MAGAZINE



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## p30: CO comments on NAVSEA success

From Naval Sea Systems Command public affairs

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** 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. 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 having the goal of reducing Sailors' workload. The S4 is a complete sanitary space refurbishment that replaces porcelain with high-performance maintenance, and corrosion-free stainless steel components and fixtures.

Importantly, it reduces Sailors cleaning time 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 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, performance decline.

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 traditional metal ventilation with an easy to clean and maintain cloth-like material. According to Nesselrode, the last deployment saw **Anzio** 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 air filters used on many ships.

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 installed on **Anzio** are the best."



New stainless steel sinks



Magnetic coupling



Installing magnetic coupling

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