Navy Warfare Center Drives First Naval Strike Missile Launch Demo from Destroyer

USS Fitzgerald (DDG 62) conducts the first demonstration firing of a Naval Strike Missile from a U.S. Navy destroyer during RIMPAC.
From Thomas McMahon, Oct. 23, 2024

PORT HUENEME, California – Among the flurry of fleet activities in the recent Rim of the Pacific (RIMPAC) exercise in Hawaii was a milestone that Naval Surface Warfare Center, Port Hueneme Division (NSWC PHD) spearheaded – the first demonstration firing of a Naval Strike Missile (NSM) from a U.S. Navy destroyer.

USS Fitzgerald (DDG 62) fires the first naval strike missile from a U.S. destroyer while participating in RIMPAC 2024. (MC2 Jordan Jennings)

Working under a compressed timeline, NSWC PHD and its

partners installed the first Over-the-Horizon (OTH) Weapon System on a destroyer, USS Fitzgerald (DDG 62), in time for it to launch an NSM at a decommissioned ship on July 18 during RIMPAC.

Other major players in the effort included Program Executive Office Integrated Warfare Systems (PEO IWS) 3H, Naval Air Warfare Center Weapons Division (NAWCWD) China Lake, General Dynamics Mission Systems and Kongsberg Defence & Aerospace AS.

“This was a high-visibility requirement for the Navy,” said Eric Romero, customer advocate for OTH with NSWC PHD in Port Hueneme, California.

OTH is a long-range surface-to-surface warfare system that launches NSMs, which are anti-ship guided missiles. The Navy has added the system to about a dozen Independence-variant littoral combat ships over the past five years.

In late September 2023, the Office of the Chief of Naval Operations challenged PEO IWS, which in turn tasked NSWC PHD, with installing an OTH on Arleigh Burke-class destroyer USS Fitzgerald in time to demonstrate it at RIMPAC 2024. That left only about nine months before the biennial international fleet exercise.

“We knew we were working on an aggressive schedule, but we had all the right personnel on the team to make sure we were successful in executing it,” Romero said.

NSWC PHD employees took on various projects to pull off the endeavor at this accelerated pace, from developing ship installation drawings to getting cybersecurity approval to installing and testing the equipment.

The overall effort encompassed nearly 20 organizations,

including five program offices, four warfare centers and a dozen external entities, according to Todd Jenkins, platform integration lead with NSWC PHD in San Diego.

“We were expecting a great deal of roadblocks due to the compressed timeline, but everyone came together to accomplish this monumental event,” Jenkins said.

Typically, this type of first-of-class installation takes at least two years, according to Robert “Tony” Honeycutt, Alteration Installation Team manager at NSWC PHD’s Virginia Beach Detachment in Virginia. A key factor in speeding up the process was proposing the OTH as a temporary change to USS Fitzgerald, which reduced the requirements for documentation and drawings compared to a permanent change.

Beyond streamlining the paperwork, Honeycutt and Jenkins met frequently with stakeholders from PEO IWS 3H and NAWCWD China Lake to overcome obstacles and stay on schedule.

“Basically, we were just driving it as hard as we could,” Honeycutt said. “As soon as we ran into a problem, we had a group powwow and figured out the solution.”

Another task that the team sped up was securing the cybersecurity accreditation known as authority to operate (ATO) for the OTH software that would be installed on the ship. The rigorous six-step process typically takes about a year, but in this case it had to be completed much quicker so the installation could start.

“We had to do the cyber ATO in two months,” Romero said.

The team installed the OTH on USS Fitzgerald at Naval Base San Diego from mid-March to late May. The main components of the system are the launcher and an operator interface console. To make it compatible with the destroyer, the system also

required a navigation adapter.

After installing the OTH, NSWC PHD trained crew members and helped them test the system while underway.

“We made sure they were trained up, such as to be self-sustaining as operators,” Romero said.

In Hawaii for RIMPAC in July, USS Fitzgerald participated with other ships and aircraft in a sinking exercise, known as a SINKEX. The target was a decommissioned amphibious ship about 50 nautical miles off the coast of Kauai.

With NSWC PHD team members monitoring remotely, USS Fitzgerald launched its first NSM from the OTH. The NSM successfully searched the target area, detected and prosecuted the target.

“It was a successful NSM live-fire shot launched from the OTH Weapon System,” Romero said.

Following the inaugural firing at RIMPAC, NSWC PHD personnel will help prepare USS Fitzgerald to go on deployment with the OTH.

While the new weapon system is still authorized as a temporary installation on USS Fitzgerald, the team is working to secure approval for it to stay on the ship indefinitely.

“We’re migrating the ship change document to a permanent change, as we want to keep the system aboard DDG 62,” Romero said.

The work done on DDG 62 will help inform the way forward on providing this capability to other DDGs.