

Moton: New Frigate's Conditions-Based Maintenance 'A Big Change for the Navy'



An artist's rendering of the Constellation-class guided missile frigate. *U.S. NAVY*

ARLINGTON, Va. — U.S. Navy leaders are bullish on the forthcoming Constellation-class guided-missile frigate (FFG 62) for many reasons, including lethality, commonality, proven combat systems, and abundance of space, weight and power. In at least one respect, the FFG may be a “first” — possibly the first U.S. Navy ship with conditions-based maintenance (CBM) designed into it.

The FFG “is going to be one of our first ship classes — if not our first one — delivered with a conditions-based maintenance system inherent in the design,” said Rear Adm Casey Moton, program executive officer, Unmanned and Small Surface Combatants, speaking Oct. 18 in San Diego at the Fleet Maintenance and Modernization Symposium of the American Society of Naval Engineers.

Conditions-based maintenance is maintenance on a platform, system or equipment that depends on the current condition of the system. It is designed to help optimize the maintenance funds, work force, material and infrastructure at hand.

CBM can involve scheduling maintenance based on data that can determine when a repair or replacement is needed before a failure occurs. Sensors can be used to monitor conditions and detect a potential failure before it happens.

“We are working that very closely with SEA 21, with NAVSEA 05, how we’re going to use that working with type commanders,” Moton said. “[There] is a lot of work going on there to make

sure that we are able to leverage that capability. The frigate's going to be one of the first ships that brings that actually brings that technical solution."

"For CBM, we're trying to do important things that hopefully are going to result in less time in availabilities," he said. "It's a big change for the Navy, so we need industry supporting us, and that goes all the way back to the shipbuilders and the equipment suppliers."

Moton praised the frigate's program as having a "good set of requirements," a "good design," good sustainment features, reliability built in the specifications, commonality of the combat system, good ship control software, and margins in space, weight and power to accommodate future electronic warfare systems and directed energy weapons. He noted that the program's emphasis on basic fundamentals "sets us up for success."