## Program Manager: Zumwalt Class Will Influence Future Surface Combatant Designs

ARLINGTON, Va. – The Zumwalt DDG 1000-class destroyers are still early in their evolution, with questions remaining on how they will be armed, what size crew will be needed and how the novel "tumblehome" hull performs in heavy sea and wind conditions, but they are expected to influence the design of future surface combatants, the program manager said Jan. 16.

"The Navy considers this ship to be a game changer in the Pacific," Capt. Kevin Smith told reporters during a Naval Sea Systems Command briefing at the annual Surface Navy Association symposium.

Years later than expected, one of the massive warships – bigger than World War II heavy cruisers – has been commissioned but is more than a year from operational status, the second has yet to start the second phase of equipping, and the third and final ship is still under construction at the Bath Iron Works shipyard in Maine.

Initially intended as a land-attack warship providing longrange precision fire support for Marines ashore, the Zumwalts now are designated as surface strike platforms, with some anti-submarine capabilities. The status of the two 155 mm advanced guns systems (AGS) installed for the land-attack mission is in doubt after the long-range munitions developed for them proved to be too expensive.

Smith noted the separate testing of other munitions, including hypersonic guided projectiles fired last year from the standard 5-inch naval guns, that could be used with the AGS. But tests on Zumwalt are planned with Standard Missile-6 missiles and Smith said the program also is looking at the naval-strike Tomahawk missile.

USS Zumwalt is in San Diego preparing for activation of its combat systems, which were installed there as the second phase of the construction and equipping process. The basic construction, called hull, mechanical, electrical, was completed at Bath before the ship transitioned to San Diego. Activation and testing of the Mk57 combat system, the SPY-3 Xband radar and associated systems must be conducted before Zumwalt can start the comprehensive operational testing that would qualify it for operational status, not expected until 2020.

Even before that, the ship has been getting underway regularly for testing and crew training, including three at-sea refuelings from a Navy oiler and "doing things with the fleet," Smith said.

During its design stage, the Zumwalt's hull form — which gets narrower at the top rather than at the waterline — was criticized as inherently unstable and dangerous. Smith and Capt. Drew Carlson, the current commanding officer, said the ship has proven to be more stable in turns than ships with conventional hulls in early at-sea trials. But Carlson said it sails differently, sliding through turns and "wants to go straight." It has yet to be tested in extreme sea conditions.

Meanwhile, the second ship, named for Medal of Honor recipient Michael Monsoor, a Navy SEAL killed in Afghanistan, is now in San Diego preparing to start combat system installation. It is scheduled to be commissioned Jan. 26. And the final ship, Lyndon B. Johnson after the former president, is completing construction at Bath.