Shipbuilders replace stealthy US destroyer's 15-ton turbine

August 31 2018, by David Sharp

In this Dec. 4, 2017 file photo, the future USS Michael Monsoor leaves Bath Iron Works for sea trials in Bath, Maine. The shipbuilder has replaced one of the massive turbines on the stealthy destroyer. It is scheduled to depart for San Diego in November. (AP Photo/Robert F. Bukaty, File)

Shipbuilder Bath Iron Works has replaced one of the massive turbines on the future USS Michael Monsoor, and the stealthy destroyer is scheduled to depart for San Diego in November.

The delicate operation involved lifting and maneuvering the 15-ton Rolls Royce marine turbine out of the ship, and workers had to build a rail system to assist in the removal and installation of the replacement turbine in August, officials said.

"The number of twists and turns it had to go through represented a pretty interesting engineering evolution," said shipyard President Dirk Lesko.

Shipbuilders noticed an unusual vibration during sea trials and discovered afterward that a foreign object had damaged some of the blades the turbine was installed, Lesko said. Although the turbine still works, the Navy decided to replace rather than repair the unit.

The Zumwalt-class destroyers use two main turbines similar to ones used on Boeing 777 jetliners to produce electricity that powers the ship and its sophisticated systems. Combined with auxiliary turbines, the ship produces 78 megawatts of power, enough for a small- to medium-size city.

The Zumwalt and Monsoor are the first and second in a class of three of the stealthy destroyers. The third, the Lyndon B. Johnson, remains under construction.

The Monsoor repairs presented an inconvenience because the Navy crew is already aboard the ship, and the repairs interrupted some of their training, Lesko said.

"We tried to work around them in a way that would be minimally impactful," he said. "We were both satisfied with how that turned out."

The destroyer, named for a Navy SEAL who threw himself on a grenade to save comrades, is due to be commissioned in January in Coronado, California.

The ships with an unusual, stealthy shape are the largest and costliest destroyers built for the Navy, weighing in at 15,000 tons.

They feature an unconventional wave-piercing hull and a sleek deckhouse that hides radar and other sensors inside. Heavy automation allowed the Navy to reduce the crew size by half, compared with the other destroyers in the fleet.

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