GE Delivers Gas Turbine Module for Future USS Santa Barbara

An illustration of the future Independence-variant littoral combat ship USS Santa Barbara, which will receive GE Marine's first new lightweight LM2500 composite gas turbine module. U.S. Navy/Mass Communication Specialist 2nd Class Paul L. Archer

EVENDALE, Ohio – GE Marine has delivered its first new lightweight LM2500 composite gas turbine module to Austal USA for the future USS Santa Barbara, the company said in a release.

This new module, which was fully certified by the U.S. Navy last year after receiving MIL-S-901D shock qualification, provides a 5,500-pound weight savings (50% wall weight reduction) and 60% quieter enclosure.

Austal USA recognized the attributes of this new composite module design by bestowing GE Marine with its 2018 Supplier Innovation Award.

GE is supplying 38 LM2500 gas turbines to Austal USA for Independence-class variants of littoral combat ships up to LCS 38. Like all Austal USA-built littoral ships, the Santa Barbara will be powered by two GE LM2500 gas turbines arranged in a combined diesel and gas turbine configuration with two diesel engines.

The Module Modernization Program was a four-year collaborative effort with the Navy, Bath Iron Works of Bath, Maine, and GE. GE's strategic partners in this effort included: RL Industries of Fairfield, Ohio, for help in developing and qualifying the carbon fiber enclosure; and DRS Power

Technology of Fitchburg, Massachusetts, which helped satisfy all first article inspection quality requirements and package assembly.

Changes to the LM2500 system include the composite module, components, and fewer shock mounts for weight reduction, all while leveraging the experience and loadings from previous LM2500 shock tests with running units. Components such as sensors, transducers, ice and flame detectors and the heater also were updated.