Digital Control System for U.S. Navy

HPI, a supplier of turbine control products and turnkey power plants, recently announced the successful commissioning of a digital propulsion, power and steering control system aboard the ex-USS Foster Self-Defense Test Ship (SDTS). HPI designed the system to replace the existing analog controls, creating a fully integrated remote control system allowing the SDTS to operate unmanned at sea.

Called the Digital Remote Interface Vector Equipment (DRIVE), the system has been built using multiple programmable logic controllers (PLCs), and includes computer workstations connected via a redundant fiber optic network.

This control system will provide shore-based personnel with the ability to control the ship’s speed, course and machinery during weapons trials. The system will enable the SDTS to provide realistic effectiveness testing of self-defense sensors, weapons and controls via live-fire test operations.

“The DRIVE system will provide the U.S. Navy with a more reliable control system for their testing and evaluations,” said Hal Pontez, president and CEO of HPI. “The system we designed converts the vessel’s gas turbine propulsion plant and steering system from its original analog control system to a PLC and PC-based, digital-to-digital interface.” Pontez added that it was an honor to work with the U.S. Navy leveraging its control systems knowledge and experience to benefit the success of this project.

HPI, located in Houston, Texas, U.S.A., provides turbine solutions including retrofit control, mechanical inspection/overhaul, turnkey engineering, procurement and construction of power plants. The company has expanded its capabilities from stand-alone turbomachinery control to complete balance of plant systems.