HII Installs First Additively Manufactured Valve Manifold Assembly on Aircraft Carrier

From HII

NEWPORT NEWS, Va., March 04, 2025 (GLOBE NEWSWIRE) – HII (NYSE: HII) announced today that shipbuilders at its Newport News Shipbuilding division have successfully installed the first valve manifold assembly created by additive manufacturing technology on a new construction aircraft carrier.

NNS continues to integrate additive manufacturing, also known as 3D printing, into the shipbuilding process. The use of certified 3D-printed parts has the potential to accelerate construction and delivery of vessels to the U.S. Navy by cutting lead times and improving manufacturing quality for critical components.

The valve manifold assembly, a specialized assembly that allows distribution of a single source of fluid to multiple points on the ship, is installed in a pump room on *Gerald R. Ford*-class aircraft carrier *Enterprise* (CVN 80). The assembly, which is approximately 5 feet long and 1,000 pounds, reflects the shipyard's pursuit of all opportunities to support construction using additive manufacturing. NNS collaborated with DM3D Technology to manufacture the manifold body.

With the completion of this evolution on *Enterprise* (CVN 80), similar manifolds planned for *Doris Miller* (CVN 81) will employ additive manufacturing rather than traditional casting methods, reducing schedule risk and improving efficiency.

Photos accompanying this release are available at: http://hii.com/news/hii-installs-first-additively-manufactured-valve-manifold-assembly-on-aircraft-carrier-at-newport-news-shipbuilding/.

"What started as a proof of concept quickly turned into a tangible result that is making a meaningful difference to improve efficiencies in shipbuilding," said Dave Bolcar, NNS vice president of engineering and design. "The benefits of this innovation will extend well beyond *Enterprise* (CVN 80), as we incorporate our expertise in additive manufacturing into the fundamentals of shipbuilding."

This latest advancement in the development and deployment of additive manufacturing builds on NNS' prior certification and approval as a supplier for additive manufacturing components on Naval Sea Systems (NAVSEA) platforms. To date, the shipyard has created more than 55 additively manufactured parts installed on both new construction vessels and those currently in the fleet, with plans to install more than 200 additional parts this year.