

# HII Expands Welding Automation at Ingalls Shipbuilding Through Partnership with HD HHI



PASCAGOULA, Miss. – HII and HD Hyundai Heavy Industries (HHI) are advancing their strategic partnership with a pilot program to implement additional intelligent mechanized welding equipment at HII’s Ingalls Shipbuilding division, expanding Ingalls’ robust existing automation and technology strategy. The pilot is a meaningful step in advancing U.S.-Korea shipbuilding cooperation, as outlined in a 2025 memorandum of understanding (MOU) between the two companies, and underscores HII’s commitment to innovate operations as it delivers ships to the U.S. Navy.

“Ingalls operates one of the most advanced automated

production lines in the U.S. shipbuilding industrial base,” Ingalls Shipbuilding President Brian Blanchette said. “Investments in technology and automation range from large-scale automated panel lines and material handling, to robotic bulkhead fabrication, to numerous other digital and advanced manufacturing tools. This pilot extends that automation footprint further into the production process, and to a greater share of the workforce. Working with HHI allows us to expand targeted automation functions, and integrate shared best practices as we continue delivering the most capable ships to the U.S. Navy.”

The pilot deploys intelligent mechanized welding systems in unit-fabrication areas that currently rely predominantly on manual welding. These systems are designed to make welding, one of the most demanding processes in shipbuilding, safer and more efficient. The system automatically recognizes workpieces and welding conditions, corrects welding positions in real time and captures process data that can support quality control, process improvement and traceability. Ingalls has ensured the machines comply with existing U.S. Navy fabrication standards and will use the pilot to identify opportunities for improved efficiency.

“This pilot program reflects the strengthening of our partnership and the advantages of open technical collaboration,” said Dr. Won-ho Joo, chief executive of the Naval & Special Ship Business Unit at HHI. “We look forward to working with HII to enhance shipbuilding efficiency and deliver greater value to our customers.”

The intelligent mechanized welding pilot grew out of a three-day technical exchange at Ingalls where the companies evaluated shipbuilding technologies and automation opportunities across their respective shipyards. During the visit, Ingalls showcased its hybrid laser welding process, robotics integration, and facility layout designed to support streamlined construction.

Additional automation and technology initiatives under evaluation or in implementation at HII's shipyards, Ingalls Shipbuilding in Mississippi and Newport News Shipbuilding in Virginia, include new robotic and cobot applications including fabrication cells, additive manufacturing, automated steel processing systems, integrated production control software that supports precise construction and real-time production insights, and continuous upgrades to automated panel and bulkhead lines. Additionally, HII's recently announced High-Yield Production Robotics ([HYPR](#)) initiative teams the company with emerging physical AI technology companies to implement AI-enabled tools aimed at augmenting the capabilities of the existing shipbuilding workforce.