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FOR IMMEDIATE RELEASE**NSRP Project to Install LSP Technologies' Laser Peening System
To Improve Aluminum Survivability Onboard Navy Littoral Combat Ship**

Dublin, Ohio, January 7, 2020 – A public-private investment will help LSP Technologies Inc. (LSPT) and Hepburn & Sons LLC research and design a new laser peening system to treat aluminum plates on Navy combat ships. The Procudo® Laser Peening System will be installed for research onboard a Littoral Combat Ship (LCS), a lightweight vessel designed for ocean-going and near-shore operations and combat.

"We'll be demonstrating how laser peening deters cracking due to sensitization of aluminum, as well as how to install and operate a portable, hardened version of the Procudo® system actually onboard the ship" David Lahrman, VP Business Development, LSP Technologies

A \$1.78 million National Shipbuilding Research Program (NSRP) project will be funded to the lead contractor, Hepburn & Sons, along with LSP Technologies and Vigor Shipyards. The Naval Surface Warfare Center's Carderock Division will provide technical expertise from the Navy to support this project.

"Contractual work based on the award began in December, following the recent project announcement. Terms include an investment of \$1.96 million from the private sector team, bringing the total value of the project to nearly \$3.8 million," said LSPT VP Business Development David Lahrman.

Custom Laser Peening Solution

The project will include an installation of a Procudo® Laser Peening System with a custom-designed Beam Deck Delivery System (BDDS) onboard an LCS vessel at one of the West Coast operations of Vigor Shipyards.

The LCS craft use 5xxx Series Aluminum extensively to make them lighter, stronger, and faster in ocean-going and near-shore – that is, "littoral" – operations. However, 5xxx Series Aluminum contains magnesium and other elements that make it vulnerable to stress corrosion cracking (SCC) due to sensitization, a process in which high temperatures and saltwater can combine to promote corrosion in some aluminum alloys.

Moving Laser Beam Delivery to Treat Deck Plate

"We'll be demonstrating how laser peening deters cracking due to sensitization of aluminum, as well as how to install and operate a portable, hardened version of the Procudo® actually onboard the ship," said Lahrman.

"Typically, our Procudo® laser peening systems involve robots manipulating metal parts for the laser peening process, but in this case, we will use an articulating arm to manipulate the laser beam delivery to the deck of the ship."

"This project promises to be a major step forward in adopting laser peening technology to improve the survivability and reliability of Navy vessels," said Scott Hepburn, Chief Operating Officer of Hepburn & Sons. "We will validate the ways in which laser peening can improve the condition of the aluminum onboard the ship, even when the aluminum has been sensitized beyond weld repair levels. This kind of lasting repair is a high priority for the Navy."