

PORT HUENEME, CALIFORNIA, UNITED STATES

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Remote Removal of Material Around Ship Fantail; Additive Manufacturing; AR; Nonskid Material and Corrosion Removal

During the fourth day of the Navy's first-ever Repair Technology Exercise, or REPTX, government, industry and academia continue testing potential battle damage and repair products and services aboard Naval Surface Warfare Center, Port Hueneme Division's Self Defense Test Ship (SDTS).

Hull Maintenance Technician Second Class Gerardo Vasquez with the Navy's Surge Maintenance program operates the Epi-Jet surface cleaner, supplied by Navarre, Ohio-based Terydon Inc., to remove nonskid material from an upper deck of the Self Defense Test Ship (SDTS).

An operator maneuvers Boston Dynamics' Spot inspection robot aboard the SDTS.

Serco deploys a Revolution remotely operated vehicle (ROV) to remove a line attached to the fantail of the SDTS.

Sarcos Technology and Robotics Corp. deploys a VideoRay Defender ROV outfitted with Sapien Sea Class robotic arms to remove a line attached to the fantail of the SDTS.

Sarcos Technology and Robotics Corp.'s Guardian DX robot, equipped with American Laser Enterprises' laser ablation device, tackles some of the corrosion aboard the SDTS.

Petty Officer 1st Class Josh Miller, a reservist with the Navy's Surge Maintenance program, uses Marine Safety Solutions' RDI Shield, a rapid deployable spray shield that can be secured to piping systems and equipment to deflect fluid spray into a contained downward stream.

Hull Maintenance Technician 2nd Class Juan Marco Perez gears up for a battle damage fire simulation below decks with a self-contained breathing apparatus, or SCBA. He is shown affixing a polymer-aerogel heat shield from Oros to a simulated broken water pipe that has been repaired and requires new insulation or "lagging."

Essentium Inc. of Pflugerville, Texas is one of several additive manufacturing companies from around the country that brought its 3D printer to REPTX.

Terry Gromes Jr., director of strategic technology with Terydon, operates the company's HH-40 hand-held tool to remove corrosion from a bimetallic strip on the SDTS.

Tara Scranton with Sarcos Technology and Robotics Corp. uses an augmented reality headset and body sensors to remotely operate the company's Guardian DX robot on the bow of the SDTS. American Laser Enterprises' HH100-200 Transportable Laser Ablation Machine Tool is attached to remove coatings using this robot.

Naval Sea Systems Command's (NAVSEA) Naval Systems Engineering and Logistics Directorate Technology Office (NAVSEA 05T) is sponsoring REPTX 2022 and selected 65 technologies to participate.

NSWC PHD is a field activity of NAVSEA and is located at Naval Base Ventura County in California.