

Austal's Electrowatch Awarded ONR Contract for Additive Manufacturing Process

CHARLOTTESVILLE, Va. – The U.S. Navy Office of Naval Research (ONR) has awarded ElectraWatch, an Austal USA company, a highly competitive Manufacturing Science Program contract to identify new material processing pathways that use additive manufacturing for Copper-Nickel (CuNi) heat exchanger designs. ElectraWatch was one of only five organizations, and the only non-academic organization, to receive a contract award.

“I’m proud of the hard work our engineering team has done to make this contract award possible,” ElectraWatch General Manager Ryan Dunn said. “We are honored that this award puts us in a position to further champion the next generation of manufacturing capabilities and to best equip the Sailors who protect and support our country and our allies.”

Dr. Scott Kasen, ElectraWatch’s principal engineer, explained that the enormous heat loads of future naval vessels require advanced designs for seawater heat exchangers which may only be achievable by leveraging the design freedom afforded by Additive Manufacturing (AM). “Despite the tremendous advancements in AM,” Kasen said, “existing modalities are unable to easily process CuNi alloys which are chosen for their high thermal conductivity, demonstrated corrosion performance, and biofouling resistance in marine environments.”

To overcome the challenges of existing approaches, ElectraWatch partnered with Metallum3D to propose a novel AM capability which uses the unique combination of a bound pellet extrusion process and microwave sintering.

This project reinforces Austal USA's position as a global leader in advanced ship manufacturing and sustainment. Investing in these future capabilities demonstrates the commitment of Austal USA and ElectraWatch to continue expanding post-delivery support and sustainment offerings, while also supporting multiple shipbuilders, maintenance providers, and the U.S. Navy across a broad range of military ships deployed in the U.S. fleet.