February 23, 2016

NAWCAD partners with local small business for environmentally-friendly anti-corrosion technology

PATUXENT RIVER, Md. (Feb. 4, 2016) Naval Air Warfare Center Aircraft Division (NAWCAD) Commander Rear Adm. Dean Peters and NAWCAD Executive Director Leslie Taylor finalize a patent license agreement with 3 Notch Chemicals founder Jeb Henderson Feb. 4, granting the company permission to use NAWCAD's patented Active Aluminum Rich (Al-Rich) technology, a powerful and environmentally-friendly anti-corrosion chemical composition for use in coating systems. (U.S. Navy photo)

From the Naval Air Warfare Center Aircraft Division Technology Transfer Office

NAVAL AIR STATION PATUXENT RIVER, Md. -- Naval Air Warfare Center Aircraft Division (NAWCAD) granted a license to a local small business Feb. 4 to mature and produce an anti-corrosion technology that is safer and more environmentally friendly than chemicals currently in use.

Rear Adm. Dean Peters, commander, NAWCAD, signed the non-exclusive patent license agreement with 3 Notch Chemicals founder Jeb Henderson, granting the company permission to use NAWCAD's patented Active Aluminum Rich (Al-Rich) technology, a powerful anti-corrosion chemical composition created for use in coating systems.

"Al-Rich is superior to existing coatings based on the novel aluminum pigment that actively overcomes corrosion by electrochemical means," said NAWCAD chemical engineer and Al-Rich inventor Craig Matzdorf. "Current coatings rely on chemical inhibitors like

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chromate, which are less effective at fighting galvanic corrosion. We anticipate that the Al-Rich primer will reduce galvanic and other types of corrosion and its effect on cost and availability."

Corrosion is one of the biggest degraders of readiness in naval aviation, but current coating systems are limited in their ability to combat it. Corrosion experienced by Navy and Marine Corps aircraft costs approximately $3.6 billion per year and accounts for almost one third of all maintenance costs. Corrosion-related maintenance prevents active aircraft from being ready for mission tasking approximately 30 days a year.

Al-Rich was invented to alleviate environmental and occupational concerns about chemicals currently used in paint primers. Hexavalent chromate, a highly toxic form of chromium, is the most common anti-corrosion substance used in marine coatings. Al-Rich was the first research and development effort proven to match the performance of chromate primers without creating serious human and environmental health concerns. 3 Notch Chemicals is one of several companies that has licensed the Al-Rich technology.

Licensing this technology facilitates the maturation of Al-Rich. Absent these types of industry partnerships, this technology would not be available to the fleet.

Henderson, a former NAWCAD chemical engineer, established 3 Notch Chemicals in southern Maryland in November 2015. The company will begin production in partnership with Coherent Technical Services, Inc. (CTSi), a technical solutions and engineering firm headquartered in Lexington Park, Maryland.

"Southern Maryland is on the verge of an important transition," said Henderson. "Starting 3 Notch here allows me to be a part of that pivot and stay close to home. I have been impressed with the diversity and multitude of support the company has received."

For more information on the Al-Rich technology or other NAWCAD innovations available for licensing, contact the NAWCAD Technology Transfer Office at 301-342-1133.