

BLASTING ABRASIVES

Mid-Atlantic Coatings Receives AMPP Project Award Using BARTON 30/60 CG Garnet

For its exceptional work refurbishing the U.S. Navy aircraft carrier USS John C. Stennis (CVN-74), Mid-Atlantic Coatings, Inc. has received the AMPP Project of the Year Award for Excellence in Management of a Complex Materials Protection. The award, presented by the Association for Materials Protection and Performance (AMPP), is shared with BARTON International and other project partners.

BACKGROUND

The U.S. Navy operates, and Hill Newport News Shipbuilding (NNS) constructs and repairs,



nuclear-powered aircraft carriers. In 2019, the USS John C. Stennis (Stennis) came into NNS after 25 years of service for a midlife refueling and complex overhaul (RCOH). All key components of the vessel, including the nuclear fuel rods, are to be replaced and the entire carrier will be preserved. This includes preservation of the entire exterior and interior of the aircraft carrier with state-of-the-art MIL-Spec coatings. The RCOH will last several years and is an extremely complex project requiring superior management skills.

Mid-Atlantic Coatings, Inc. (MAC) is the contractor and management lead for the materials protection on the Stennis during this midlife overhaul. An innovative, industry-leading marine blasting and coatings contractor, MAC is based in the Tidewater area of Virginia. The company employs hundreds of skilled workers and a team of certified blasting and coating specialists. Led by company president, Vincent D'Auge, MAC employed creative problem-solving strategies and teamed with key partners to utilize state-of-the-art corrosion control technologies during the Stennis overhaul.

The Stennis is the seventh Nimitz-class aircraft carrier that MAC has refurbished for Newport News.

MAC recently completed similar work on the USS George Washington (CVN 73) using BARTON 30/60 CG garnet blasting media.

CHALLENGE

Operational phases of a RCOH are highly complex, requiring skilled management. During the Stennis RCOH, over 1.2 million square feet will undergo surface preparation and coating application. Additional challenges impacting the project include COVID-19, labor and skilled worker shortages, and supply chain issues affecting material availability and cost.

MAC is refurbishing the entire steel exterior (underwater hull and freeboard) and the four aluminum elevators used to move aircraft to and from the flight deck. The project requires a variety of novel approaches to containment, surface preparation, application equipment and coatings application. Logistics and frequent change orders require that the surface preparation team remain flexible. MAC project managers are highly responsive to the needs of the other trades working in the area, and they work closely with NNS to ensure all work is done on schedule.

Complicating matters, the onset of the COVID-19 pandemic in the spring of 2020 severely limited available manpower. Government pandemic relief subsidies and the availability of other higher-pay, less demanding jobs contributed to a reduction in the workforce.

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SOLUTION

MAC employed a variety of novel approaches to containment, surface preparation, and coatings application. For example, the freeboard preservation required blasting of 12 separate zones, three types of staging/scaffolding on various surfaces, and daily 60-, 80- and 120-foot aerial lift operations to access the ship's structure.



Worker safety is a priority for both MAC and NNS. To protect the workers, free silica and beryllium levels are closely monitored for permissible exposure levels (PEL) during blasting, which MAC conducts inside custom designed containment. Prior to the USS George Washington RCOH, MAC spent months testing a wide variety of materials that met all military specs for blasting. Testing showed that BARTON 30/60 CG garnet was the most productive and met environmental, health and safety (EHS) requirements. Thanks to its previous experience with 30/60 CG, MAC made the choice to use this domestic BARTON garnet for the Stennis. In total, BARTON will supply up to 8,000 tons of 30/60 CG garnet for the project.

“The things BARTON did as a supplier on the George Washington project showed me that they care and that I can rely on them,” explains MAC President Vincent D’Auge. “We chose 30/60 CG garnet as the best value based on the performance, consistency, cleanliness and safety of the product, and the outstanding customer support. MAC and BARTON are industry leaders, and both our companies stand by our commitments. I knew we could depend on BARTON.”

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RESULTS

The fully refurbished Stennis is expected to return to service in 2025. As of this writing, the blasting and recoating phase of the RCOH is 70% complete, thanks



in large part to the expertise and hard work of the MAC team and the supplier network D’Auge assembled. His vision to find efficiencies on each new overhaul brought the latest technologies to this project. That high level of performance by



MAC and its suppliers prompted the AMPP to select the Stennis RCOH for its Project of the Year Award for Excellence in Management of a Complex Materials Protection Project. Presented at the 2023 AMPP Conference + Expo in Denver, Colorado, the award recognizes superior performance, management approaches, innovation, and other achievements involving one or multiple materials protection solutions.

“We at BARTON are tremendously proud to have been chosen to support work on this U.S. Navy ship,” commented Randy Rapple,



BARTON president and CEO. “I’d especially like to congratulate Vinny D’Auge. His foresight, skilled project management and creative problem-solving are really what made everything possible.”

