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Securing the Nation: ACMA and the NOAA

In early July of this year, the National Oceanic and Atmospheric Administration (NOAA) issued a "Request For Proposals" for the design, development and construction of a new Small Waterplane Area Twin Hull (SWATH) coastal mapping vessel (CMV). The primary mission of the ship: "to conduct full seafloor mapping of coastal areas."

Doug Ottens, Principal Marine Engineer with ACMA, explains the significance in terms of US National Security, "In mapping the US coastal seafloor, we will be able to monitor discreet changes and detect any potential intruders."

ACMA has submitted a proposal and is looking forward to helping secure our nation's borders. Doug Ottens is coordinating the project with premier shipbuilder VT Halter Marine and acting as the primary liaison to the government. "ACMA will be the design integrator of the CMV," adds Doug, "and I will manage subcontractor contributions and direct the workflow at ACMA."

Proposed NOAA SWATH CMV - 29m LOA; 15kt.

NOAA is expected to award two teams the chance to compete for the project. The first phase will last 4 months, consisting of three months of preliminary design. The winning team will then be awarded the contract and proceed to Phase II, which will entail both contract design and detail design. This phase will wrap up around May of 2005. At that time, NOAA will decide whether to proceed with actual construction of the SWATH CMV.

ACMA and VT Halter will both be making use of ShipConstructor software, enabling fast, efficient collaboration. Notes ACMA Vice President Darrel Harvey, "ACMA is known for cost-effective design and mission flexibility. Add that to our unrivaled experience in SWATH development, and our capabilities are a perfect match for this assignment. If all goes well, ACMA will be 'in our nation's service' in the very near future."

Maximizing the Marine Transportation of CNG

A significant opportunity exists today for those who are able to cost-effectively deliver natural gas to an energy-hungry world and ACMA is at the forefront of that opportunity.

As part of a strategic partnership developed by EnerSea Transport LLC, ACMA has helped create the patented technology that's designed to cost-effectively transport under-valued, stranded natural gas reserves to markets at distances up to 4,000 miles.

Known as "VOTRANS" (Volume-Optimized Transport System), this innovative technology is an ocean-going gas delivery system comprised of large diameter pipes contained within insulated structures integrated onto specially designed and constructed ships. The technology provides the ability to move as much as 1 Bcf of gas per ship at significantly lower costs than other gas export alternatives.

From the Top

September 20, 2003 marked the 6th Annual Offshore Pioneers Induction Ceremony in which Alan C. McClure was named one of five "Industry Pioneers". As an inductee into the Offshore Energy Center Hall of Fame, Alan's contributions to the offshore industry will be memorialized by a plaque highlighting some of his most impressive achievements.

Needless to say, I am very proud of my father. His dedication to innovative design is an inspiration, not only to me, but to all of us at ACMA. It's that kind of dedication on which this company was founded.

And, in his same pioneering spirit, all of us at ACMA will continue pushing ourselves to achieve more. After all, we have a reputation to uphold and an obligation to raise the bar within the industry. In the coming years, we intend to remain a leading force among naval architecture and engineering firms and push the threshold in a way that would make Alan proud.

Scott C. McClure
President

McNotes is published by Alan C. McClure Associates.

Founded in 1975, Alan C. McClure Associates, Inc. (ACMA) is one of the industry's premier naval architecture and engineering firms. Headquartered in Houston, Texas, we've provided advanced design and engineering services to our international clientele in offshore exploration, production and marine transportation for over 28 years.

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A major portion of ACMA's assignment was centered on concept development. Our task was to develop a ship around EnerSea's unique containment system and do it within the context of class and regulatory environments for the safe and secure delivery of natural gas. This included the design of the ship's hull structure and containment support structure, as well as specifying machinery requirements, including propulsion system, auxiliary systems and safety systems. ACMA also participated in HAZID and HAZOP workshops to identify key hazards that could be impacted by vessel design, as well as a formal comparison between LNG and CNG.

To date, ACMA has finished the first pass on the design spiral of the hull and machinery. We've also completed cost estimating with shipyards around the world and are now in the process of going through the design spiral to build a vessel domestically that can meet Jones Act requirements. Finally, ACMA continues to participate in VOTRANS Workshops in an effort to educate industry leaders on the advantages of CNG marine transportation.

Votrans CNG Vessel - 700 MMscfd; 18kt.

Peter Marucci – Structural and Shipyard Specialist

As Principal Structural Engineer with ACMA, Peter Marucci brings to the table unparalleled experience with high-end structural FEA. His many years of shipyard experience, coupled with extensive design work, has given Peter a well-rounded view of industry processes, enabling him to view problems from every aspect and to accurately assess the needs of each project.

Since joining ACMA in 1996, Peter has become a major contributor to our team's success. Some of his most recent work has been on ACMA's highly successful SWATH projects. For the "Stillwater River" - his first SWATH and favorite project - Peter did the ABS scantlings, as well as local FEA. For the Q4000 SWATH work platform, Peter performed the initial scantlings, global strength and hull assessment.

But Peter hasn't always been focused on SWATH technology. A few years earlier, Peter took on the unique assignment of providing the structural analysis of a conceptual Syncrolift system that could be operated at the Panama Canal as a third "lock". When low water conditions would normally prevent ships from passing through the canal, this system was designed to allow both a ship and the water on which the ship floated to be lifted to the upper level. This concept would not only reduce the volume of water used for each passage, but also reduce the number of cycles as well.

It's that kind of creative thinking that keeps Peter looking forward to his next assignment. "I like new challenges", says Peter, "and I get those at ACMA."