

Naval Architects & Engineers

Project Updates

Although a very soft worldwide economy has challenged ACMA, along with many of our clients and associates, recent activity has made us very optimistic on how the year will end. The following activities and projects are currently in-house:



CLICK HERE to follow the progress of the TxDOT ferry.

TxDOT's Galveston-Port Bolivar Ferry: The ferry's first dry dock has been successfully

completed at Conrad Deepwater in Amelia, Louisiana. ACMA and Schuller & Allen teamed up to provide engineering and design for the new 264-foot vessel, and ACMA is now providing owner's representation during the construction period until delivery.

The ferry received her new propeller shafts, propellers and rudders, along with a fresh coat of bottom paint during her first dry dock. Now she'll be given the final topside colors that she'll proudly wear during her tour of duty. Over the next few months, ACMA will be overseeing alignment of the propulsion system, electrical equipment integration and termination, and equipment start-up, as well as dock trials and sea trials. The ferry is scheduled for delivery in the second half of 2009.

Helix Producer 1: The US Gulf of Mexico's first dynamic-positioned floating producing/offloading vessel (FPU), Helix Energy Solutions' Helix Producer I, has arrived in Ingelside, Texas, and we're continuing our involvement in her preparation for oil production. ACMA has provided structural and stability analysis as well as on-site services during vessel refits and construction on numerous vessels over our thirty-five year history.

K-Sea Transportation: We've completed the engineering and design modifications on the West Coast barges that allow them to operate as Integrated Tug Barges (ITBs). The final Finite Element Analysis (FEA) structural reports, along with the design modification structural drawings, are at ABS New Orleans for review and approval.

Bisso Marine: We've been assigned a number of modifications that will be applied to their new and existing vessels.

Petroleum Geo-Services: We're currently providing naval architecture services to PGS for some of their geophysical survey vessels.

Zeta Gas: ACMA has just put the finishing touches on our activities involving the offshore buoy installation for an LNG off-loading terminal in Mexico. This project involved a number of on-site bathymetry surveys of the region, as well as mooring equipment selection and recommendations based on our hydrodynamic model findings for the system using our copy of AQWA.

Etc: We have also had a number of small stability-related projects that have presented themselves at times which have allowed us to keep our GHS software 'dusted off' and put to good use. And, we've made a big push to get the word out on our CFD software and have made a number of presentations to customers, both old and new, to better educate them on the uses of computational fluid dynamics software and its capabilities.



From the Top

As economies around the world become more industrialized, the demand for energy continues to grow. Unfortunately, the cost of developing traditional energy sources is also



rising, along with environmental concerns. That in turn has placed a much greater emphasis on identifying and developing renewable energy sources.

As a result, ACMA has seen an increased interest in renewable energy projects that include wave, wind and current-based energy generation systems. Of course, each time we've been asked to provide solutions for this emerging industry, we've had the advantage of applying the analytical design, project management and construction oversight experience we've gained over the past 35 years in the offshore industry.

For example, when we analyze wave and current-based loads on fixed structures, many of the disciplines we now use are directly applicable to the structures that support various renewable energy systems.

So we're looking forward to meeting the new challenges of this emerging industry, because the companies that maintain their leadership role in the marine industry will be those that integrate the expertise they've forged in the past with the new technologies that are shaping the future.

Scott C. McClure, President

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Founded in 1975, Alan C. Mc-Clure 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 30 years.



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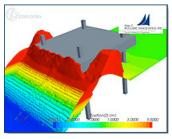
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CFD Expands ACMA's Analysis Capabilities

ACMA recently expanded our analysis capabilities by acquiring a license for STAR CCM+, the flagship CFD (Computational Fluid Dynamics) package. This enables us to accurately determine the effect of viscous flows and nonlinear waves on vessel hulls and in internal tanks. We've also purchased a high-performance computing cluster, equivalent to 16 standard desktops, to run the new program. That cluster has also greatly improved run and post processing times when performing FEA analysis with ANSYS.



CLICK HERE to see CFD in action.

Many of the analyses we can now perform with CFD were previously analyzed using models tested in a Tow Tank. Our CFD capability enables us to have a "Virtual Tow Tank", which allows analyses to be done faster, at less cost and earlier in the design cycle. And, in many cases, CFD actually does a better job of predicting the loading due to the limitations in model testing.

Donald Burris: An Aptitude for Analysis

As far back as he can remember, Donald always had access to a computer. As a matter of fact, he was connected to the "net" long before most people even knew it existed.

Born in 1980 in Huntsville, Texas, Donald grew up in a household that was always on the "bleeding edge" of technology. After all, his father was a Computer Science professor at Sam Houston State University. So it shouldn't come as a surprise that he earns his living today as a Naval Architect, working for a company that stays on the forefront of technology.

His path to the ocean began in high school when he attended a Wave Tank demonstration at a Texas A&M University science fair. Already interested in engineering, Donald says this lecture lit the fuse that would lead him to graduate a few years later from Texas A&M with a Bachelor of Science degree in Ocean Engineering. And earlier this year, Donald earned the distinction of becoming a licensed Professional Engineer.

Following graduation, Donald joined Det Norske Veritas where he gained valuable regulatory experience. He then took a position with SBM Atlantia and spent the next three years focusing primarily on stability analysis. Prior to joining ACMA, Donald worked two years with Delmar Systems analyzing

mooring systems for mobile offshore drilling units in the Gulf of Mexico.

His opportunity to join ACMA came as a result of being active in SNAME. In college, Donald was President of the student chapter.



Donald Burris

He continued his association after college and served as the Chairman of the Texas Section from 2006 to 2007. It was here he met Scott and Darrel. When he mentioned that he was looking for new challenges, a lunch meeting was set for the following week. The rest, as they say, is history. Donald joined ACMA in March of 2008.

According to Darrel, "Bringing Donald on board was an easy decision. We were impressed with his expertise in mooring and anchoring systems. He's also proven to be a valuable asset in our IT services."

From Donald's perspective, ACMA has been an equally good fit. While he's applied his skills to a number of different projects, most importantly, he's getting to do what first intrigued him about ocean engineering - wave dynamics and motion analysis. Better yet, he's getting to do it on some of the industry's most advanced software and hardware.