

From Bunkering to Propulsion

ACD's strength in the LNG industry continues to grow, as we expand our reach into nearly every aspect of LNG, from bunkering to main propulsion powering sea going vessels.

This was most evident for the world to see in Jacksonville, Florida. The Port of Jacksonville (POJ) is one of the first successes in the incursion of LNG as the fuel of choice for marine propulsion replacing diesel fuel. ACD was approached to help provide a new pumping solution for high pressure fuel injection, using LNG to power the ship's main engine, as well as a bunkering solution at the port. We drew on our vast experience designing equipment for new applications and creating custom solutions based on our proven technology. As a result, ACD's pumps were used in nearly every stage of the operation.

ACD is excited about several things happening at the Port of Jacksonville. Our equipment has already successfully pumped nearly 5 million gallons of fuel from shore to ship. Through Eagle LNG, ACD is building the actual on-site plant that is being installed. ACD's pumps will be mounted in tanks as well as on the ground to support both the trailer and ship bunkering.



TOTE's experience in LNG propulsion systems is among the most extensive in the industry. TOTE was the first to convert their existing fleet to run on natural gas, and brought the world's first natural gas-powered containerships to an industry that dates back thousands of years. The LNG fueling system on board the vessel was

designed and manufactured by ACD LLC in Southern California. TOTE is committed to LNG not because it's cheaper, but because it's cleaner.

TOTE was not just the first in the nation to build LNG ships, but their Marlin-class vessels are the most advanced, environmentally responsible vessels of their kind – reducing vessel sulfur emissions by 97%, while providing safe, reliable cargo deliveries. Burning LNG will allow the TOTE's Marlin Class ships to be fully compliant with strict emissions regulations while operating in both the North American Emissions Control Area and the U.S. Caribbean ECA.

On January 9, 2016 TOTE Maritime Puerto Rico successfully loaded LNG bunkers aboard the world's first LNG powered containership, MV Isla Bella. Approximately 100,000 LNG gallons, transported by 12 TOTE-owned LNG ISO containers, were loaded utilizing ACD's TC34.2 submerged motor pumps.

The LNG was transferred from ISO tank containers using a specially developed transfer skid developed by TOTE's partner, Applied Cryogenics Technology (ACT) of Houston, TX. The transfer skid was designed to allow four ISO tanks to be transferred to the ship at once, dramatically reducing transfer time.

"We are very pleased with the results of this initial LNG bunker event and know that the use of LNG in our Marlin Class vessels will provide unprecedented environmental benefits both here in Jacksonville and in Puerto Rico," said Tim Nolan, President of TOTE Maritime Puerto Rico.

AppliedCryoTechnologies, Inc. (ACT) the assembler of cryogenic industrial gas and LNG systems in North America is the first to market with this type of bunkering equipment for the marine Industry using ACD pumps.



"At ACT, quality, reliability, efficiency, and innovation in engineering, are the foundation of the products we supply. Our choice in suppliers for components required to design and build equipment for our customers' specific needs is something we take very seriously.

Over the years we have grown to understand that ACD shares our initiatives in their cryogenic pump technology. They have proven themselves to us and our customers in engineering superiority, dedication to success, and after - sale service.



This was no different when we were tasked with creating the first in North America product for the TOTE shipping company. They needed a solution in shore to ship LNG bunkering for their new LNG powered mariner class ships. With ACT

on the case, we knew exactly where to go for the cryogenic pumps required to make a bunkering system that could deliver, and the partnership in engineering and service required to make it all a reality.

As we suspected, ACD performed to our expectations, by providing the pump we needed from their first class TC34.2 line of pumps.

Being the true partner they are, they supplied this key component and were there for us in any capacity we needed throughout the engineering, manufacturing, and commissioning process.

ACD has consistently proven themselves as a great partner in the overall success of cryogenic pumping technology for our products.

We are proud and confident to work with ACD because they have such a broad product line coupled with very capable engineering and service." – Jack Smith, is Co-founder and Executive Officer

According to Jim Estes, General Manager of ACD, "ACD is thankful for the opportunity to have been selected as the LNG pump supplier for the POJ Project. As a leader in this developing industry, ACD is dedicated to the success of LNG fueling and bunkering by continuing to supply the highest quality products, services and support whenever possible."

For more information, go to www.acdllc.com.

"Bunkering Up" (2016, February 11). Retrieved from http://marinelog.com/index.php?option=com_k2&view=item&id=10535:bunkering-up&Itemid=230