

# At Work

## Two big ASD tugs custom-designed for moving LNG tankers

Photos and story by  
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**T**he four azimuthing stern drive (ASD) tugs at the Moran Towing of Lake Charles dock, located off a lonely stretch of Gulf Coast highway near Cameron, La., have a combined horsepower of 25,800.

Two of the tugs, *Hercules*, built for Suderman & Young Towing (SYT), and *Tristan K*, built for Bay-Houston Towing (BHT),

are 6,300-hp, 7500 class Z-Tech units. Delivered in 2011, they joined *Catherine C. Moran* and *Loretta B. Moran*, both 6,600-hp z-drive tugs. Moran, in a joint venture with SYT and BHT, is providing escort and assist services to LNG ships berthing at the newly-built Cameron LNG facility near Lake Charles, La. The Cameron LNG receipt terminal is

owned by Sempra LNG, a subsidiary of Sempra Energy.

As with the Moran tugs, *Hercules* and *Tristan K* were purpose built at the Washburn & Doughty yard in East Boothbay, Maine. They have been ABS certified and meet all of the criteria specified in the contract, including full FiFi-1 capability, speed and bollard pull.

The propulsion system comprises a pair of MTU 16V4000-M70 diesel main engines driving Rolls-Royce US 255 ASD units. To meet the customer's towing requirements, a Markey 200-hp DESF-48 electric hawser winch was installed on the foredeck, a departure from the Markey DYSF-52 hawser winches installed on previous Z-Tech tugs in both company's fleets. The single drum accommodates a 400-

Top, *Tristan K* is a 6,300-hp, 7500 Class Z-Tech tug built for Bay-Houston Towing by Washburn & Doughty in East Boothbay, Maine. *Tristan K* and its sister, *Hercules*, provide escort and assist services to LNG ships at the Cameron LNG facility near Lake Charles, La.

Left, Capt. Miguel Martinez, the operations manager for Moran Towing of Lake Charles, at the controls of *Hercules*.





Left, the Markey 200-hp DESF-48 electric hawser winch.

Right, the winch's single drum can accommodate a 400-foot towline of 9.5-inch Amsteel Blue synthetic rope. *Hercules* carries a 125-foot line with a 9.5-foot pendant.



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Two dry-docking skogs forward of the z-drives were added to the hull. Combined with the large skog inherent in the Z-Tech design, they form a tripod for convenient dry-docking.

"The z-drive guards (or docking skogs) have two purposes, one to protect the z-drive from damage when the boat is grounded," said Mike Nigro, vice president of engineering for G&H Towing, who supervised construction of the vessels. "The second is to reduce cost when dry-docking the vessel."

The firefighting system consists of two Caterpillar C-18 engines driving FFS SFP fire pumps rated at 6,019 gpm at 167 psi. The monitors, located on the pilothouse deck, are made by FFS and have a rated capacity of 5,284 gpm.

*Hercules* and *Tristan K* are the seventh and eighth Z-Tech ASD tugs designed by Robert Allan Ltd. of Vancouver, British Columbia, for the Bay-Houston and Suderman & Young fleets. •



Above left, Engineer Don Floyes with one of the two MTU 16V4000-M70 mains. Left, the two MTU engines drive Lufkin gears, giving the boat a bollard pull of 74 tons.

Above, one of the Caterpillar C-18 engines that power the FFS SFP fire pumps rated at 6,019 gpm at 167 psi.

Right, left to right: Deck hand Jonathan Luna, Capt. Ricky Ward, Engineer Don Floyes, Capt. Kevin Upmal, Operations Manager Miguel Martinez, General Manager Jeff Beach, AB Mark Kuebler and Capt. Eddie Heredia.

