

Title: DP Drilling Operation Success – Electric Pod Thrusters Extend Maintenance Intervals

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Abstract

In 2004, sixteen electric pod thruster units (3.3 MW power each) were installed on two semisubmersible vessels under construction in Singapore. These vessels were delivered by the shipyard in Spring 2005, and sailed from Singapore to the Gulf of Mexico, self-propelled by the new electric thrusters.

After a challenging initial service period in the Gulf (summer included two major hurricanes, Katrina and Rita), the vessels finally started operation as 2005 drew to a close.

The vessels carried one spare thruster unit on their initial journey; the thruster pods are designed for underwater removal and installation. It is common practice to change thrusters in the field, eliminating a trip to the dock (and providing significant cost savings).

Four additional thruster units were delivered in 2008 for maintenance rotation, and thruster maintenance sequencing began in 2009. This paper describes findings from the thruster units that have been overhauled, focusing on the most important components, including photos from disassembled components.

Some of the thrusters are still operating with initial components; since the underwater part of the thruster cannot be maintained *in situ*, the components inside the unit must be designed to be as reliable as possible, and that reliability has proven itself in the field. The rugged thruster design technology is also reviewed in this paper.

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