

**Title:**        **The Effect of In-Flow and Counter-Rotating Props on the Efficiency of Azimuthing Thrusters**

**Authors:**   **H.A. Reynolds, Wu Zhu, *Diamond Offshore Drilling, Inc.***

**Abstract**

The role of the Coanda Effect in the efficiency of azimuthing thrusters is well established, and thruster manufacturers have responded by producing "tilted axis" thrusters, generally 7 to 8 degrees from horizontal. However, tilting the prop axis also increases the criticality of both thruster In-Flows and the direction of prop rotation.

We used full-scale CFD modelling to examine the effects of thruster inflows and prop counter-rotation on the efficiency of ducted, tilted axis, azimuthing thrusters mounted on two different drillship hulls.