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# MARITIME REPORTER AND ENGINEERING NEWS

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## The Kirby Way

Joseph Pyne, Kirby & 30 Years of Growth

**MLC 2006**  
Proving Compliance

**\$228B**  
LNG Capital Expenditure

**Floating Production**  
Huge Opportunity for Shipyards

**Training & Education**  
Poland's Maritime "U"



## Efforts continue to improve the **Modeling of Thrusters**

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**M**ARIN uses thrusters in many projects. For a typical model scale, around 1:50 to 1:60, relatively small thrusters are required. Thrusters for these models are available ranging from 50 mm to 80 mm nozzle diameters. In the past these thrusters were always modelled with a horizontal shaft.

By tilting the nozzle, the closest possible match was achieved between the client specifications and the modelled thruster for the basin tests.

Due to the ever-evolving process in improving the models, new thrusters were built with a 7-degree tilted thruster shaft.

Special gears were made for a reliable and durable thruster model and with these new thrusters it is still possible to mount nozzles with a slightly different angle. See figures for examples.

The newly built thrusters give clients the ability to choose a more accurate representation of the thrusters used during model testing.

**0 deg. tilted nozzle**



**5 deg. tilted nozzle**



**7 deg. tilted nozzle**



**7 deg. tilted axis,  
5 deg. tilted nozzle**



**7 deg. tilted axis,  
7 deg. tilted nozzle**



**Model with mounted thrusters**

