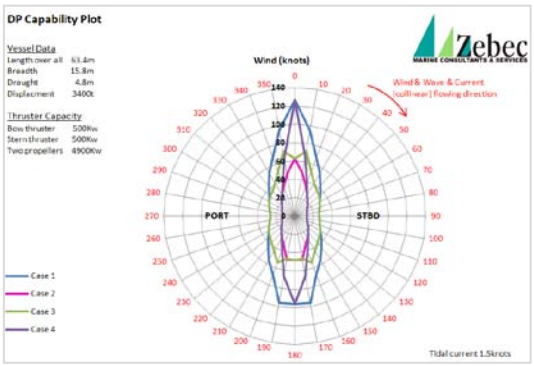
Zebec
MARINE CONSULTANTS & SERVICES

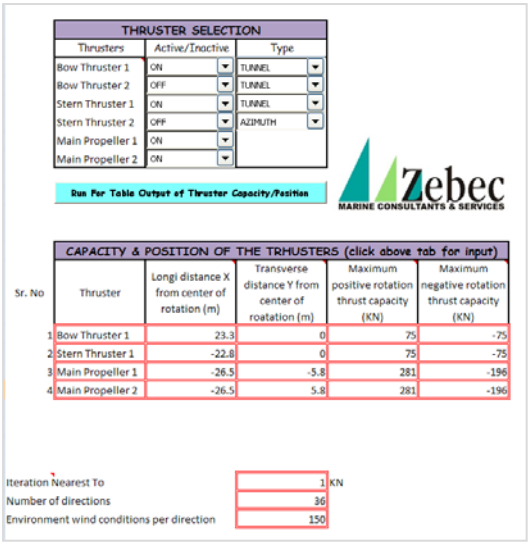
DP CAPABILITY STUDIES

Zebec conducts DP capability studies for vessel with a given thruster system to examine the operability environmental limits. This analysis will help vessel owners to ensure that DP operation is safe and efficient.

The typical DP capability studies include:

- Analysis for vessel only with tunnel or azimuth or combinations of both including the main propeller capacity
- Determination of the maximum environment in which the vessel can withstand, when all thrusters are operations under maximum efficiency / failure of one or more thrusters / Low efficiency operations
- Determination of most economical thruster capacity and configuration for given environmental condition.
- Determination of wind/current loading on the vessel based on industry accepted IMCA, DNV wind current coefficients and formulations.
- Determination of wave drift loading by using Bureau Veritas hydrodynamic (Hydrostar) software
- Determination of critical wind speed, wave height and current speed at the thrusters failure for each heading for given thrusters configuration and capacity
- Determination of environmental loading for each wind steps for each heading





In house program:

A macro program is developed to calculate the thruster system critical loading distribution for a particular direction of wave, current and wind loading to the vessel. The program will generate the limiting curve of the wind for all direction of wave, current and wind attack in which the vessel can be dynamically positioned with the thruster system arrangement and capacities specified. In addition, this program has the capability to compute the critical wind curve with one or multiple thrusters switched off and with change of loading bearing efficiency for each active thruster. The in house program is validated with available model testing.

Contact Us: At Mumbai, India: +91-22-42965000
Email: zebec@zebecmarine.com | www.zebecmarine.com