ABSTRACT

“Resistance and seakeeping analysis on the Fast Rescue Boat”

Author Name : Roynando Napitupulu
NRP : 4105100056
Departement : Naval Architecture and Shipbuilding Engineering ITS
Supervisor : Prof. Ir. I Ketut Aria Pria Utama, MSc., Ph.D
Ir. Murdijanto, M. Eng

Calculation and analysis of resistance and seakeeping done numerically possible to analyze the behavior of ships at sea. The results of these calculations can be a reference in the design and operation of ships at sea. In this study performed the analysis and calculation of total resistance in the ship seakeeping fast rescue boat types. Ship resistance calculations can be performed by the method of Savitsky with 3 phases, namely displacement phase, the phase of pre-planning phase and the planning and ship seakeeping calculations can be performed by varying the speed of the vessel (15 knots, 20 knots, 25 knots, 30 knots), direction angle variation ships (0 degrees, 45 degrees, 90 degrees, 135 degrees, 180 degrees), as well as variations in frequency (0.3 rad / sec, 1.21 rad / sec, 1.87 rad / sec, 2.53 rad / sec, 3.19 rad / sec, 3.85 rad / sec, and 4.51 rad / sec).

From the calculation of the resistance that keep going to get the relationship between the ships with the Froude number Lwl, WSA vessels and total vascular resistance, whereas the results of seakeeping calculations will be found in response to waves and ship motion characteristics can be determined respectively (heaving, pitching, rolling).

Keyword : fast rescue boat, savitsky, resistance, seakeeping