TECHNICAL ANALYSIS OF ADDITION BULBOUS BOW TO HIGH SPEED CRAFT SHIP

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Abstract

High Speed Craft (HSC) is a high speed craft for civilian use. One type of HSC is a Crew Boat, a crew boat is a ship specifically used to carry supporting equipment for offshore drilling work such as personnel, fuel and others. Because the uncertain sea conditions require a shipping expert to design a ship with good resistance and seakeeping. In this study, an analysis of the addition of bulbous bows to crew boats was carried out to reduce drag and seakeeping by using three types of bulbous bows, namely delta type, ellipse type and nabla type. From the results of the analysis that has been carried out, it shows that the addition of a bulbous bow can reduce the amount of resistance on the ship. The smallest resistance value was found on the Nabla type bulbous bow with a value of 135.3 kN while the resistance value of ships that did not use bulbous bows was 149.3 kN. For the ship's seakeeping analysis results, the response results from the heave and roll movements of the Nabla type bulbous bow variation have a better response than the other models with a RAO heave value of 1.395 m/m and roll 6.581 deg/m, while for pitch motion response, planing hull variations had a better response than ships using bulbous bows with a RAO value of 1.378 deg/m.

***Keywords* :** *High Speed Craft, Crew Boat, Resistance, Seakeeping, Bulbous Bow, Seakeeping*.