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Beauchamp

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(54) **SIDE THRUSTER PERFORMANCE IMPROVEMENT WITH SPEED CONTROL**

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(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(52) **U.S. Cl.** **114/151; 440/47**

(58) **Field of Search** **114/150, 151; 440/38, 47**

(56) **References Cited**

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(57) **ABSTRACT**

The present invention having enhanced maneuverability that has hull at least partially submerged in fluid, which will ordinarily be water. The vehicle has a forward bow, a longitudinal axis extending rearwardly from said bow and opposed first and second sides. The first and second sides have respectively a first major opening and a first small opening and a second opening. A fluid-conducting tunnel extends generally transversely through the hull from the first major opening on the first side of the hull to the second major opening on the said side of the hull. There is a propeller for causing fluid to flow through the tunnel. In order to compensate for the detrimental effect on thrust (T) caused by increases in forward vehicle velocity (V_v), angular speed (N) of the propeller is increased proportionally to measured increases in axial fluid velocity (V_x).

20 Claims, 2 Drawing Sheets

