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Experimental Measurements and Comparison of Cable Performance for Mine Hunting Applications KATHERINE MANGUM, BENJAMIN RUPPEL, NAVSEA Carderock — The Naval Surface Warfare Center (NSWCCD) conducted testing of multiple faired synthetic cables in the High Speed Basin in April, 2005. The objective of the test was to determine the hydrodynamic characteristics of bare cables, ribbon faired cables, and cables with extruded plastic "strakes." Faired cables are used to gain on-station time and improve performance of the MH-60 Helicopter when towing mine hunting vehicles. Drag and strum were compared for all cases. Strum was quantified by computing standard deviations of lateral cable acceleration amplitudes. Drag coefficients were calculated using cable tension and angle readings. While the straked cables strummed less than the bare synthetic cable, they did not reduce strum levels as well as ribbon fairing at steep cable angles for speeds of 10, 15, 20 and 25 knots. The drag coefficient of the straked cables was calculated to be higher than that of a bare cable, although further testing is needed to determine an exact number.

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