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In Confidence: Not to be quoted without reference to the laboratory

FRV Goldseeker 5GR84
Cruise 5/84

REPORT
10-25 May 1984

OBJECTIVES

1) To measure the drag of single and double twine codends at various speeds.
2) To measure the shape and vibration characteristics of four types of smooth and stranded cable towed under various loading conditions.

NARRATIVE

After steaming from Buckie on 10 May, Goldseeker commenced trials in Loch Ness on 11 May, working out of Fort Augustus every day until 24 May. The half landing was taken on 17 May. Instrumentation was unloaded at Muirtown on the afternoon of 24 May and the trawl gear and cables at Buckie on the morning of 25 May.

RESULTS

1. Two identical hauls were made with each codend and with the supporting frame alone. Preliminary results show that there is no significant difference in drag between the codend with single twine and that with double twine, despite the fact that there should be approximately twice the twine area in the double twine codend. Detailed measurements of the mesh and twine size will be made to verify the similarity of the two codends before definite concludisons are drawn.

2. Date were collected on 200m lengthsof four cables - an 11mmdiameter three stranded cable, a 10.4mm six stranded cable and a 12mm and 17mm smooth cable. Measurements of tension and declination angle at the ship and depth of the cable end were taken. Accelerometers were attached to the cables a short distance from the ship. The divergence of the end of the stranded wires from the plane containing the ship's centre line was also measured by an acoustic pinger/hydro phone system.

A range of weights was attached to the cable lower ends to achieve varying degrees of curvature.

Measurements were also made on trawl warps (six strand) when towing a pelagic gear.

Careful calibrations of all instrumentation were done frequently and temperature/depth profiles were obtained on three separate occasions to allow accurate calculation of the speed of sound in water.

Detailed analysis of the results will continue in the laboratory.

seen in draft
A Mair
24.06.84

R S T Ferro
27 June 1984