WILLIAM DENNY & BROTHERS LIMITED

PRESS RELEASE.

An important milestone in the Hovercraft research and development programme, being carried out by William Denny & Brothers Limited, Dumbarton, was reached on Saturday 13th May, when a research craft, which has been constructed in the Shipyard at Dumbarton, entered the water for the first time. A number of preliminary tests were carried out and satisfactory results were obtained.

William Denny & Brothers Limited are one of four British Firms who are collaborating with Hovercraft Development Limited, a subsidiary of National Research Development Corporation, on the development of Hovercraft.

Next week, a start will be made on an intensive programme of trials and tests of the Denny research craft. The trials will be carried out firstly in deep water in the Gareloch and at a later stage on a specially prepared measured mile course in shallow water outside the navigation channel of the river Clyde, near Langbank. Speed trials will be carried out at various hover heights, in order to study the various drag components of the craft and its efficiency compared with orthodox vessels.

As the development programme of William Denny & Brothers Limited is being directed in the first instance towards the production of Hovership or Hoverferries, primarily for operation in rivers and estuaries, the research craft is designed for operation over water only. The craft is rectangular in shape, approximately 60 feet long by 10 feet wide and has skirts or sidewalls along each side. These walls retain the air cushion under the craft and the cushion is contained at each end by a curtain formed by a thin jet of air forced downwards and inwards along the full width of the craft between the walls. The air for the cushion and the jets is drawn into the interior of the craft and forced by fans through ducted systems to each of the jet orifices. Forward propulsion of the craft is provided by two "Mercury" 300 outboard motors with variable pitch propellers, each developing 35 b.h.p. while power for the fans is provided by two 3 cylinder 2 stroke "Excelsior" engines, each developing 25 b.h.p.

The craft is fully instrumented as a floating laboratory in order to obtain all the necessary data required for future development work.

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The essential difference between the Denny research craft and other existing experimental craft is that the sidewalls of the Denny craft remain continuously in contact with the water, whereas the other types are fully air-borne. The sidewall type of craft however has the advantage that less power is required to maintain the air cushion.

Since the type of full size operational Hovercraft which William Denny & Brothers Limited aim to produce will be primarily intended for river and estuary work, high speeds are not a primary requirement. A speed of 35 knots would probably be the optimum maximum considered for safe navigation of rivers and estuaries. The maximum speed of the research craft is expected to be in the region of 15 knots.

The research craft is built of plywood and sheet steel and weighs approximately 4½ tons. The longitudinal and vertical stripes painted on the sides of the craft are for the determination of the wave profile on the outside of the craft, the inside wave configuration being measured by special instruments. The superstructure is painted in bright colours, in order to render the craft conspicuous in dull weather and also to assist in colour photography.

The craft is manned by a crew of three, one member being the driver while the other two are in charge of the various instruments.

The forthcoming tests will provide valuable data on which future development work will be based, but it should be emphasised that much remains to be done before the production of full scale operational craft becomes a commercial proposition.