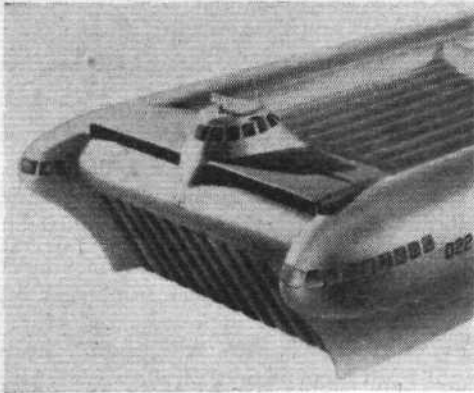


Air-Cushion Vehicles

DESIGN • COMPONENTS • APPLICATIONS



Cover picture: Design work is in hand at Hovermarine on the HM-4 "deep cushion" sidewall ACV, a projected 125-ton craft designed for 40kt in 3ft seas and shown here in model form. Hovermarine recently received its first firm orders: see page 8.

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Where is the Dynamic Raft?

THE COMMERCIAL EXPLOITATION of Britain's lead in ACVs seems set, at the light utility end of the scale, to founder on the rocks of complexity and to be the victim of an obsession with size. This month sees the second anniversary of full-scale, scheduled all-the-year-round services across the Solent which began, and which continue, with the only practical passenger-carrying hovercraft available, the SR.N6. But the lesson of these operations and of the recent Expo '67 services at Montreal is that radical rethinking is needed in the realm of small, commercially viable air-cushion ferry craft.

It is evident that development and manufacture of these vehicles can no longer be mixed in, at the same high-cost aerospace establishments, with that of space boosters, moon-landing simulators, helicopters, VTOL research aircraft and so on, as is happening both at BHC and Bell Aerosystems. The first cost of an ACV is of great significance in its profitability, for from the prime cost such factors as depreciation, insurance, spare parts, overhaul and, ultimately, fares and charter fees all devolve. Without radical rethinking of the whole nature of air-cushion ferry craft, water-bus operators will continue to be asked to pay moon-shot prices. Few, if any, will choose to do so.

One of the first tasks, therefore, of the new Director of Hovercraft should be to start an urgent Mintech study into a new concept of multi-role, cheap and profitable utility vehicles tailored for short, high-intensity ferry services. The ideal vehicle would probably take the form of a "dynamic raft" which could accept, with equal ease, a light-alloy passenger capsule, built by a bus-body builder, and lightweight freight containers. The whole emphasis in freight movement these days is on—forgive the word—"containerisation." What better than a quick-change hovercraft which can spread its usefulness over the peak-hour movement of passengers and which, at other times, hauls easily handled freight from beach to beach, or bank to bank, as a lighter, from which the containers are off-loaded on to compatible road or rail vehicles or, in the longer future, on to air-cushion road vehicles?

One approach towards an easier financial life for the short-haul ferry pioneers is through the simple non-amphibious sidewall hovercraft, and one welcomes the orders for Hovermarine HM.2s which both Hovertravel and Seaspeed have placed in recent weeks. But the need for amphibious *but profitable* utility ACVs remains and, worldwide, the undiscovered demand is probably of vast potential.

BHC is choosing, at present, to develop larger craft and in any case is known to feel that over 80 per cent of its market is in the military field—though there are many people who would contest this assumption. If the corporation is completely tied to this part of the ACV spectrum, there is all the greater need for more licensees to tackle the utility end of the market which, on present trends, will remain undiscovered and untapped. Mintech and NRDC should see to it that it is exploited first by Britain with the development of thoroughly competitive machines. And at this end of the spectrum, it is the lorry makers, bus builders, diesel engine companies, automotive component suppliers and small-vessel shipyards who should be induced to combine to compete, and then be given their head.