

hull is foam-filled, and three wheels are provided for ground manoeuvring.

Propulsion and control are integrated in that both functions are served by multiple variable-angle vanes, those in the side jets being used together for propulsion or braking and differentially for yawing, and those in the transverse stability slit providing lateral thrust.

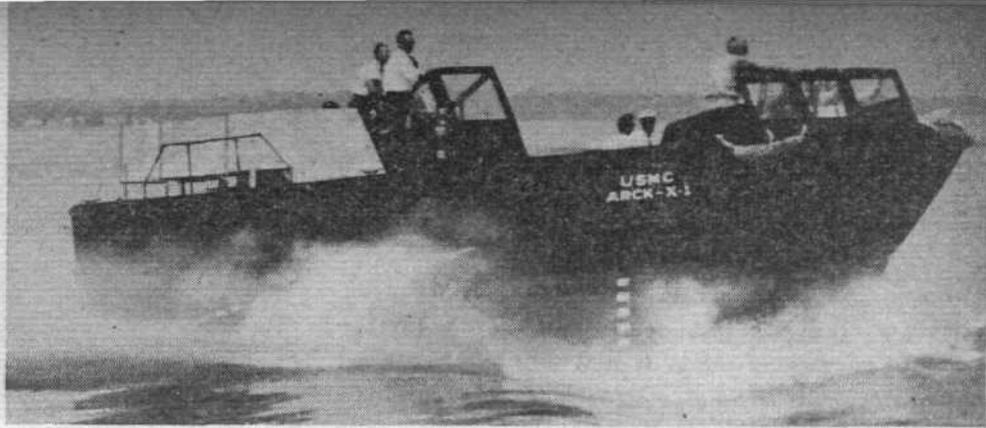
Overall length of the PV-1 is 11ft 9in, overall width 6ft 10in and overall height 4ft 7in. The air cushion has the form of a square with semi-circular ends, and its dimensions are: length, 9ft 10in; width, 4ft 11in; and area, 43 sq ft. Gross weight is 816lb. Hover height is given as 3.2in, and maximum speed about 15.5 m.p.h.

#### Hydrokeel Research Craft

Since publication of the article *Boating on a Bubble* in our previous issue we have received the following maker's description of a new craft of the Hydrokeel type:—

"Completion of a high-speed amphibious research craft, employing the unique Hydrokeel air-cushion principle, is announced by Textron's Bell Aerosystems Company of Buffalo, NY, and the Anti-Friction Hull Corporation of Severna Park, Maryland. The craft is designed to achieve speeds in excess of 30kt—more than three times faster than the conventional landing craft now in service.

"The Hydrokeel craft, called the ARC(K), was designed and built for the US Marine Corps under a \$99,000 contract awarded by the US Navy Bureau of Ships to Textron's Bell Aerosystems Company. Anti-Friction Hull Corporation, whose president, Robert W. Priest, conceived the Hydrokeel concept, built the new craft at Severna Park, Maryland, under a subcontract from Bell Aerosystems. The craft was demonstrated for the first time in late June in



*Hydrokeel amphibious research craft, subject of a news item on this page, speeds over Chesapeake Bay, near Annapolis, Maryland, during demonstrations for the US Navy and Marine Corps*

the Chesapeake Bay near Annapolis, Maryland, to a group of high-ranking Navy and Marine Corps officers.

"After acceptance by the Navy and Marine Corps, the ARC(K) will be used in a research programme to evaluate the Hydrokeel concept as applied to heavily-loaded amphibious craft. Operational testing will be conducted later by the Marine Corps Development Center, Quantico, Virginia.

"The craft uses two centrifugal blowers, driven by a 290 h.p. Chrysler marine engine, to provide a layer of air between the bottom of the craft and the surface of the water. This air, forced downward between the side keels by the blowers through an opening at the bow, reduces friction and enables the craft to attain high speeds. Twin 650 h.p. Continental air-cooled engines drive the conventional marine propellers.

"In addition to achieving higher speeds, the revolutionary Hydrokeel hull design reduces the cost of construction and maintenance of such craft in comparison with the hydrofoil, improves the riding qualities at higher speeds, reduces operating costs for the speeds attained and widens the range of practical applications.

"The concept differs from conventional air-cushion vehicles in that the latter ride on a cushion of air com-

pletely above the surface and are capable of much greater speeds. However, the Hydrokeel requires less horsepower to support heavier loads."

The company adds that since the Hydrokeel principle was conceived in 1959 five craft of the type have been built and give the following additional data:

Length, 37ft 6in; beam, 10ft 6in; draft, 5ft 3in; trial displacement, 28,000lb; design displacement, 38,000 lb; diameter of marine propellers, 26in; diameter of lift blowers, 54in; operational sea state, 3 (2ft waves); design speed, 25kt; trial speed, 35kt.

#### Contentious ACV Airport Link Proposal

Details were announced in London last month of a proposed ACV link between a new all-airlines terminal in Paddington and London (Heathrow) Airport, which would reduce the present 40-60 minute road journey from existing West London terminals to about 21 minutes.

Promoted by Airway Transport Ltd, a company headed by the architect Lord Bossom, the scheme calls for the laying of a light dual channel-section track along the drained bed of the Paddington branch of the Grand Union Canal, which ends at Southall. Running along the track on wheels angled at 30°, which would take a minor proportion of the weight but which would propel the vehicles, would be 80 m.p.h. 60-passenger Hovercars, air-cushion supported and diesel powered, costing about £20,000 each. The vehicles would be automatically controlled, through an electrical impulse system, but would carry a driver who would take over and drive the vehicle as a conventional bus about the airport roads, fully supported by the wheels, which would hinge to the vertical. Automatic control would permit all-weather services at only 40sec spacing, it was claimed. The scheme could be in operation within two years of the go-ahead, said the promoters, and about £7m would be needed. Cost estimates envisage a five-shilling single fare.

Airway Transport's announcement

*Built by Sabena at Melsbroeck, this Belgian ACV, designated PV-1, is the subject of a news item beginning on page 18*

