

Information and Photos Needed

Following is a partial list of historical topics that could make good additions to this page. Contact the webmaster if you would like to provide info/photos or to write a new "Page From the History of Hydrofoils" on one of these subjects or any other historical subject of interest to hydrofoilers. Please feel free to suggest topics that should be added to this list.

1. According to the Smithsonian Air and Space Museum website, PBM-5A Martin Mariner aircraft were used in ski/hydrofoil development tests for seaplanes conducted by Convair in the late 1950s. Also according to the website, the Convair XF2Y-1 (F-7) Sea Dart was used to experiment with a small rigidly-mounted hydrofoil ski. Actual flight was not possible with this configuration because the rigid mounting and placement of the ski "...would not permit the approx. 20 degree nose-up attitude required for takeoff. The first test was carried out on 21 Mar 57. Violent pounding caused every taxiing run to be aborted at speeds between 50 and 60 knots. Another rigid ski configuration was tested in the autumn of 1957. It too cause too much vibration, and further tests were abandoned."
2. "The bath tub [hydrofoil] models were made in 1938. That was just about a year after I had married. In 1941, we decided to make it a hydrofoil sail boat, and made our first successful run under sail on the Chesapeake Bay in 1941. Then we took it apart and put it back up in the garage afterwards and didn't sail it again, and it was later turned over to Vannevar Bush. He got a very important idea, that he thought the hydrofoils were going to be so effective in all kinds of shipping. He formed a company and he said if I'd patent my original sail hydrofoil, those plans would be worth a great deal, and he'd give me a generous amount of stock in his company... He really was excited and he'd been wondering how he was going to get patent coverage on the hydrofoil. Here was something ideal, I could patent my sailboat. The problem he (Bush) had, he had a fellow named Shearer, I think his name was Shearer, and he did most of the calculations for Vannevar Bush. The NACA had put out books that summarized airfoils characteristics. They gave the profile drag of a great number of airfoils. These were low drag airfoils capable of laminar flow and they had very, very low drag. So Shearer was taking the values of drag, and then just saying that the lift to drag ratio was to take a reasonable lift coefficient and divide the drag into that. He was getting lift to drag ratios that were around 30 and 40 and 50, and he didn't realize that there was another drag that was called induced drag, which was the drag due to lift. You just don't put it in the handbook because it is dependent on the aspect ratio and the speed. Anyway, that was the thing that was wrong with the Hydrofoil Corporation. They calculated the drag wrong and they thought they could get drags that were very, very much lower than they could get. When they built some of their first models, they found that the drag was much higher than they'd thought." -- Dr. Robert Gilruth in a [14 May 86 interview](#) conducted by Dr. David De Vorkin, Ms. Linda Exwell, and Mr. Martin Collins.
3. The hydrofoil development work by Sam Saunders and the Saunders Roe company in support of the Canadian naval hydrofoil program led to the construction in 1956/57 of the 59 foot long hydrofoil vessel R-103 *BRAS D'OR*, which was equipped with ladder foils. The *BRAS D'OR* was subsequently re-named *BADDECK* in 1962 in anticipation of the construction of the proposed larger FHE-400 which was to be given the name *BRAS D'OR*.
4. According to Ian Hamilton in his article "The Hydrofoil As a Weapon," which appeared in *Pacific Defence Reporter* Aug 1981, "The first hydrofoil boat was the product of an accident in 1861, when Thomas Moy, an Englishman, decided to study the aerodynamics of wings by observing the underwater swirls they created. Having attached wings to his craft, he ventured out onto the Surrey Canal. To his surprise, the ship rose from the water -- and unintentionally he

had invented hydrofoils. But it was not until 1898 that the first efficient hydrofoil was designed by Enrico Forlanini of Milan..."

5. More items needed... please suggest additional topics by contacting the webmaster.