

his death. In his early years on the Committee he was active in preparing and delivering papers on the subject.

KWC

JOHN CARVER MEADOWS FROST

New Zealand aviation has suffered a severe blow with the death from a heart attack on 9th October, 1979, of John Carver Meadows Frost, CEng, FCASI, MRAeS. He was 63.

From the outset John Frost was in the forefront of aviation development. An unassuming man with a puckish sense of humour, he was an original thinker who quickly left his mark on the industry in the 15 years he spent in New Zealand aviation from 1964.

It could be said that he spent a lifetime meeting challenges and overcoming aeronautical problems. His first job was as an apprentice for Airspeed Ltd, the company co-founded by Nevil Shute Norway in 1931 which built the world's first aircraft with a retractable undercarriage, the Airspeed Courier. At the time of his death Mr Frost had completed a man-powered aircraft which was almost ready for flight trials. The years before were studded with aviation high points. Immediately before the war he helped with the design and construction of the Blackburn wind tunnel for testing the designs of military aircraft.

He was with Slingsby Sailplanes from 1939 to 1942, where he designed the Hengist, one of the Second World War's troop-carrying gliders. For the next five years until 1947, he was responsible for much of the design of the de Havilland Vampire, including its original dive brakes, and was project engineer in charge of the Swallow or DH 108, the first jet aircraft to exceed the speed of sound and the first swept wing aircraft outside Germany. The Swallow was also the first aircraft to be operated with power controls and the second to be fitted with an ejector seat. Mr Frost was Chief Design Engineer for Avro Canada from 1947 to 1961 and was responsible for the design of the CF-100, an all-weather fighter, and both the first straight wing aeroplane to exceed the speed of sound and the first Canadian-designed and built military aircraft.

As head of Avro Canada's special projects team, he studied vertical take-off designs for military aircraft and discovered the ground cushion produced by a ring-like jet. This principle became the basis of the first hovercraft developed by Sir Christopher Cockerell. Mr Frost was subsequently made a Fellow of the Canadian Aeronautics and Space Institute for a paper he delivered on the ground cushion effect.

Mr Frost came to New Zealand permanently in 1964 and joined the airworthiness section of the Civil Aviation Administration. Mr Frost joined Air New Zealand 18 months later as a technical services engineer, in which position he served for 13 years until his retirement in April 1978. He was responsible for all technical activities at the airline's Mangere engineering headquarters and during his time in New Zealand fathered the certification of the Airtruk, the PL-11, designed the conversion of the first three Fletcher topdressers to turbine power for aerial agricultural work and reconfigured a number of aircraft on the New Zealand

register plus the Murray Air, a 7,000lb agricultural biplane, for work in the Hawaiian Islands. In recent years Mr Frost devoted his time to introducing many ingenious modifications to Air New Zealand's Mangere base.

Though aviation was John Frost's first love, his original thinking ranged far beyond the skies and the work in the hangars beneath them. He suggested that, with the world becoming increasingly overpopulated, the sea was perhaps the only area which provided escape from people. To overcome the problem, his whimsy prompted him to postulate a boat in kit form which could be put together by amateurs. It would be powered by a wind driven rotor — a propulsion method he considered was much more efficient than existing systems.

Though he had roughed out a tentative design for such a craft, the unclaimed prizes which had been on offer for man-powered flight for nearly 20 years diverted his attention from the sea. Mr Frost first began concentrating on designing and building a man-powered aeroplane about five years ago. The machine is still at Auckland and the RNZAF and the Auckland branch of the Royal Aeronautical Society are understood to have undertaken to complete the work needed to prepare it for flight. The success of their efforts will be the finest tribute that could be paid to an outstanding engineer.

DEATHS

It is with regret that we record the deaths of the following members.

Albert D. Brown, MRAeS, aged 75 years. His last known post was Chief Systems Engineer, Lockheed Aircraft Corporation, Georgia Division, Marietta.

Professor Edmond Antoine Sylvestre Brun, FRAeS, aged 80 years. He was Honorary Director of the Laboratoire d'Aérothermique du Centre National de la Recherche Scientifique, and had been Professor at the Ecole Nationale Supérieure de l'Aéronautique until his retirement in 1969.

Gp Capt Geoffrey Mungo Buxton, FRAeS, aged 73 years. His last known post was Air Force Representative, Director General, Guided Weapons, MoS (1954-57). He was awarded the Society's Busk Prize in 1938.

James Arthur Collopy, MRAeS, aged 77 years. His last known post was Senior Aircraft Surveyor, NSW Region, Australian Dept of Civil Aviation.

John Carver Meadows Frost, MRAeS, aged 63 years. He had been a technical services engineer with Air New Zealand. An obituary is published on page 28.

Trevor Harry Thornton, MRAeS, aged 58 years. He had been a design engineer with the General Electric Company, Stanmore Laboratories, Middlesex.