

MEDALIST FOR 1970

For original and outstanding contributions to aerodynamics, aviation and engineering education.



JAKOB ACKERET

There is hardly any area in the science of aerodynamics in which the name of Jakob Ackeret does not appear as a major contributor to progress.

Swiss-born and an expert on steam turbines as far back as 1921, he collaborated with Professor Ludwig Prandtl in the creation of the boundary-layer theory, helped pioneer in the application of the new fluid-mechanical theories for the design of turbines and other rotary machines, and perhaps is best known for the work he did in the invention of the Ackeret-Keller gas turbine cycle.

Professor Ackeret has published more than 100 research papers, virtually every one a classic milestone in fluid mechanics and aerodynamics. He designed the world's first closed-circuit supersonic wind tunnel, pioneered research into separation-induced oscillations in aircraft wings, developed practical applications of suction, and solved numerous problems involving propulsion such as thrust-augmentation and reverse thrust.

Fundamental principles developed by Ackeret were applied to the investigation of wind forces on structures and ventilation of tunnels, and many of his theories bore practical fruit in the design of variable-pitch propellers for aircraft and ships.

But Ackeret also has been a respected and beloved teacher (Wernher von Braun was one of his students), as well as serving as a consultant to many aeronautical firms, the Swiss government and the United States Air Force. He became an authority on the history of hydrodynamics and his achievements have earned him fame on an international scale, with awards and honorary degrees from Italy, Germany, Austria, the U.S. and his native Switzerland.

Widely viewed as one of the foremost aeronautics experts of 20th century, he died in 1981.