Int. J. Heat Mass Transfer. Vol. 19, pp. 1–2. Pergamon Press 1976. Printed in Great Britain

OBITUARY

IN MEMORY OF ERNST SCHMIDT

E. SCHMIDT died on 22 January 1975 just before finishing his 83rd year. In this way we lost a scientist who has to be considered one of the pioneers in the field of engineering thermodynamics, and especially in heat and mass transfer.

E. Schmidt was born on 11 February 1892 at Vögelsen, near Lüneburg. He studied, at Dresden and Munich, Civil and Electrical Engineering and joined in 1919 the Laboratory for Applied Physics at the Technical University, Munich, which was under the direction of Oscar Knoblauch. One of his early research efforts there was a careful measurement of the radiation properties of solids, which study caused him to propose and develop aluminum foil as an effective heat insulation.

In 1925 he received a call to come as professor and director of the Engineering Laboratory to the Technical University, Danzig. His research during the years in this position made his name well-known nationally and internationally. Among other papers, he published the graphical difference method for unsteady heat conduction which today can be found in every textbook on heat transfer, the Schlieren method to make thermal boundary layers visible and to obtain local heat-transfer coefficients. He was the first to measure the velocity and temperature field in a free convection boundary layer and the large heat-transfer coefficients occurring in droplet condensation. A paper* pointing out the

*This paper is republished in this issue as a Pioneer Paper.

analogy between heat and mass transfer caused the dimensionless quantity involved to be called "Schmidt Number". This term has in the meantime been accepted internationally. He also wrote the textbook *Technische Thermodynamik*, which served as text for a number of student generations.

In 1937 he became director of the Institute for Propulsion of the newly founded Aeronautical Research Establishment at Braunschweig. His interest turned now to research in combustion and cooling of aircraft piston engines and gas turbines. After the second world war, he became professor at the Technical University, Braunschweig, and in 1952 at the Technical University, Munich, occupying a chair which before him had been held by Wilhelm Nusselt. He developed the laboratory connected with this chair during the difficult postwar conditions to a research institute which today again has international reputation. He also served the University as Rektor during the years 1956 to 1958. After his retirement, he continued his scientific activity and was especially strongly involved in the development of the international steam tables.

In recognition of his work, he received Honorary Doctor's Degrees from the Technical University, Aachen, Germany and from the University of Glasgow, Scotland. Among his many other awards are the Ludwig Prandtl Medal and the Max Jakob Award. He was elected a member of the Bavarian Academy of Sciences.

His unusual gift to combine innovative experimentation with analytical approaches for the solution of problems, arising in engineering development and his ingenuity in finding applications for the results of his research inspired a large number of his students and associates, which today are active in all parts of the world. The results of his research belong to the permanent store of knowledge in the field of thermodynamics and heat transfer.

ERNST R. G. ECKERT