



In Memoriam Ernst Voss

Ernst Voss died on April 8, 2004, after a long illness, at the age of 81 years. He was born and educated in northern Germany (in Holstein), studied chemistry and graduated in 1953 from the University of Hamburg, from where, 2 years later, he also received his Ph.D. In 1955, he joined the Central Research Laboratory of Accumulatorenfabrik AG, which later (in 1963) became VARTA Batterie AG. During the following years, he helped to build up the VARTA Research Center in Kelkheim, near Frankfurt, as a co-worker of Professor Hans Bode.

His very first publication on lead-acid batteries, co-authored with Hans Bode, appeared in 1956 in "Zeitschrift für Elektrochemie" and was entitled "Ueber die Bleidioxid-modifikationen beim Akkumulator". This paper gave the first account of the presence of α -PbO₂ in the positive electrode of the lead-acid battery. A number of excellent research papers followed later on, making important contributions to the science and technology of lead-acid batteries and of other battery systems as well. Together with Professor Bode he published classic papers on basic lead sulfates and lead-phosphates.

Dr. Voss stayed with VARTA for his entire professional career. In 1964, he was named manager of the Department of Product Research and Development, and his responsibilities included now, in addition to lead-acid batteries, also nickel-cadmium cells. Later, in 1973, he was appointed manager of the Technology Department for Primary Batteries and New Battery Systems. In this position, he directed research on various primary battery systems, such as zinc-carbon, alkaline-manganese, zinc-silver oxide and lithium cells. In addition, he continued work on lead-acid and nickel-cadmium batteries. During 1976/1977, he participated in a research programme on high-temperature lithium-iron sulfide molten salt batteries, at Argonne National Laboratories, Illinois, USA. Following this, he built up

a similar programme at VARTA's Research and Development Laboratories in Kelkheim, Germany.

In 1978, Ernst Voss became department director, and in 1981 a director of the Research and Development Center in Kelkheim. His functions included now, in addition to directing research and development, also responsibilities regarding legal matters, patents, planning, government contracts, and contacts with universities. Throughout his career, he maintained a keen interest in research, especially in the field of lead-acid batteries. Even late in his professional life he co-authored papers, in particular also with Professor Winsel, for example on the effect of charge and discharge rates on cycle life, on the phenomenon of "premature capacity loss", or on the "Kugelhaufen" model of the positive active material. In total, he is the author, or co-author, of over 50 scientific papers, and of almost as many patent applications. During numerous years, he was on the Editorial Board of the *Journal of Power Sources*.

He retired from VARTA Batterie AG in 1988, after 33 years of service to that company. After his retirement, he served during several years as consultant to VARTA and was also expert on batteries and fuel cells for the Commission of the European Communities, Directorate XII, in Brussels. In 1989, Ernst Voss was selected to become the first recipient of the prestigious Gaston Planté Medal, awarded by the Bulgarian Academy of Sciences.

Ernst Voss was a man of broad interests. He liked paintings and poetry and could recite many poems by heart. He is survived by his widow Ruth, his son Wolfgang and two granddaughters. His daughter Erdmute died of cancer in 1999, an event which deeply marked Ernst's life.

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