Int. J. Heat Mass Transfer. Vol. 30, No. 1, p. 1, 1987
Pergamon Journals Ltd. Printed in Great Britain.

Fran Bošnjaković on the occasion of his 85th birthday

ON JANUARY 12, 1987, Professor Fran Bošnjaković celebrates his 85th birthday with his wife Zlata and two sons. In good health and with his mental powers unimpaired, he still follows new developments as they are published in the literature or reported in scientific meetings. In fact, he maintains a constructive and critical overview of those developments to which he himself contributed in the area of thermodynamics by his research and his teaching.

He was born in Zagreb which, at that time, belonged to the Austro-Hungarian Monarchy. He studied mechanical engineering at the Institute of Technology in Dresden, Germany, where he received his doctor's degree in 1928 and his venia legendi (as docent) in 1931. Subsequently, he was involved in teaching and research as professor of engineering at the Universities of Belgrade and Zagreb, in Yugoslavia. In 1953, he succeeded Ernst Schmidt as professor and director of the Institute for Applied Thermodynamics in Braunschweig, Germany. In 1961, he accepted the Chair for Thermodynamics of Air and Space Propulsion at the University of Stuttgart, retiring from this position as emeritus in 1968. He still lives in Stuttgart but visits his native Yugoslavia frequently.

As one of his important contributions, he developed the graphic presentation of thermodynamic and heat and mass transfer processes, continuing the work of his teachers R. Mollier and F. Merkel. Thus, he provided a tool for engineers which greatly facilitated the task of analyzing processes of two-phase mixtures in absorption refrigeration, heat exchange, combustion, gasification, other chemical reactions, high temperature plasma, and solar collection. The second volume of his widely used book *Technische Thermodynamik* is really a monograph, collecting and extending his studies published in numerous papers. The book has been translated into a number of languages and has earned him invitations to lecture in various countries. His ideas on bubble growth in nucleate boiling provided the foundation of our understanding of this process and gained significance in the development of nuclear reactors.

His paper "Fight Against Irreversibilities" made engineers aware of the importance of basing their analysis of thermal processes on the second law of thermodynamics. This brought in the concept of exergy, which continues to find increasing application. Thus, his work has strongly influenced our present view of thermodynamics. His teaching has inspired many students who will carry on the development of his ideas into the future. For his accomplishments, he was awarded honorary doctorates by the Universities of Belgrade and Aachen and he received the Grassmann medal of the Verein Deutscher-Ingenieure, and gold medals from the Associatione Thermotechnica Italiana, Padova, and the Institut Francais des Combustibles et de l'Energie, Paris, among numerous other honors.

His character and world view were shaped during the early years of this century making him a moderate and wise man, modest in spite of his gifts and accomplishments. This earned him many friends and I am proud to count myself as one of them. I want to congratulate him—also in the name of the editors and scientific advisors of the *International Journal of Heat and Mass Transfer*—for his scientific and educational achievements and to wish him health, joy, and satisfaction for his remaining years, spent in the circle of his loving wife and his family.

E. R. G. ECKERT

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