



OBITUARY

KIYOSHI YAMAGATA

1901–1973

It is reported with deepest regret that Doctor Kiyoshi Yamagata died unexpectedly on 24th February 1973. He had been a Professor Emeritus of Kyushu University in Japan and a member of Honorary Advisory Board of *International Journal of Heat and Mass Transfer*.

Professor Yamagata was born at Asa, Yamaguchi Prefecture in 1901, and immediately after his graduation from the Department of Mechanical Engineering, Faculty of Engineering, Kyushu University in 1926, he became a Research Assistant of the same department to start his career as a researcher. In 1927 he secured a position of Lecturer at the Department of Mechanical Engineering, Kyushu University and then in 1929, he was appointed an Associate Professor to take the chair of Heat Engines. He was promoted to a Professor in 1940, and throughout the years up to his retirement in 1966 he was engaged exclusively in the task of instruction and research in the field of Steam Engineering. He was highly esteemed in the University for his eminent philosophy of education and outstanding administrative ability. While he was in the office of Dean in the Faculty of Engineering, Kyushu University between 1947 and 1949, he strived for the settlement of various difficult problems that arose in the wake of the academic reform after World War II. Later on, he participated in the Principal Administrative Officials as a University Council from time to time, but his constant concern was to return to his vocational sphere and devote himself to the work of research and education. Again, he contributed, after his retirement, to the education of young engineers between 1967 and 1972 as President of Ube Technical College.

Among his activities outside the University, Professor Yamagata contrived for the promotion of Thermal Engineering in Japan as member or chief of the Heat and Thermodynamics Committee of the Japan Society of Mechanical Engineers. When the Heat Transfer Society of Japan was founded in 1961, he was one of the participants who took initiative and leadership in its formation. In 1968 he took the office of president of the same society. He was also a member of Honorary Advisory Board to *Int. J. Heat Mass Transfer* since its first issue in 1958.

After his assumption of office as a lecturer at Kyushu University, he ventured into the work on Thermal Engi-

neering, which was a field not fully developed then, taking up the subject of heat transfer with boiler as object. His papers on heat flow through the furnace hearth or radiant heat absorption of water-cooled furnace wall are the first ones of this sort in Japan. Then he proceeded to the field of convective heat transfer inside a tube and free convection outside a sphere. At that time, he was virtually the forerunner in the line of heat transfer in Japan since he realized the importance of that science before others and opened a lecture on the same subject in Kyushu University. On the other hand, he established many achievements in the field of boiling heat transfer. The researches on free convection and boiling served to stimulate the development of the study of thermosyphon and supercritical fluids respectively. Beside the above, he carried out researches on the numerical solution of heat conduction problems and as its application to the solidification problem of steel ingots.

He was also interested in the research of steam engineering and took an active part as member of the Steam Table Supplementation Committee (1955) of the Japan Society of Mechanical Engineers. He wrote the excellent original papers on the isentropic exponents of steam and on the thermodynamics at critical point. Furthermore, he exerted himself for the settlement practical problems, such as circulation of boiler water, the development of suction pyrometer for the temperature measurement of hot gas and flame, countermeasures against wear of an exhaustor blade and that of choking in coal bunkers and chutes, and the achievements he made in the industrial circle will never be forgotten.

Professor Yamagata impressed all those who came in contact with him with his personality in which scholastic austerity and humanistic compassion were mingled exquisitely. Professor Hartnett who visited his laboratory on the occasion of his tour to Japan admired people working in unity under the latter's guidance as heat transfer family. He was fond of sports and literatures and it seemed all these characteristics were fabricated to form his background.

His sudden departure is a serious loss to the field of heat transfer and a cause for deep regret to us. Remembering his distinguished achievements during his lifetime, we sincerely lament the untimely death of Professor Yamagata.