

PROFESSOR NIICHI NISHIWAKI

ON HIS 70TH BIRTHDAY



ON 18 MARCH 1980 professor and doctor of engineering, Niichi Nishiwaki, celebrated his 70th birthday.

Professor Nishiwaki was born in Hikone City, near Kyoto, Japan, where he spent his youth. He became interested in aircraft engine development and, after receiving his bachelor's degree in mechanical engineering there in 1932, he remained at the University of Tokyo as a research associate in the Aeronautical Research Institute. It was at this time that he initiated his work in the field of heat transfer and made his initial contributions in the development of compact heat exchangers for airplanes.

During the next decade, research and development projects at the Aeronautical Research Institute demanded most of his time. However, he also enrolled in the graduate program at the University of Tokyo and received his doctor of engineering degree in 1947. He then joined the Department of Mechanical Engineering, where he remained as a faculty member until his retirement in 1970. After the retirement, he was nominated as a Professor Emeritus of the University of Tokyo, and is still continuing research work in his own private company. He expanded his consulting practice through this company to undertake projects concerned with the reduction of noise and air pollution.

His scientific activities reveal an unusually broad range which includes experimental and analytical studies of liquid droplet evaporation and combustion, heat and mass transfer to and from catalytic surfaces, band emissivities of carbon dioxide and water vapor, radiation from luminous flames, heat transfer from high Prandtl number fluids, supercritical state heat transfer, free convection within a confined layer, transpiration and film cooling, and turbulent heat transfer in impinging jet systems. His papers on "Forced convection heat transfer of fluids near the critical point flowing in a tube" have been nominated for the 1976 Award of the Japan Society of Mechanical Engineers. His students and colleagues found Professor Nishiwaki to have an exceptional capability for perceiving the key or controlling elements of a problem. His philosophy for research was firstly to develop a sound physical understanding of the phenomena under study, and then to develop the simplest analytical interpretation.

Along with his teaching and research, Professor Nishiwaki has been an especially prominent administrator and leader. He served his university in various administrative assignments and also his government as a consultant. He was one of the founders of the Japan

Society of Heat Transfer. He had an essential role in attracting the International Heat Transfer Conference to Japan in 1974. He organized this conference successfully as the chairman, and international recognition of his outstanding ability and contributions came in his subsequent election as president of the assembly of International Heat Transfer Conferences.

For these many contributions and achievements in the area of heat and mass transfer as an educator,

researcher and administrator, dedicated to national and international exchange and advance of knowledge, Professor Nishiwaki was selected as the 1978 recipient of the Max Jakob Memorial Award. He is truly representative of the rapid development and outstanding progress in heat and mass transfer research and technology in Japan.

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