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SAMSON SEMYONOVICH KUTATELADZE

ON HIS 70TH BIRTHDAY

SAMSON SEMYONOVICH KUTATELADZE was born in 1914 in Leningrad. His working activity began in 1931 when he became laboratory assistant at the N. I. Polzunov Central Boiler and Turbine Institute. In 1936 he formulated the basic conditions of the similarity of heat transfer processes in change of state of matter.

From 1941 up to 1945 he served in the Soviet Army in the Field, took part in battles and was wounded. After the war he resumed his work at the Polzunov Institute where he carried out numerous experimental investigations of the properties of liquid–metal heat transfer agents for nuclear power engineering and formulated the basic ideas that underlay the hydrodynamic theory of burnouts.

In 1958 Professor S. S. Kutateladze was invited to the Siberian Branch of the U.S.S.R. Academy of Sciences where he did a great deal for the formation of the Institute of Thermophysics whose Director he has been since 1964. In 1968 he was elected Corresponding Member of the U.S.S.R. Academy of Sciences, in 1979 its Full Member.

S. S. Kutateladze has advanced the theory of turbulent boundary layer with vanishing viscosity, discovered the effect of compressibility on heat transfer in bubbling and boiling and performed considerable researches into the structure of wall turbulence and into a number of other problems of physical hydrogasdynamics. All these investigations have been generally recognized. In 1969 he received the Max Jacob International Award donated by the American Society of Mechanical Engineers and the American Institute of Chemical Engineers.

Being the creator of original investigations, S. S. Kutateladze has authored, or co-authored with his colleagues, many of the important fundamental works, including 14 monographs.

At the age of 24 he authored the monograph *Fundamentals of Heat Transfer in Change of State of Matter*—the first monograph in the world literature to cover the subject. In 1958 he published, together with M. A. Styrikovich, the book *Hydrodynamics of Gas–Liquid Flows*. Well known are: *A Concise Encyclopedia of Heat Transfer* by S. S. Kutateladze and V. M. Borishansky, the monograph *Liquid–Metal Heat Transfer*, edited together with V. M. Borishansky *et al.*, and the text-book *Fundamentals of Heat Transfer* which has run several editions, one of which having been marked with the N. I. Polzunov Award of the U.S.S.R. Academy of Sciences. Twelve editions of the books by S. S. Kutateladze have been issued in Great Britain, U.S.A. and Czechoslovakia. Lately the books *Similarity Analysis in Thermophysics* and *Hydrodynamics and Waves in Gas–Liquid Systems* (the latter in collaboration with V. Ye. Nakoryakov) have been published. In 1983 he received the U.S.S.R. State Award for his investigations in the field of wave dynamics of two-phase media.

In the scientific world S. S. Kutateladze is well known not only as a gifted researcher, but also as an organizer of international scientific relations. He is one of the organizers and oldest members of the Assembly of International Heat Transfer Conferences, a member of the Scientific Council of the International Center for Heat and Mass Transfer, a member of the Honorary Editorial Advisory Board of the *International Journal of Heat and Mass Transfer* and a member of the Editorial Boards of the journals *Heat Transfer—Soviet Research* and *Heat and Technology*. Besides, he is a

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member of the Editorial Boards of four Soviet journals.

S. S. Kutateladze pays great attention to the training of scientific personnel. He has created several research schools. Being the adviser of numerous candidates and doctors of sciences, he has determined the development of new scientific trends of the investigations carried out at the Institute of Thermophysics of the Siberian Branch of the U.S.S.R. Academy of Sciences (in particular, the investigations of the dynamics of rarefied gases and radiative–conductive heat transfer), formed large research teams who actively use the achievements of science on heat transfer in energetics, chemistry and other industrial fields.

S. S. Kutateladze is celebrating his 70th birthday anniversary as a tireless worker, rich in creative ideas. His pupils and colleagues wish him good health for long prolific years.

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