

Leonid Yakovlevich Suvorov (Obituary)

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A prominent specialist in the area of applied nuclear physics and nuclear power plants L. Ya. Suvorov died suddenly on December 1, 1985. We lost a man of exceptional spiritual qualities, endlessly dedicated to and who has contributed a lot to science.

L. Y. Suvorov was born on August 21, 1911 in Putivl', Sumskaya region; he was the oldest child in a large working family. He started his own working life in 1924 as an assistant at the Putivl' electric power station, attending at the same time a vocational school. In 1928–1930 he studied in a vocational technical school and worked as a metalworker in a mechanical shop. After that he worked for two years as an electrician at an electric power station. In 1932 he entered the Department of Physics of the Leningrad State University, from which he graduated with honors in 1937.

After finishing his study at the university L. Ya. Suvorov worked at the Institute of Radio Broadcasting and Acoustics, where he had carried out a number of important studies in the area of shielding radio receiving devices from industrial interference. Already in these early investigations solving purely practical problems, L. Ya. Suvorov showed himself to be a real scientist, who deeply understands the logic of scientific research, i.e., the necessity of finding first the physical causes of parasitic phenomena and only then to start searching for efficient ways to suppress them.

The subsequent scientific activity of L. Ya. Suvorov took place under the guidance and in direct contact with such outstanding scientists and organizers of Soviet science as Academicians A. F. Joffe, I. V. Kurchatov, A. I. Alikhanov. When working in the Leningrad Physico-technical Institute, L. Ya. Suvorov, together with M. O. Kornfel'd, had carried out extremely interesting studies of the physical nature of cavitation destruction of metallic materials. In these investigations fundamental results were obtained on the kinetics of formation and growth of bubbles under different external conditions, and for the first time assertion was made, universally accepted now, that the possible mechanism of cavitation destruction can be related to the formation of microstreams of the liquid. These purely physical investigations, as all the subsequent work of L. Ya. Suvorov, had an important practical character; in this case the question was solved as to how to increase the working capabilities and durability of the screw propellers on ships.

At the invitation of I. V. Kurchatov, starting in May 1944 L. Ya. Suvorov began working at the I. V. Kurchatov Institute of Atomic Energy in Moscow. Here his main scientific activity was connected with the measurement of isotope equilibrium constants and with the studies of the mechanism



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(1911–1985)

and development of isotope separation methods for various materials. This work also had an important applied significance for the nuclear power plant industry which had just started to develop.

Since the end of 1948 and until the last days of his life L. Ya. Suvorov worked at the Institute of Theoretical and Experimental Physics, and for many years was a colleague, of the prominent Soviet chemist Professor B. V. Ershler. In almost forty years of work at the ITEP, L. Ya. Suvorov had carried out a large number of investigations in various areas of science and technology. The subjects reflect the width of scientific interests of L. Ya. Suvorov, and their quality—his high scientific erudition. Here are the studies of electrochemical and corrosion properties of construction materials (first of all, of titanium and its alloys), and analyses of kinetics of crystal growth, and a search for quarks and, finally, the work related to cavitation (the behavior of superheated liquids, formation and evolution of bubbles in radiation fields at different temperatures, etc.). One can say that cavitation

was and remained until the end a constant attachment of L. Ya. Suvorov, since he turned to it, one way or another, during the entire of his almost fifty-year-long scientific career.

In 1955 L. Ya. Suvorov, as a member of a Soviet delegation, competently presented Soviet investigations at the First International Conference on the Peaceful Utilization of Atomic Energy in Geneva.

The broad erudition and diverse scientific interests were combined in L. Ya. Suvorov with original qualities of a design engineer, who not only creatively, but also from an absolutely unexpected angle could look at the technical problem with which he was confronted, and solve it by an extremely original and at the same time rather simple method. L. Ya. Suvorov is the author of inventions, which found wide applications in the practice of scientific research and technology.

L. Ya. Suvorov had put a lot of effort and dedication into pedagogical activity. He was one of the founders and leaders of the chair of applied nuclear physics at the Moscow Engineering-Physics Institute where for almost fifteen years he

lectured to the senior level students.

As a communist L. Ya. Suvorov spent a lot of time and effort on social work and on education of young people.

The party and the government have highly rewarded the achievements of L. Ya. Suvorov. He is a recipient of the State Prize of the USSR, and has been awarded the Order of the Red Banner of Labor and many medals.

L. Ya. Suvorov was a person endlessly dedicated to science, who could not imagine his life outside it, who did not search in science any gain for himself. He was characterized by an absence of personal ambitions, had genuine culture, friendliness.

The fond memory of Leonid Yakovlevich Suvorov, a wonderful human being, an excellent engineer, and a talented scientist, will forever remain in the hearts of his many friends, students, colleagues, all those who were fortunate to know him.

Translated by Andrew Petelin