

OBITUARY

NIKOLAI IVANOVICH SYROMYATNIKOV



Soviet science has suffered a great loss. On April 10, 1987, an eminent Soviet scholar in the fields of thermophysics and thermal power generation, Hero of the Soviet Union, dedicated servant of science and technology in the RSFSR, Doctor of Technical Sciences, Professor Nikolai Ivanovich Syromyatnikov, passed away.

Syromyatnikov lived an intense life, filled with glory. Born in the village of Susanino, Molvitinskaya region, Yaroslav' oblast', his first employment was as a machinist in a textile factory in the city of Ivanovo in 1930. He graduated from the Ivanovo Energy Technical School in 1934, and in 1940 completed his studies at the Ural Industrial Institute (now called the S. M. Kirov Ural Order of the Red Banner of Labor Polytechnic Institute). In the same year he entered the Red Army.

During the Great Patriotic War Syromyatnikov participated in battles from Stalingrad to Prague, commanded a platoon and an artillery battery, and completed the war as a brigade staff officer. Three times wounded, on the front, in 1943 he joined the Communist Party. For bravery and heroism shown during the forced crossing of the Dnepr, on October 26, 1943, he was awarded the high honor of Hero of the Soviet Union. His efforts as a soldier were also recognized by five other decorations and many medals.

After demobilization Syromyatnikov turned to graduate studies, defending his Candidate's dissertation in 1949, and his Doctoral dissertation in 1956. In 1960 he became the head of the theoretical thermotechnology faculty which he had personally organized, and was to lead for 25 years. Over the course of the years he served as dean of the energy faculty and pro-rector for scientific studies.

Syromyatnikov was one of the originators of studies of the combustion process and heat-mass transport in various dispersed systems, including fluidized and vibrofluidized beds. In 1956 his book "Processes in a Boiling Layer" appeared, the first Soviet monograph to generalize problems of hydrodynamics, heat exchange, and practical application of the fluidized bed in industry.

Syromyatnikov's most significant scientific results involve experimental and theoretical studies of reactive motion of fuel particles, the structure, hydrodynamics, and heat exchange of boiling and vibroboiling layers, processes of interphase transport in equipment using a boiling layer with high frequency heating of the solid phase, methods or organization of

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thermal processes in vibrating disperse media, combustion of solid fuel in centrifugal force fields, high speed oxidizer-free heating of metals in boiling and vibroboiling layers, use of gas-dust flows as working substances and intermediate heat transport agents in industrial apparatus and energy generation equipment.

It is only proper to consider Syromyatnikov the founder of the Ural scientific school of heat and mass transport in dispersed media and industrial applications of the latter, the work of which is widely known not only in the USSR, but also abroad.

He published more than 300 scientific studies as well as four monographs, and was awarded 20 patents for his inventions. A powerful scholar himself, he dedicated his life to the preparation and training of high-quality scholars and teachers, having served as advisor to 31 students receiving the Candidate's degree and three Doctors of Science.

Syromyatnikov successfully combined his scientific and teaching activities with much public service. He was a delegate to the Twenty-Second Congress of the Communist Party of the Soviet Union, a deputy in the eighth session of the Supreme Soviet of the USSR, and was chosen several times as a deputy to the Sverdlovsk City Soviet. For more than 20 years he was the president of the Sverdlovsk region Society for Soviet-Czechoslovak Friendship, a member of the Central Soviet of War Veterans, and an honorary citizen of the city of Sverdlovsk.

His scientific service and labors were recognized by his being awarded the Order of Lenin, Medal of Honor, and Peoples' Friendship Medal.

He was a scholar and communist, an ardent patriot of his motherland, a man of great culture, and tremendous ability. Nikolai Ivanovich gave all his efforts and his brilliant talent to the service of his people and Soviet science. The bright memory of this communist, scholar, and most talented teacher will remain forever in our hearts.

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