

## MEN OF SOVIET SCIENCE

PETR KUZ'MICH KONAKOV

(ON THE OCCASION OF HIS SIXTIETH BIRTHDAY)

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On November 26, 1968, Petr Kuz'mich Konakov celebrated his 60th birthday and the 35th anniversary of his scientific and pedagogical activity. Doctor of Technical Sciences, Professor, and head of the Thermal Power department of the Moscow Institute of Railroad Transportation Engineers, Petr Kuz'mich Konakov began his working career as a locomotive machinist and, following his graduation from the MÉMIIIT, he then devoted all of his energies to the scientific-pedagogical field, first at the Moscow Electromechanical Institute of Railroad Transportation Engineers, and then at the MIIT. Konakov worked for a considerable period of time at the Power Engineering Institute of the USSR Academy of Sciences.

During his time at the Power Engineering Institute of the USSR Academy of Sciences, and in the years following, in conjunction with Academician M. V. Kirpichev, Konakov worked on the development of the fundamentals of the theory of similarity and concentrated on new applications of this theory to various branches of heat engineering.

The results of this work were published in the monograph, *Mathematical Fundamentals of the Theory of Similarity*, by Kirpichev and Konakov, and in addition they collaborated on a number of articles dealing with problems in the theory of similarity and dimensional analysis. Konakov subsequently published the monograph, *The Theory of Similarity and Its Application in Heat Engineering*. The concepts of affine similarity were introduced in these papers, similarity theorems were refined, a relationship was discovered here between the methods of the theory of similarity and the analysis of equations and dimensional analysis, and finally, a simpler and yet more exact method was proposed for the derivation of criterial equations.

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As an addition to the theory of similarity, he dealt with the operating cycles of piston machinery, which served as the impetus for the application of the theory of similarity to the study of pump compressors, internal combustion engines, and similar piston equipment.

One of the results from the application of the theory of similarity to the turbulent flow of an incompressible fluid was the familiar formula for the coefficient of hydraulic resistance.

The other line of theoretical research followed by Konakov involved the development of the scientific bases for the complex transport of energy (by radiation, convection, and conduction), which found practical application in the development of a method for the design of combustion chambers in steam boilers. Konakov and his students wrote and published the monograph, Heat Transfer in the Combustion Chambers of Steam Boilers, and a large number of scientific articles, all dealing with this problem.

Recently, Konakov has been busy with the problems of the general laws of mass and energy transfer in moving media, applying these to the various cases of complex heat transfer. He has published a number of articles and has prepared two monographs for publication, the latter dealing with the laws of mass and energy transport.

Konakov has published about 100 scientific works, including texts and monographs. Some of these have been published abroad.

Konakov is full of creative thoughts and energy. As outstanding lecturer, he evidences his zeal in speaking of the most complex problems in the theory of heat and mass transfer to the students and engineers.

Konakov's scientific ideas are developed by his numerous students. He has supervised the training of 40 Candidates and 6 Doctors of Science.

Konakov is active in the Znanie society, he is a member of the Methods Commission of the Ministry of Higher Education, and he is active on the editorial board of the International Journal "Heat and Mass Transfer."

On the occasion of this anniversary, his working comrades, his friends, and his students extend to Petr Kuz'mich Konakov their best wishes for his good health and successful realization of his extensive creative thought.