

BEKIR MIKHAILOVICH SMOL'SKII



On July 12, 1973 a prominent Soviet scholar, Corresponding Member of the Academy of Sciences of the Belorussian SSR, Doctor of Technical Science Bekir Mikhailovich Smol'skii, director of the Order of the Workers' Red Banner Thermoaerodynamics Laboratory of the Institute for Heat and Mass Transfer of the Academy of Sciences of the Belorussian SSR, observed his 60th birthday anniversary and the completion of 40 years of scientific pedagogic and industrial activity.

Smol'skii was born in 1913 in the city of Minsk. In 1935 he graduated from the Belorussian Polytechnic Institute, having studied heating gas supply and ventilation. From 1935 to 1939 he worked in assembly, design, and scientific organizations. His first studies in heat technology and industrial aerodynamics date from this period.

Before the Great War for the Fatherland B. M. Smol'skii was the senior scientist in the industrial aerodynamics laboratory of the Institute for Preservation of the Works of the All-Union Central Council of Trade Unions in Minsk.

During the war Smol'skii served in the Soviet Army. Commanding engineering units, he saw action on several fronts. Smol'skii was decorated with five awards and nine medals for personal courage and bravery.

After demobilization Smol'skii was a member of the faculty of heating gas supply and ventilation at the Belorussian Polytechnic Institute. In 1948 he defended his Candidate's Dissertation on the question of ventilation for wood-processing and match factories.

From 1957 until the present Smol'skii has been associated with the Institute for Heat and Mass Transfer of the Academy of Sciences of the Belorussian SSR. In 1958 he successfully defended his Doctoral Dissertation and in 1967 was selected a Corresponding Member of the Academy of Sciences of the Belorussian SSR.

From 1959 to 1971 Smol'skii was the director of the Heat and Mass Transfer Institute. Under his personal direction in a short period of time a most important scientific-technological resource of the USSR

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for theoretical and experimental studies in the field of thermophysics was created. He was responsible for the organization and conduct of four All-Union Conferences on heat and mass transfer in Minsk.

Under Smol'skii's direction, 26 students have successfully prepared and defended Candidate's Dissertations.

For his service in the development of higher education in the Belorussian SSR and his rich scientific-pedagogic activity, Smol'skii was awarded a Citation of the Supreme Soviet of the Belorussian SSR and an Honorary Citation of the Supreme Soviet of the Belorussian SSR.

Smol'skii's first works were related to industrial thermotechnology and industrial aerodynamics. He successfully solved production problems in peat, textile, wood-processing and match factories.

Smol'skii has published a series of studies dedicated to increasing the productivity of furnaces for firing of structural brick and ceramic products. His researches made possible the creation of highly productive tunnel ovens for adobe brick and the establishment of a year-round structural brick industry in Belorussia.

His researches into heat moisture processing of thermally sensitive materials, and in heat and matter transfer under vacuum conditions made possible the introduction of new devices and effective technologies for treatment of thermolabile materials. This research was culminated in the publication of the well known External Heat and Mass Transfer in Convective Drying Processes.

Smol'skii's experimental investigation of heat and mass transfer in the interaction of a porous capillary body and a gas flow successfully demonstrated the influence of a transverse current in a boundary layer on the temperature and velocity fields, as well as the significant effect of material structure on this process.

He conducted interesting experiments on the structure of turbulence in nonisothermal gas flows. Important relationships between the intensity and spectral characteristics of turbulence and the temperature and velocity of the moving gaseous medium were established.

He obtained important results in the field of heat and mass transfer during sublimation in a vacuum. He determined optimal conditions for desiccation of capillary materials by sublimation.

Moreover, one may consider his important studies of a boundary layer in the presence of heat and mass transfer in non-Newtonian liquids, and also in nonstable heat and mass transfer of bodies of various shapes in an established gas flow, in which the effect of heat and mass instability on the heat and mass transfer processes was shown. All these studies were of great significance in the development of new technologies.

Smol'skii is also active in scientific and political organizations. He is a member of the editorial board of two journals, the All-Union Journal of Engineering Physics and the Physics-Energy series of the Bulletin of the Academy of Sciences of the Belorussian SSR. He is the chairman of the Republican Soviet on the scientific problem of "Mass and heat transfer in technological processes," and was selected secretary and member of the Party Committee of the Institute and the Party Committee of the Academy of Sciences of the Belorussian SSR.

Smol'skii has earned the respect of all who have come in contact with him in his multifaceted activities. His colleagues and students value him not only as a scholar of broad experience and an excellent teacher, but also as a warm and sincere person.

The board of editors of the Journal of Engineering Physics warmly congratulates Bekir Mikhailovich Smol'skii on the occasion of his sixtieth birthday, and wishes him continued health and further attainments for the good of Soviet science.