

TO THE 110TH ANNIVERSARY OF ALEKSANDR IVANOVICH MAKAREVSKII

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April 16th, 2014 was the 110th anniversary of one of the founders of the TsAGI scientific school in the area of aircraft strength standards, the Fellow of Russian Academy of Sciences, Aleksandr Ivanovich Makarevskii. All of his fruitful scientific and engineering career was related to TsAGI, to the Development Design Offices and aircraft factories, to the progress of Russian aviation industry.

After graduation from Smolensk University in 1922, Aleksandr Makarevskii entered Moscow State Technical University. As a graduate student, he started working at TsAGI in the department of wind turbines and after graduation he pursued his career in this field. Back then he showed his special interest toward specific scientific research of different kinds of operation loads. In 1934 A. I. Makarevskii was assigned to the division of aircraft strength standards under the supervision of S. N. Shishkin. Such features as the effect of disturbed air on the aircraft, maneuvers with deflected ailerons and wing flap system, flutter and reverse of the control surfaces, hydroplane landing, etc. were first described in the aircraft “Strength standards” improved by the Shishkin team. An itemized classification of military and civilian aircraft depending on the weight and design mission was created.

A. I. Makarevskii and his colleagues made a significant contribution to the improvement of Russian military aviation during the Second World War. In 1943, as a member of strength specialists from TsAGI, he was awarded a State Prize for the complex of innovations included in the “Design Guide.”

During the after-war period of the development of turbo-jet aviation, Makarevskii stated the requirements to the strength and stiffness of the aircrafts at high flight speeds, which were included additionally into the “Design Guide.”

In 1950, A. I. Makarevskii was assigned as a director of TsAGI. This was not only because by that time Aleksandr Ivanovich had become a leading scientist in the field of aeromechanics with broad scientific interests. His remarkable personality had a great influence: high responsibility, perfect honesty, integrity, and with that kind and respectful attitude to people.

The decade that Aleksandr Ivanovich was at the head of the main institute of the aircraft industry was marked by creation of the whole generation of aviation technology. He

participated in the development of advanced aircraft and helicopters in cooperation with the development design offices named after Tupolev, Ilyushin, Myasischev, Antonov, Mikoyan, Yakovlev, Sukhoy, Mil, and Kamov. In 1957, together with the group of colleagues from the development design office named after Tupolev, he was awarded the Lenin Prize for great contribution to creation of the Tu-104 aircraft. The same year, A. I. Makarevskii was given the title of Hero of Socialist Labor.

Although A. I. Makarevskii paid main attention to uniting all the departments of the institute for the purpose of solution strategic problems of the industry development and to educating new generations of scientists in the strength chair of the Moscow Institute of Physics and Technology, he made time to perform his own research. His outstanding colleagues and he himself continued improving the “Design Guide.” As the first deputy of the TSAGI director (1960–1970) and as the scientific supervisor of the institute in strength problems (1970–1979), Aleksandr Ivanovich, until the very last days, was actively leading the institute, improving its corporate organization, and upgrading its experimental capability.

Due to his deep knowledge and experience, engineering intuition, and ability to choose development priorities, A. I. Makarevskii became a recognized head of the scientific school of TsAGI in the area of the aircraft strength.

In memory of all who knew Aleksandr Ivanovich, he was the true Russian intelligent, the man of high level of culture, broad humane interests, and the perceptive connoisseur of art, music, and literature.