

Professor Janush Bronislavovich Danilevich (1931 – 2011)

Prof. Janush B. Danilevich, full member of the Russian Academy of Sciences, distinguished Russian scientist and science manager, one of the most renowned specialists in the area of design and operation of high power generators, co-designer of the largest units in Russia, died on 16 May 2011.

Prof. Janush B. Danilevich was born in 1931 in Vilno in the Polish family. His father was an officer of the Polish Police in Vilno, and his mother, maiden name Korsak, was Polish as well. Professor emphasized his Polish origin on many occasions. In 1955 he graduated from the Leningrad Polytechnic with outstanding results. Later in 1991 he received Ph.D. at the Institute of Electromechanics of the Russian Academy of Sciences (RAS), and D.Sc. in 1974 while at the National Research Institute for Electromachinery Industry (ВНИИ Электромаш) in Leningrad. That was the scientific arm of the company 'Электросила', the No. 1 company of the electric power industry in Russia. While in this Institute for 30 years from 1961 till 1992 his career progressed, and finally he took the position of the Chief Engineer of this institution. At that time in Russia high power turbo- and hydrogenerators were successfully developed, and Professor's contribution to the progress on that field was extremely valuable. He designed a research cryogenic generator of 20 MW. It was the largest machine of this type in the world at that time.

After dissolving the Institute he was managing the Institute of Fundamental Research for Electric Power Engineering of the RAS in St. Petersburg from 1992 till 2005. In 2006 he became the head of the Laboratory of Electric Power Engineering in the Institute of Silicon Chemistry of the RAS. He died on duty during a meeting of the RAS in Moscow.

Janush B. Danilevich was awarded the degree of Professor in 1976. In 1987 he was elected the corresponding member of the RAS, and later, in 1997, elected to the full member of the RAS. Also, he was a member of the Academy of Electrical Engineering of the Russian Federation and the International Academy of Power Systems. He was engaged in many local and national organizations on electrical engineering and power systems. Prof. Janush B. Danilevich is an author or a co-author of 12 books of which some were translated and published in English, Chinese and Romanian. He published approximately 400 scientific papers and 60 patents.

Prof. Janush B. Danilevich was a world-class specialist in the area of power systems, and high power generators in particular. In his research he undertook and solved key problems for design and operation of high power generators, both turbo and hydro, but also for electrical machines in general. It should be mentioned the achievements in investigations of electromagnetic phenomena in damping cage of high power synchronous motors, additional losses in windings and magnetic circuits of electrical machines and complex analysis of phenomena in

the end zones of turbogenerators, which required an analysis of interactions of electromagnetic, thermal and stress fields in 3D space. Very important are also his results on abnormal operation modes of big generators and its impact onto the lifetime of their components. All results have been directly applied in new designs and largely contributed to increasing the reliability and output power of generators. Prof. Janush. B. Danilevich provided research on diagnostics and condition monitoring of high power generators and turbogenerator rotors in particular. As such, one extension of Professor's research was his work on developing Russian as well as international standards related to generators.

Moreover, while in the Institute of Fundamental Research for Power Systems he was involved in various activities related to renewable energy sources. He was developing concepts of small yet effective and distributed power stations using local sources of energy and the renewable energy in particular. It was then that new concepts of generators for such objects were developed.

His research activities were accompanied by his work as an academic lecturer. He was a full-time employee of the Leningrad Polytechnic and next of the University of Technology in St. Petersburg. He supervised 40 Ph.Ds., 11 D.Sc. ones, and was a reviewer of 35 theses for scientific titles. He lectured mainly on turbo- and hydrogenerators at universities in Russia and the People's Republic of China where he was an unquestioned authority.

Prof. Janush B. Danilevich was a well-known and respected scientist by Polish universities and research centers specialized in electrical machines. His close collaboration with the Cracow University of Technology started in 1993 on projects in the area of diagnostics and condition monitoring and renewable sources of electrical energy, and lecturing students of the Faculty of Electrical & Computer Engineering. In the year of 2002 he was awarded the degree of Doctor Honoris Causa by the Cracow University of Technology for his outstanding scientific achievements. In the same year Prof. Janush B. Danilevich became a member of the Editorial Board of Archives of Electrical Engineering, the journal of the Polish Academy of Sciences.

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