

PROMINENT SCIENTISTS

Vladimir Isaakovich Timoshpolskii

(On his 50th birthday)

On 14 July 2004, Professor Vladimir Isaakovich Timoshpolskii, Doctor of Technical Sciences, prominent researcher in the field of the thermophysics of metallurgical processes and technologies, Director of the A. V. Luikov Institute of Heat and Mass



Transfer of the National Academy of Sciences of Belarus, Chair of the "Metallurgical Technologies" at the Belarusian National Technical University (BNTU), Editor-in-Chief of the Journal of Engineering Physics, and State Prize Winner of the Republic of Belarus will celebrate his 50th birthday.

In 1976, V. I. Timoshpolskii graduated with top honors from the Dneprodzerzhinsk Industrial Institute in the Ukraine as a specialist in industrial power engineering. In 1991, has received the degree of Doctor of Technical Sciences and in 1992 he has become the Professor in the field of the metallurgy of ferrous metals. In 2003, V. I. Timoshpolskii was appointed the Director of the A. V. Luikov Institute of Heat and Mass Transfer of the National Academy of Sciences of Belarus,

while simultaneously holding the Chair of "Metallurgical Technologies" at BNTU.

V. I. Timoshpolskii is a famous scholar in the field of industrial thermal technologies, and of high-temperature processes and operations in the metallurgical industry. He was the first to formulate and solve mathematically, in nonlinear terms, the applied problems of the theory of crystallization, melting, solidifying, heating, and thermal treatment of metals and to establish many other correlating factors that increase in the efficiency of metallurgical processes in melting, continuous casting, heating, and rolling.

From the time of its startup in 1984, the unique metallurgical plant — Belarusian Metallurgical Works (BMW) — and up to the present time, V. I. Timoshpolskii has guided a number of strategically important scientific research projects aimed at the introduction of new equipment, intensification and refinement of the thermal and

technological processes of melting, after-treatment, continuous casting and heating of steel, increase in the quality of production and output of competitive products.

V. I. Timoshpolskii participated in working out the concept of the development of the metallurgy in the Republic of Belarus by reforming it and organizing, at BMW, the production of domestic, rather than imported, steels of new quality and of a whole range of ferrous metals. Studies dealing with the optimization of the processes and units operating at BMW include: new designs of continuous casting machines for steel have been developed, the operating regimes of heating facilities and thermal gas-flame installations have been updated and optimized, thus making it possible to considerably reduce fuel consumption, increase the efficiency of high-temperature plants, and intensify the accompanying processes. V. I. Timoshpolskii obtained more than 30 inventor's certificates of the USSR and patents of the Russian Federation, Ukraine, and of the Republic of Belarus, which are of great significance for the development of the metallurgical complex of the Republic as they ensure a high efficiency of thermal technologies and promote the strengthening of the economic security of the Republic.

The results of V. I. Timoshpolskii's practical developments are being employed at a number of the largest metallurgical enterprises of the CIS countries (Ukraine: Alchevsk Integrated Iron-and-Steel Works, Dnepr Integrated Iron-and-Steel Works, Krivorozhstal Works; Russia: Novosibirsk Plant of Specialized Steels, etc.). The economic benefit from the introduction of the improvements made under the leadership of V. I. Timoshpolskii and by him personally amounts to more than 10 million U.S. dollars.

V. I. Timoshpolskii is the author of about 400 scientific works, including 10 monographs, two of which were published abroad, three handbooks and nine textbooks, and teaching aids. The most popular of these are: Applied Problems of Metallurgical Thermophysics (Minsk, Navuka i Tekhnika, 1992), Thermotechnology of Metallurgical Mini-Works (Minsk, Navuka i Tekhnika, 1992), Thermotechnological Foundations of Metallurgical Processes and Units of Highest Technical Level (Minsk, Navuka i Tekhnika, 1995); Heating of Steel (Minsk, Vysheishaya Shkola, 1990); Annular Furnaces. Theory and Calculation (Moscow: Metallurgiya, Minsk: Vysheishaya Shkola, 1993); Steel Ingot (in 3 volumes, (Minsk: Belorusskaya Nauka, 2000–2001); text-books published by the Ministry of Education of the Republic of Belarus: Industrial Thermotechnologies (in 5 Volumes) (Minsk: Vysheishaya Shkola, 1995–2000); Heat Transfer and Thermal Regimes in Industrial Furnaces (Manual) (Minsk: Vysheishaya Shkola, 1992).

V. I. Timoshpolskii has been the advisor for 2 doctoral and 18 candidate theses. Among his students are eight prize winners of the Lenin Young Communist League of the BSSR and three State Prize Winners of the Republic of Belarus.

V. I. Timoshpolskii has been the winner of many national and international awards. In 1988 he received the Prize of the Lenin Young Communist League of the BSSR for his work "System Analysis of High-Temperature Metallurgical Processes and Its Application to Development of the First Stage of the Belarusian Metallurgical

Works" and in 1998 he received the State Prize of the Republic of Belarus for a series of research works "Theory of High-Temperature Power and Resource-Saving Thermotechnological Processes in Mechanical Engineering and Metallurgy," in 2001, the prize of the National Academy of Sciences of Belarus for the best research work (his monograph "Belarusian Metallurgical Works — Base Enterprise for Latest Metallurgical Technologies"). In 2001, in recognition of his great personal services rendered to the development of metallurgical industry, V. I. Timoshpolskii was decorated with the Order of Honor for the creation and introduction of new high-efficiency technologies at the industrial enterprises of the Republic, in 2004 he was awarded with a Diploma of the Ministry of Industry of the Republic of Belarus.

He has contributed much to the development of the system of higher education and training of young specialists and highly qualified scientists, and for this in 1999 he was awarded with a Diploma of the Ministry of Education of the Republic of Belarus.

At the present time, V. I. Timoshpolskii is the Chairman of Specialized Doctoral Council at BNTU, which includes the entire range of basic metallurgical specialities, and member of two specialized dissertation defense boards, Chairman of a scientific seminar in the field of high-temperature metallurgical processes, member of coordination councils in governmental purpose-oriented programs. Being Editor-in-Chief of the Journal of Engineering Physics and of the Republican Interagency Collection of Scientific Works "Metallurgy" of the Ministry of Education of the Republic of Belarus, Deputy Editor-in-Chief of the Journal "Transactions of Higher Educational Establishments and Energy Associations of the CIS Countries. Power Engineering," member of the editorial boards of the journals "Vestsi NAN Belarusi," "Lit'e i Metallurgiya" (Casting and Metallurgy), international periodical volume "Metallurgical Thermal Engineering" of the National Metallurgical Academy of Ukraine, V. I. Timoshpolskii carries out a voluminous amount of scientific-organizational work.

The scientific community of our country, colleagues, friends, and disciples wholeheartedly congratulate Vladimir Isaakovich Timoshpolskii on the occasion of his 50th birthday, wish him new creative achievements, good health, and all the best.