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LENIN PRIZES: THE HIGHEST PRIZES TO THE BEST WORKS

By V. Yelyutin

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FOREWORD

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LENIN PRIZES: THE HIGHEST PRIZES TO THE BEST WORKS

Following is the translation of an article by V. Yelyutin in Izvestiya, Moscow, 22 April 1961 page 37

The peoples of the Soviet Union are observing the 91st anniversary since the birth of their teacher and leader as well as the founder of the Communist Party and of our country, V.I. Lenin, during these days of the great new triumphs of our science and of man's intelligence. The triumphant flight of "Vostok", the first cosmic ship in the world, with cosmonaut Yu. A. Gagarin on board -- was not only a victory of the physical and technical sciences, of mechanics and aerodynamics, the combined effect of all the natural sciences, and of a brilliant technical-engineering perfection and artistry, but also a victory of Leninism.

The great Lenin said that science has already discovered many phenomena in nature, and in the world that surrounds us, that it will reveal further, hitherto unheard of phenomena and processes for the good of the toiling man and mankind. V.I. Lenin's predictions are coming true with an amazing rapidity.

The decisions of the Committee for Lenin Prizes in the fields of science and technology with the Council of Ministers USSR on the award of Lenin Prizes for 1961 to a large group of scientists for their outstanding work are being published today. Remarkable successes have been attained in the development of our science and technology.

Among the works that are distinguished this year with Lenin prizes, is the work of Academician A.F. Ioffe which is of outstanding significance. His work consisted of theoretical and experimental investigation of the properties of semi-conductors and the development of a theory of thermoelectric generators. Academician A.F. Ioffe established a new trend in physics -- the thermoelectricity of semi-conductors. It now has received widespread recognition and a multilateral development. The Soviet school of physicists occupies the most advanced position in the world in this field.

As a result of extensive experimental investigations of the physical qualities of semi-conductors, new important features were revealed, matter was created, which has high thermoelectric properties.

It is sufficient to state that all of the thermoelectric cooling equipment produced in the USSR and abroad, is based on the application of this matter. At the present time there are some 50 different varieties of equipment of this type.

The work conducted by Academician Ioffe and his collaborators in the field of the physics of thermoelectricity and thermoelectric cells served as a foundation for the formation of a completely new sphere of technology which is of great importance to the national economy.

M.M. Postnikov's cycle of works in the field of homotopic theory of continuous mapping was also awarded the Lenin Prize. This work is a substantial contribution to mathematics. It brought the author international recognition and placed him among the outstanding specialists in that field.

Academician N.M. Strakhov's work, "Basis of Lithology" is of outstanding scientific significance. This volume is the outcome of many years of work by the scientist in the revelation of the processes taking place in sedimentary rock formation. The author established basic types of present day accumulations of deposits and rock formations, peculiar to the various climatic zones, and followed their development through the history of the earth. The work sheds light on the formation processes of various deposits in the oceans and the essence of the transformation of sediments into rock is also illustrated. The conditions surrounding the formation of aluminum, iron and manganese ores as well as bituminous shale, phosphorates, carbonaceous and silicon rock are discussed in detail. The regularities involved in the distribution of these minerals are pointed out. The conclusions arrived at by N.M. Strakhov, provide material for the many thousands of geologists.

The work conducted by G.D. Il'yin, K.I. Kiyko, M.R. Pustil'nikova, S.T. Korotkova, A.V. Ul'yanova, and K.F. Kozhemyakina in the discovery and surveys of large natural gas deposits in the Krasnodarskiy Krai are of great national economic significance. These deposits are among the most outstanding in the world and are a great new basis for a reconstruction of the country's fuel balance.

The discovery and exploitation of large natural gas deposits in the Krasnodarskiy Krai is a valuable contribution to the development of the country's gas and chemical industry. The authors of this work are quite justifiably rewarded with the Lenin Prize.

A.V. Ivanov, a Leningrad zoologist, conducted one of the most original investigations in the field of zoology that were accomplished in the past 25 years. His work is entitled "The Fauna of the USSR. Pogonophora", and deserves the highest award; it is the result of many years of research, which led to discoveries of world significance in the field of theoretical zoology. A.V. Ivanov discovered a new fauna, pogonophora, he described 50 of which inhabit the ocean depths, by establishing a basis for classifying them into a new type of animal kingdom. This discovery is of the same significance to zoology as the discovery of a new planet would be to astronomy.

The Lenin Prize is also awarded to V.P. Volgin for the creation and development of an important branch of Marxist-Leninist historical science -- the history of pre-Marxist socialist teachings, the results of which are contained in a book entitled "The Development of Social Thought in France in the 18th Century", in the series entitled "The Predecessors of Scientific Socialism".

By thoroughly revealing the social-economic conditions under which various socialist and communist ideas occurred and developed,

V.P. Volgin pointed out the course in the development of socialist ideas from hazy dreams to the theory of scientific communism, which is found in the works by the founders of Marxism-Leninism.

Soviet medicine achieved considerable success during recent years. The work accomplished by professors N.M. Amosov, N.V. Antelav, L.K. Bogush, I.S. Kolesnikov, B.E. Linberg, V.I. Struchkov and F.G. Uglov in the development of new methods of diagnosis and surgical intervention in lungs and in the implementation of these methods into public health practice was rewarded with the Prize.

These scientists made a substantial contribution to the struggle against such serious diseases as pulmonary tuberculosis. They helped to eliminate surgical backwardness in treating pulmonary tuberculosis in our country, that is associated with the war years, and promoted this aspect of our medical science to first place position in the world medicine.

A work entitled "Hepatocerebral Distrophy", by N.V. Konovalov, which was awarded the Lenin Prize, is of an extensive theoretical and practical interest to medicine. His research is conducive to an understanding of the essence of such complex problems as the relationship between the liver and the brain, problems of vascular hypotonia, permeability and so on.

The extensive biochemical research conducted by N.V. Konovalov furnished him a basis for proposing a new interpretation for the causes of hepatocerebral distrophy. The scientist developed a method for the treatment of this disease, which was formerly considered hopeless, by means of a domestically produced thiol [?] preparations.

In the field of technology the Lenin Prize was awarded to a large group: A.D. Kuz'min, Ye. A. Zhukovich-Stosha, N.I. Krylov, B.F. Kulik, M.I. Anfimov, A.V. Istomin, N.S. Tishchenko and N.A. Ryzhenko for the creation of a typical continuous billet mill 850/700/500, and also for raising the productivity of the existing billet mills. In its technical specifications this mill surpasses the existing ones as well as the new ones that are being built abroad.

The work of the continuous billet mill, installed at the Anshanskiy metallurgical combine, in Bkhilai and at Novaya Gutya (Poland) indicated its high potentialities.

A Lenin Prize was awarded to G.I. Neklyudov, B.S. Andreyev, Ye. F. Chuchin, V.I. Shchadilov, N.N. Volkov and V.M. Kudryabtsev for the implementation of automatic equipment in the manufacture of clocks.

The high level of automation and mechanization permitted a sharp increase in the volume of production, an attainment of high economic indices and a material decrease in the cost of clock production.

The development of automatic regulators for increased output of powerful hydraulic generators and synchronous compensators, accomplished by G.R. Gertsenberg, is of considerable importance to the national economy. These regulators are successfully functioning

at the Volzhskaya and Stalingradskaya hydroelectric power plants. They raised considerably the stability of the hydroelectric power plants and increased the power transmitted through power lines into the power system by 8 to 16 per cent.

The work accomplished by E.N. Alikhanov and his colleagues in the complex task of assimilating off-shore oil deposits in the Azerbaijan SSR, was awarded the Lenin Prize.

The latest achievements of science and technology were used in the construction and exploitation of off-shore oil fields. This permitted the extraction of high grade oil off-shore, with a cost of production that was on the average 30% below that for inland Azerbaijan oil fields.

Portable mechanized stope supports were extensively used for the first time in the world in 1959 in the shafts of the Tul'skiy Sovnarkhoz. At the present time it is in widespread use in the shafts of the Kuznetskiy, Irkutskiy, Primorskiy, Chitinskiy and Dnepropetrovskiy coal basins. The country receives extensive benefits as a result of the implementation of the new system of supports. The Prize was awarded to A. Ye Il'yin, L.A. Ziglin and others.

The following group was also awarded the high prize: I.M. Malkin, V.N. Bubliss and others for their work in the development of a system of block caving at the mines of the Leninogorskiy polimetal combine. The following group was awarded the Prize for the implementation into production of new technological methods for achieving tension in the wire mesh for prestressed reinforced concrete structures with the aid of electric heat for use in industrial and public building. A Lenin Prize was awarded to G.G. Agabal'yants, S.A. Brusilovskiy and A.A. Merzhanian for the development and introduction into production of a biochemical method of producing champagne in a constant flow along with the automation of the technological process.

The work accomplished by the Soviet scientists and engineers who were rewarded with the Lenin Prizes in 1961 forms a substantial contribution to the development of our own world science and technology. The Soviet people are proud of their scientists, engineers and other specialists, who bear the banner of their great teacher and leader, V. I. Lenin, with great honor and constantly work for the further scientific and technical progress of our Homeland.