

ALEKSANDR FEDOROVICH LUNEV (1909-1967)

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On April 25, 1967, after a long and severe illness the death occurred of a great specialist in the corrosion and protection of underground structures and communications, Master of Chemical Sciences Aleksandr Fedorovich Lunev.

A. F. Lunev was born on July 27, 1909 in the village of Spasskii in the Yur'ev-Pol'skii region of the Ivanovsk province. His working life began in 1928 in the "Krasnyi Perekop" textile combine in Yaroslav as an operative of the factory. In 1933 he finished at the Chemical Faculty of the M. V. Lomonosov Moscow State University, specializing in physical chemistry (electrochemistry). In 1934 he entered for a graduate course at Moscow State University, but for family reasons was compelled to leave without finishing this and move to Siberia, where from 1936 to 1939 he worked as head of the Central Industrial Laboratory of one of the chemical factories of the Irkutsk region. In 1939 he resumed his studies at Moscow University.

In 1941 Lunev again interrupted his studies and went willingly to the Front. From 1941 to 1946 he served in the Soviet Army.

From 1946 to 1959 Aleksandr Fedorovich worked in the Institute of Physical Chemistry of the Academy of Sciences of the USSR, first as junior and then as senior scientific fellow. In 1948 he defended a dissertation for the degree of Master of Chemical Sciences. From 1959 to 1961 he directed the Corrosion Section of the All-Union Scientific-Research Institute of Pipeline Construction, and from 1961 to 1967 worked as head of the Corrosion and Metal-Protection Laboratory of the Kiev Branch of the Central Scientific-Research Institute of Telecommunications. The first papers of A. F. Lunev were devoted to a study of the adsorption properties of coal and the rhodium electrode. His studies on the adsorption properties of the rhodium electrode, carried out under the direction of Academician A. N. Frumkin, formed the basis of his Master's Dissertation.

Subsequently Lunev's interests were directed toward the corrosion and protection of metals. This was largely fostered by Corresponding Member of the Academy of Sciences of the USSR G. V. Akimov,

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under whose direction the work in this field started. The great creative and organizational capacities of A. F. Lunev appeared at this point. He was one of the organizers of the Zvenigorod Corrosion Station of the Academy of Sciences of the USSR, which he directed for a long period. Lunev showed special interest in problems regarding the underground corrosion of metals. In view of the large-scale construction of main pipelines and underground services and communications in the Soviet Union, the problem of protecting metals from soil corrosion took on a great significance in the popular economy. It was to this problem that for the rest of his life Lunev devoted his creative activity, making a vast contribution to the theory and practice of protector and cathodic-protection systems for main pipelines. He always verified his laboratory investigations under full-scale conditions on the "Saratov-Moscow" gas main. He carried out a great deal of work in seeking insulating coatings for pipelines, developing methods of testing the continuity of the coatings and corrosion damage to pipelines, and determining the aggressive properties of soils. In his papers he was one of the first to study the influence of reduction-oxidation (redox) processes and carbon dioxide on the corrosion of metals in soils. Recently he devoted great attention to protecting telecommunication cables from corrosion in the soil. He was the first to demonstrate the possibility and establish the parameters of the electrochemical protection of aluminum cable sheaths in underground conditions. On this question he presented a contribution to the Third International Congress on Metal Corrosion in May 1966 in Moscow.

At the same time Lunev carried out his considerable scientific-society activity. For a long time he headed the Section on Underground Corrosion of the Scientific Council on Metal-Protection Problems in the State Committee of the Council of Ministers of the USSR on Science and Technology.

Aleksandr Fedorovich Lunev published more than thirty scientific papers, providing a fundamental contribution to the science of protecting metals from underground corrosion. Many of his papers constituted a practical guide to the protection of metals from corrosion, and are widely used in the construction and use of underground structures and communications. Despite his undermining illness, Aleksandr Fedorovich continued working until the end of his life.

Aleksandr Fedorovich Lunev was a fine, sympathetic comrade, demanding upon himself and the colleagues working with him. More recently he devoted great attention to the training of high-qualification specialists.

The bright image of this remarkable scientist and man, fervent patriot of our Homeland, will always be cherished in our hearts.