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THE DOMESTIC FOUNDERS OF THE VACUUM ELECTRONICS

Summary

The article reveals the results of prosopographic research of the history of the domestic vacuum electronics. The theoretical and technological basis of electronics has been formed over a long period – from the random observations of the effects of static electricity to the use of quantum effects in the computers. The main purpose of

the study is to reveal the contribution of the physicists, whose life and scientific activities in the development of vacuum electronics were associated with Ukraine.

The prerequisites for the development of the vacuum electronics were spark and electric arc stations, dynamo machines of V.P. Volohdin. The article describes the initial period of development of the vacuum electronics – a coherer of O.S. Popov, diode of D. Fleming, cathode-ray relay of R. von Lieben, triode of Lee de Forrest and W. Eccles. In fact, the triode became the first amplifying lamp and led to the birth of a new branch of science and technology – Vacuum Electronics. The advent of the first radio lamps – the electrovacuum diodes and triodes – led to significant progress in the development of radio reception techniques. The scientists from different countries have worked on this problem and a significant contribution to its solution has been made by the domestic researchers.

The article presents the prosopographic materials about the three founders of the Vacuum Electronics, whose life and scientific activity were connected with Ukraine – Leonid Isaakovich Mandelstam, Mykola Dmytrovych Papaleksi and Igor Yevhenovych Tamm. L.I. Mandelstam created a nonlinear theory of oscillations, developed radio interference methods for determining the speed of propagation of the radio waves and measuring distances, and invented the new methods for exaltation of electric oscillations in the form of parametric generators. M.D. Papaleski was engaged in theoretical and practical development of the problems of radio direction finding, electronic amplifier and generator lamps, organized their production, researched and developed three new lamp circuits for receiving and transmitting signals. I.Ye. Tamm conducted a research in the field of anisotropic media. The scientific research of these scientists and their teams has laid a solid foundation for the production of the vacuum electronic devices and their use by the consumers.

Key words: *prosopography, domestic founders, vacuum electronics, diode, triode, amplifying lamps, generator lamps.*