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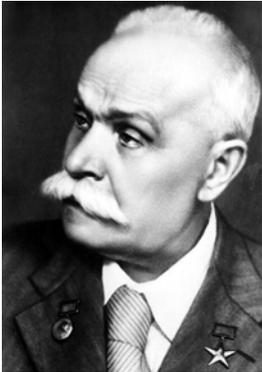
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75 YEARS OF THE E.O. PATON ELECTRIC WELDING INSTITUTE OF THE NAS OF UKRAINE



Prof. Evgeny O. Paton

Rapid development of economy of the Russian Empire at the end of the 19th century required highly qualified engineering staff. The Kiev Polytechnic Institute (KPI) was founded in Kiev in 1898 to educate such specialists. The first rector of KPI Prof. V.L. Kirpichov invited young scientists to work as teachers at the Institute. Among them was Evgeny Oskarovich Paton, who at that time already was a known scientist in the field

of bridge construction. During the years of his work in Kiev, Evgeny Paton designed and constructed many unique bridges and other structures, and completed a number of fundamental studies on bridge construction. In 1904 he became the Head of the Bridge Chair at KPI.

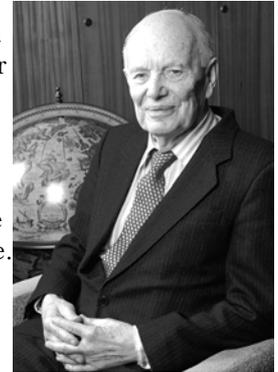
In 1929, Evgeny Paton was elected a full member (academician) of the All-Ukrainian Academy of Sciences, which led to accelerated development of structural mechanics, metallurgy, materials science and electric welding in Ukraine. New academic institutes were founded, thus launching active R&D activities in the field of technical sciences.

E.O. Paton initiated setting up of the welding laboratory at the Chair of Engineering Structures for comprehensive investigations of welded structures and metallurgical processes, welding metals science and physics of the arc discharge with subsequent development of welding equipment, consumables and technologies. To address all these challenges, the Electric

Welding Institute was founded in 1934, and E.O. Paton was appointed the director of the Institute. Mechanisation and automation of welding were considered to be among the most important tasks of the Institute from the very first years of its existence.

In 1939–1940, the Institute headed by E.O. Paton developed the method for automatic submerged-arc welding and unique technology for automatic welding of armoured bodies of tanks, air bombs and artillery systems. During the Great Patriotic War the staff of the Institute continued the research activity under factory conditions. In 1942, V.I. Dyatlov discovered the phenomenon of self-regulation of electrode melting in submerged-arc welding. Investigations into this phenomenon by B.E. Paton, together with A.M. Makara, P.I. Sevbo and M.N. Sidorenko, were used to develop portable, simple and reliable automatic welding devices.

Automation of the welding process made it possible to increase within the short time period the output of tanks and substantially improve the quality of the welded joints. Tank T-34 manufactured by Uralvagon zavod in Nizhny Tagil and other factories of the country was recognised by experts to be the best medium-weight tank of the Second World War. Lives of many thousands of tank crews were saved thanks to its reliable welded armour. In 1943, E.O. Paton was awarded the title of the Hero of Socialist Labour of the USSR for his contribution to increase in defence



Prof. Boris E. Paton



The first building of the E.O. Paton Electric Welding Institute