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## Professor Jan Pilarczyk

Close longstanding friendly relationships bind the collectives of E.O. Paton Electric Welding Institute of the NAS of Ukraine and Polish Institute of Welding in Gliwice. In many respects it is related with multiple contacts of the specialists of both Institutes as well as personal meetings of Prof. B.E. Paton and Prof. J. Pilarczyk being the head of the Polish Institute for long years. Below is information about many-sided activity of Jan Pilarczyk.



Prof. Jan Pilarczyk

All professional activity of J. Pilarczyk is inseparably linked with the Institute of Welding in Gliwice, which plays fundamental role in Polish industry due to thorough support of many enterprises in the field of application of innovative welding processes and technologies.

Prof. Jan Pilarczyk started his professional life in the Institute on March 1, 1963. His working experience makes 52 years, 25 of which he was a Director of the Institute. After retirement, Professor became a Counselor of the Director on Development of Researches. Professional activity of Prof. Jan Pilarczyk can not be separated from the Institute activity.

He acceded the position of the Director of Institute of Welding in Gliwice in 1990, when the Institute started functioning under conditions of free and competitive market. A decree about the Institutes was published in Poland in this time. This decree provided institutes with higher level of independence, but, at the same time, determined complete self-financing and responsibility for taken decisions. Working under new conditions required quick reorganization, which predetermined radical reformation of the Institute and intensification of search for new directions of activity that would bring income. Search of these directions under conditions of free market was not easy. Production of welded products and structures requires proposals considering current achievements, high professionalism of the staff, rapid task solving, responsible approach and fulfillment of service terms as well as huge flexibility during negotiations with potential customers.

Longstanding productive work of the Institute Director, Prof. Jan Pilarczyk resulted in its step-by-step transformation into a leading central research institute of Polish welding engineering and it as a single organization of such a type plays a role of Polish Welding Center. The result of successfully established European Research Space was granting the Institute with a status of the Polish Welding Center of Excellence approved by a diploma from the Minister of Science. Granting of such a status was also possible due to realization of «Polish Welding Center of Excellence» Project in scope of the 5<sup>th</sup> Framework Program of European Union.

The Institute having current facilities and apparatuses is at the very good level and is not inferior to that available in similar institutes in the world. At present time the Institute can propose to the potential consumers virtually everything in the



During signing the memorandum on cooperation between PWI and Polish Institute of Welding (on the left — Prof. B.E. Paton, on the right — Prof. Jan Pilarczyk)

field of welding that is necessary for industry, and the needs are very large, since several thousand of enterprises dealing with joining of metals with the help of welding and related technologies work in Poland.

The problems of welding engineering are not concentrated within one country. Poland also required the connections with welding community of foreign countries. In this situation Prof. Jan Pilarczyk played a significant role. He always had multiple tight personal contacts with the specialists in welding all over the world. After the European Union was established in 1992, Professor brought in the Institute of Welding as a first of welding institutes of Eastern Europe countries in European Welding Federation (EWF). Poland was taken into the European Union only in 2004, whereas the Institute of Welding has had the status of Authorized National Body (ANB) since 1996, and since 1997 a status of a member of the European Welding Federation. A year later the Institute got an approval of its status in the International Institute of Welding (IIW).

Prof. Jan Pilarczyk was a representative of the Institute of Welding in both organizations, namely EWF and IIW. He was also the President of the European Welding Federation and Vice-President of the International Institute of Welding, initiator of implementation in Poland of international harmonized system for training, qualification and certification of welding staff and certification of enterprises dealing with welding engineering.

Separate and very important part of professional activity of Prof. Jan Pilarczyk was establishment of the contacts with E.O. Paton Electric Welding Institute (Kyiv). For the beginning it was participation in the work of group XIX «Weldability of materials», which was one of the 49 groups, functioning in the organization joining welding institutes of the former Council for Mutual Economical Assistance (CMEA). The meetings were held in Kyiv, Sophia, Bratislava, Halle, Berlin, Timisoara and Gliwice from 1957 till 1989. After extinction of CMEA, it was decided to establish new, voluntary organization of countries of Central-Eastern Europe titled the International Association «Welding» (IAW). It took place at the turn of 1990–1991, and Prof. Jan Pilarczyk, at that time already the Director of the Institute of Welding in Gliwice, participated in organizing the activities requiring multiple business trips to Kyiv. Cooperation in scope of the IIW is still in force.

Prof. Jan Pilarczyk also participated in the conferences organized in Kyiv. The conferences related with anniversaries of the Director of E.O. Paton Electric Welding Institute in Kyiv, Prof. B.E. Paton, namely 80<sup>th</sup> (in 1998) and 90<sup>th</sup> (in 2008) anniversaries were of particular importance. In turn, Prof. B.E. Paton in 1995 participated in the celebration of 50 years of formation of the Institute of Welding in Gliwice.

Below is a piece of the interview, given by Prof. B.E. Paton to Wroclaw Newspaper Gazeta Poludniowa No. 21/2003 dated 3.12.2003 (re-printed in Krynica Journal published in Ukraine, No. 95–96, 2017, p. 125):

«Particularly close contacts we have with the scientists and specialists from the Institute of Welding in Gliwice, headed by Prof. Jan Pilarczyk — well known scientist in the field of theory of welding processes, especially weldability of materials. Recently, he has become the President of the European Welding Federation. Together with this Institute we have carried out a lot of interesting researches and developments. They are related to the fields such as equipment and consumables for welding and surfacing, systems for automation of technological processes, analysis of weldability of metals using mathematical methods, investigation of strength of welded structures and their workability, diagnostics of their quality. In 1990, the Institute of Welding together with our Institute has founded the International Association «Welding» and makes significant input in its activity in both countries. Scientists

of Kyiv and Gliwice Institutes actively cooperate during organization of international conferences, seminars, classes, publication of information materials, organization of exhibitions demonstrating achievements of scientists and specialist-welders on problems of welding and related technologies. Polish colleagues write for our journals «Avtomaticheskaya Svarka» («The Paton Welding Journal»), «Svarshchik» and PWI scientists publish their papers in Polish Journals «Biuletyn Instytutu Spawalnictwa» and «Przegląd Spawalnictwa».

Prof. Jan Pilarczyk always by him actively participated in performance of investigations. Many research works have been carried out and headed, and their results have been published in welding journals, booklets and books. He gave lectures in Polytechnic Institute of Silesia and Poznan Polytechnic Institute. He was a head of numerous Ph.D. theses, often acted as an opponent for Ph. D. and Dr. theses as well as participated in evaluation of candidates for a professor position.

He was and still is a member of many committees and organizations including member of Committee of Machine building of the Polish Academy of Sciences and chairman of a section of technologies of this Committee.

In a period from 1989 till 2005 he was a chief editor of Przegląd Spawalnictwa Journal. Currently he is a chairman of the Program Committee of this Journal, chief editor of Biuletyn Instytutu Spawalnictwa Journal, member of editorial board of «Avtomaticheskaya Svarka» («The Paton Welding Journal»).

Prof. Jan Pilarczyk for his longstanding and fruitful work was favored with many state orders, medals and awards. Among the most important are the Knight's Cross of Order of Polonia Restituta and Gold Medal for Long-term Service. Merits of Prof. Jan Pilarczyk were noted by the Ministry of National Economy of Poland — «Honorary award for services on development of national economy of Poland».

The most significant foreign awards are Diploma MERITE DE L'INVENTION (Brussels-1998), Prof. Jozefa Cabelki Medal (Slovakia-2000), AWS — Atlanta 2006 «INTERNATIONAL MERITORIOUS CERTIFICATE AWARD» for services for international welding society (in recognition of their wise counsel, devotion, time and generous contributions in promoting cordial global relations with industry and with other organizations and for their service to the International Welding Community) as well as IIW — the WALTER EDSTROM Medal (2015).

From Editorial board of «The Paton Welding Journal»



## Interview with A.I. Panfilov — Director of Welding Department of «Steel Work» LLC



A.I. Panfilov on the joined booth of Ukrainian companies during «Welding and Cutting» Exhibition, September 25–29, 2017. (Dusseldorf, Germany)

«Steel Work» LLC (Krivoy Rog) produces wear-resistant bimetallic plates and products from them as well as performs reconstruction, hardening and repair of different equipment subjected to abrasive wear.

«Steel Work» Company uses a Quality Management System which is certified by the requirements of International Standard ISO 9001 and Occupational Health and Safety Management System by the requirements of International Standard OHSAS 18001.

The Company supplies products to the preparation, mining and metallurgical enterprises of Ukraine and other countries.

*Andrey Ivanovich, what are the origins of your company?*

Initially, we created «Best Line» LLC, which dealt with repair of mining equipment with the help of welding and hardfacing as well as increase of wear resistance of components of grinding mills and blowing equipment. An idea of manufacture of bimetal and products from it has appeared in process of work. Such specialists as Panfilov I.I., Peleshko V.N., Panfilov S.A. and other people committed to this were the originators of «Steel Work» LLC.

*In recent years, «Steel Work» Company demonstrates successful development and increases output of products, majority of which are bimetallic plates, produced by arc hardfacing. What can explain intensive development of your enterprise under conditions of reduction of Ukrainian market?*

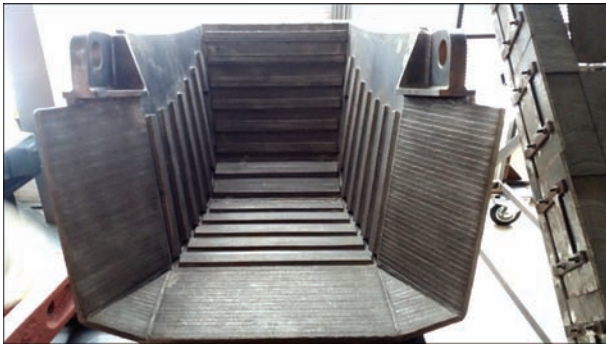
The team, successful management and wish to hold leading world market positions play an enormous role in the success.

*What are the structures for which technologies of «Steel Work» LLC have been recently realized?*

The most indicative were gas cleaning of blast furnace, Tarasov calibrator, drawdown tubes of blast furnace, hopper, chute of bell-less top, inserted cylinder, 13.5 m skip, rotors HP-7500 and HP-9000, shuttle conveyors and many other components.

The enterprise continuously carries out reconstruction of manufacturing capacities. What do you do for output of competitive products?





We use quality materials, improve production technologies, including automation and robotization of the production processes. Also, we are in process of implementation of the Quality Management System, in particular, 5S and 6SIGMA.

*How does the enterprise solve staff problems, including related with outflow of professionals to Europe?*

Due to successful management. We try to increase salary, improve labor conditions. Use other stimulus.

*The enterprise has produced more than 10000 bimetallic plates SWIP<sup>®</sup>. What have changed in the plates*

*quality from the start of their production till now?*

Wear-resistance of products and structures has been increased due to application of quality materials and more modern technologies. Also, we have increased a range of manufactured products.

*How can you explain the fact that «Steel Work» has virtually no competitors in Ukraine?*

Initially, such a production requires huge investments, payback time of which is more than 15 years. Not everybody is ready to such a risk.

*Do you have any benefits from cooperation with the research institutes, including E.O. Paton Electric Welding Institute of the NAS of Ukraine, and what production problems shall be solved together with them?*

Cooperation with E.O. Paton Electric Welding Institute of the NAS of Ukraine has provided «Steel Work» Company with a competitive advantage on price and quality of product. This cooperation allows solving the most complex problems at customers' enterprises. Due to joint work, we are getting increase of working efficiency, operation reliability and improvement of quality of released products.

*One of the directions of production diversification is explosion welding technology and production of clad bimetallic plate. What problems should be solved from point of view of production and business?*

We work in this direction, but it also requires large investments and special production capacities, i.e. area, workshop and ground for explosion works.

*Your enterprise virtually uses technologies of the XX century, and today in the XXI century productions all over the world use digital technologies in the context of «Industry 4.0» concept. What do you do in this direction?*

We, like all over the world, try to develop in this direction, and, as I mentioned above, work on robotization and automation of production processes in order to improve product quality.

*Andrey Ivanovich, you have proposed to organize a Museum of Welding in Krivoy Rog and made serious preparations. Why the Museum of Welding, not other technology and why in Krivoy Rog?*

Krivoy Rog is a big industrial center. Profession of welder is very important in our production. A lot of discoveries have been made in this sphere, and, therefore, my task lies in popularizing this profession. In this connection, I and management of the Company have a great wish to create the Museum of Welding in Krivoy Rog and propose to celebrate the last Friday of May as a professional holiday — Day of Welder.

*Thank you Andrey Ivanovich for you readiness to share with the Journal readers the directions of Company activities and wish you success in search and implementation of innovative welding technologies.*



Interview was recorded by A.T. Zelnichenko