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VISIT OF DELEGATION OF POLAND INSTITUTE OF WELDING TO THE E.O. PATON ELECTRIC WELDING INSTITUTE

Delegation of Poland Institute of Welding (Instytut Spawalnictwa in Gliwice) consisting of A. Pietras, Director of the Institute, and E. Turyk, Deputy of Head of Welding Technology Department, visited the PWI in the period of November 18–20, 2015 on invitation of the Board of Directors. Aim of the visit was familiarization of management of Poland Institute of Welding with the directions of the PWI activities.

Several meetings were held in accordance with visit program.

Head of «Investigation of physical processes, technology and equipment for electron beam and laser welding» Department V.M. Nesterenkov, Corr. Member of the NASU, presented for Poland colleagues the directions of Department activity on manufacture of EBW equipment and developments of new EBW technologies; new 40 m³ chamber for EBW and unique 100 m³ chamber for EBW of new chambers were demonstrated. It was a presentation of technological operations on manufacture of all-welded outer part of body of front medium pressure chamber in gas turbine engine from casting titanium α -alloy VT5L, consisting of pillars and blades, using

EBW method with computer-regulated technological process.

V.M. Lobanov, PWI Deputy Director, Academician of the NASU, highlighted the main directions of PWI activity in the field of welded structures optimizing as well as non-destructive testing and technical diagnostics of welded parts and structures. He also informed Poland colleagues on development of complex program of the NASU «Resource» directed on extension of safe life of the structures, constructions and machines. At the end, Prof. Lobanov arranged an excursion for the guests to PWI show-room.

In course of the meeting I.V. Krivtsun, PWI Deputy Director, Academician of the NASU, pointed out the issues of modelling of physical processes taking place in welding. The possibilities of increase of efficiency of hybrid processes of welding based on laser irradiation energy were discussed.

One more meeting was held with the Head of Department «Physical-chemical investigations of materials» G.M. Grigorenko, Academician of the NASU, during which it was possible to familiarize with different types of analytical equipment, in particular,



During signing of Agreement on cooperation (from left to right: L.M. Lobanov, B.E. Paton, A.T. Zelnichenko and A. Pietras)



Discussion of possibilities of tool for high-frequency mechanical peening (from left to right: E. Turyk, A. Pietras and V.V. Knysh)

Gleeble 380 (DSI) unit, optical spectrometer (ICP-Spectrometer) with inductively coupled plasma iCAP 6500 DUO (Thermo Fisher Scientific), Auger-microprobe with field emission cathode JAMP-9500F (JEOL).

Head of Department «Special high-voltage equipment and laser welding» Dr. V.D. Shelyagin presented the guests with Department capabilities in the field of laser welding technologies, in particular, provided detailed description of manual laser tool, developed in PWI, for welding in railway transport.

PWI unique equipment for mechanical tests, including press MP-800 and tool for high-frequency mechanical peening of welded joints, was demonstrated in «Strength of welded structures» Department (Head — Prof. V.V. Knysh).

Also, a meeting was held with Head of Department of V.N. Bakul Institute for Superhard Materials A.L. Majstrenko, Corr. Member of the NASU. The issues related with improvement of friction stir welding technology and manufacture of specialized instruments were discussed in the course of meeting.

Director of the International Association «Welding» Dr. A.T. Zelnichenko familiarized Poland guests with the main directions of the PWI publishing activity and Conference plans for 2016, which are organized by PWI.

The final meeting with PWI Director, Academician Boris E. Paton took place on November 20. It covered



In show-room of PWI (from left to right: L.M. Lobanov, E. Turyk and A. Pietras)



Against electron beam chamber (from left to right: E. Turyk, V.M. Nesterenkov and A. Pietras)

the issues of cooperation between the Institutes. Poland experience on training of welders was discussed in details. The final point of the meeting was signing of Agreement on scientific-and-technical cooperation between the E.O. Paton Electric Welding Institute and Poland Institute of Welding.

Dr. A.T. Zelnichenko, PWI

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