



*Continuous way to improvement lasting
more than 60 years*

PILOT PLANT OF WELDING EQUIPMENT OF E.O. PATON ELECTRIC WELDING INSTITUTE

On January 1, 1959, the Pilot Plant of Welding Equipment of E.O. Paton Electric Welding Institute was founded, whose main task was mastering the technology of production and manufacture of experimental models of the advanced welding equipment, which was developed at the EDTB and other structural units of PWI. From that moment, the continuous movement of the Plant towards recognized leadership in the field of production of modern welding equipment and materials began.

For more than 60 years of its history, the team of the Pilot Plant has made hundreds of thousands of units of welding equipment, in which the advanced developments of domestic scientists in the field of welding, surfacing and metal cutting technologies were embodied. The equipment produced by the Plant has been often used in as wide as possible range of conditions in different parts of the world: from deepwater welding for the facilities of oil and gas exploration to the first ever open space welding operations; from repair of ships in hot equatorial or humid tropical climates to welding pipelines in the Extreme North. All this helped to gain valuable experience, which provided a solid foundation for the Plant to take the leading positions at this market — today PPWE is the only plant in Ukraine capable of producing welding equipment with welding currents from 150 A for domestic consumers to 10000 A for giants of Ukrainian and world industry.

Today the products range of the Plant has more than 60 items, of which more than 30 models are inverter welding equipment, more than 15 models are conventional equipment and more than 10 grades of welding electrodes.

The inverter welding machines PATON™ occupy the largest part in the total volume of production of the PPWE equipment. They are commercially produced in the following categories:

- inverter rectifiers (welding currents from 150 to 500 A, operating from the power supply networks of 220 V/380 V);
- units for semi-automatic welding (welding currents from 160 to 500 A, operating from the power supply networks of 220 V/380 V);

- units for argon-arc welding (welding currents from 5 to 315 A, operating from the power supply networks of 220 V/380 V);

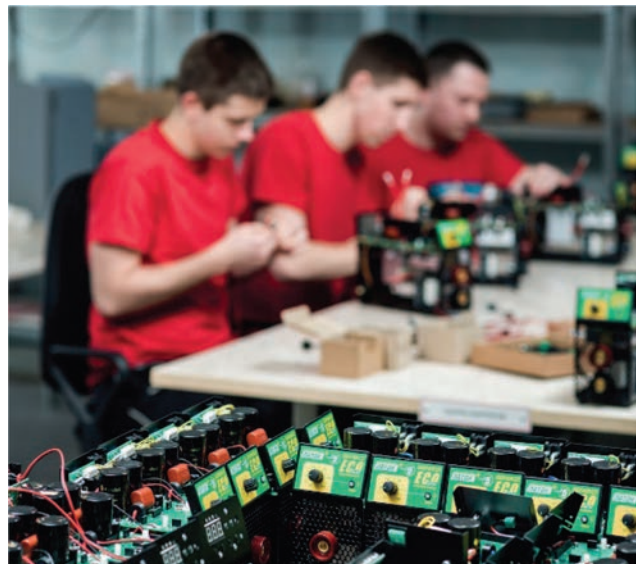
- multifunctional digital inverters (welding currents from 250 to 350 A, operating from the power supply networks of 220 V/380 V);

- units for air-plasma cutting.

For the most complete compliance with the market requirements, most units from the range of inverter equipment are produced in several series: units of general-purpose and professional series, which allow welding under particularly rigid working conditions.

Also, at the demand of ever-increasing customer requests, the Plant is actively working on expanding its range and modifying its existing models. Over the last year, the designing of the inverter rectifiers and semiautomatic units with a rated welding current of up to 500 A and the argon-arc inverter for welding with both direct and alternating current up to 315 A was completed and all were put into production. Already in 2020, it was already decided to replace the models of units with the currents of 315 and 250 A powered by a three-phase network with more powerful models of 350 and 270 A, respectively. The development of a new perspective model of unit for plasma-cutting with a rated current of up to 100 A is at the final stage.

In the production of units the most updated and high-quality components from the world's leading



manufacturers like INFINEON, VISHAY, KENDEIL and NXP are used and the units of professional series are equipped with accessories from a well-known German manufacturer Abicor Binzel. All this allows the Plant to produce «extra-class» products, the highest quality of which is reflected in the extended warranty period of up to 5 years.

The welding electrodes PATON™ also occupy a large part in the overall structure of the products manufactured by the Plant. Today, 12 grades of welding electrodes with both classic and improved composition are manufactured. And taking into account the variety of diameters and packaging variants, the number of assortment items in this category of products exceeds 50. The production uses modern technologies and rigid input quality control of raw materials, and a professional team of specialists constantly monitors the development of production of welding materials in order to timely introduce innovations.

The welding electrodes PATON™ meet all necessary requirements to products of this type and are regularly certified by relevant Ukrainian and international certification centers. In 2018, these products were certified to meet the EU standards requirements and regular deliveries of electrodes to the markets of European countries began and in 2019 a certificate was received that the manufacturing process was in compliance with the high standards of ISO 9001:2015.

This area of work of the PPWE is actively developing — today the process of organizing a new area for the production of welding electrodes PATON™ in Kyiv is at the final stage. After completion of commissioning works, several production lines of a new area will be able to provide the production of up to 600 t of welding electrodes per month. In addition to the production departments, the new complex of manufactur-

ing welding electrodes in Kyiv includes an analytical laboratory, a mechanical testing laboratory and a department for welding and technological testing. The set of laboratory equipment allows carrying out the complex input control of all raw materials, controlling the technological process of electrode production and performing acceptance tests of each batch of finished products. In the near future, it is planned to launch a line of experimental molds for the development of new grades of electrodes with improved welding and technological properties.

It is important to note that a considerable part of PATON™ products is already exported and namely this vector has been identified as one of the main ones in the Plant's development strategy. Over the last year, a number of countries at which markets the deliveries of the products were organized, has increased to 30. In particular, in 2019, deliveries of welding units and electrodes were organized to India, Sri Lanka, Egypt, Turkey and Burkina Faso. Negotiations about the start of deliveries in 14 more countries, including such European countries as Spain, Croatia, Macedonia and Bulgaria; Middle Eastern countries — Saudi Arabia, Pakistan, Israel, as well as Asian countries — Philippines and Singapore are underway at different stages. In view of such high interest to the products of the Plant, it can be stated that a high reliability, wide functionality and many unique technical characteristics allow the PATON™ welding equipment to compete successfully with the products of the leading world manufacturers at the markets around the world.

Namely the choice of the PATON™ products by both domestic and foreign welders makes the staff of PWI to be proud of its work and inspires them for new achievements!

