

## New orders for Asia and America markets

«Zaporozhtransformator» PJSC is proceeding with collaboration with Governmental Energy Company Administración Nacional de Usinas y Trasmisiones Eléctricas (UTE), Uruguay. Based on Agreement, ZTR should manufacture 4 transformers and 4 autotransformers rated for capacity 83,3 MVA, 500 kV. Equipment is purposed for operation at «Melo» and «Salto Grande» substations in Uruguay. Earlier, 10 similar autotransformers 83,3 MVA, 500 kV were manufactured and delivered to UTE. The order was executed within record tight schedule and according to high technical level. Nowadays ZTR transformers are successfully operated by the Customer.

The special feature of above Contract is delivery to foreign country of unique monitoring system designed by «Zaporozhtransformator» PJSC in-house. Therefore, one of the main conditions of the Customer as for new Contract was provision of the training related to operation of transformer and associated equipment. Within a week, ZTR specialists conducted the training courses for UTE employees. Currently all 8 transformers have been successfully shipped to the port by means of 120-tons transporter.

Within mentioned period of time ZTR as a part of consortium with Indian Company Crompton Greaves Ltd. (CGL) has also manufactured, successfully tested and dispatched 9 reactors for Governmental Indian Network Company Power Grid Corporation of India Ltd. (PGCIL).

According to Contract requirements, three units of 80 MVA, 765 kV equipment were delivered to Thiruvallur GIS (Gas Insulating Station) substation and six units of 110 MVA, 765 kV reactors were supplied to Warda substation. Total capacity makes up 900 MVA. The transformers manufactured at ZTR were successfully tested with consideration of all required technical characteristics.

In all, within 4 years, 7 reactors rated for 80 MVA, 765 kV and 12

reactors rated for 110 MVA, 765 kV have been delivered to Wardha substation; as for Thiruvallur GIS substation, equipment was supplied there for the first time. «Zaporozhtransformator» PJSC has delivered 63 reactors rated for voltage 765 kV to PGCIL for recent three years.

Signing of the Contract in the first quarter of 2014 with Vietnamese Company Power Transmission Company No.2 (PTC2) for delivery of 128 MVA, 500 kV shunt reactor for Da Nang substation should be mentioned especially. PTC2 Company is one of four regional subdivision of National Power Transmission Corporation responsible for power transmission in Vietnam.

In 2013, Vietnam Company implemented the tender for equipment delivery. To comply with the requirements of PTC2, ZTR as a part of consortium with local Vietnam Company Tinh Cau Ltd. should ensure manufacture and transportation of the reactor to Vietnam sea port, as well as cargo customs clearing and reactor delivery to the substation.

According to the terms of the Contract, the Customer laid down the conditions for mandatory delivery of 4 sets of online DGA monitoring systems manufactured by Kelman Company (Ireland). One set will be employed for installation on the reactor and three sets should be installed on the existing equipment of the substation.

Along with ZTR, the main competitor in the tender was Siemens (Austria). As a result the delivery was awarded to «ZTR» PJSC owing to optimum price quotation and delivery terms. The main factor for contact awarding was the Company authority and positive references of National Power Transmission Corporation technical specialists as for ZTR equipment which has been operated in corporation networks over the time of many years. In line with the schedule the reactor is to be shipped in quarter IV of the year 2014.

ZTR is proceeding with filling of its stock of orders, improvement of its products' competitiveness, directing towards the development of new markets for selling high quality and reliable transformer equipment.



## «Zaporozhtransformator» PJSC makes investments to production and technology development

«Zaporozhtransformator» PJSC has totalized the investment projects for 2013 related to implementation of new technologies into production. For the period of 12 months of last year, 5 projects have been implemented at the Company for amount UAH 12,3 mln.

The projects are purposed for improvement of production processes' effectiveness, equipment modernization, increasing of the products' competitiveness.

Within the scope of investment program in 2013, automatic line for production of shunt reactor disc laminations (sections) TRKA, «Georg», Germany was commissioned in Magnetic Core Workshop. Automatic line is intended for



layout of electric steel with thickness 0,23-0,35 mm and production of shunt reactor disc laminations. According to ZTR specialists, implementation of new automatic line for production of the laminations ensures elimination of manual labor at setting of disc sections, improvement of lamination production accuracy, reduction of lamination manufacture cycle, increase of products' quality and stability within execution of production schedules without frustration of contract terms. Line implementation ensures reduction of shunt reactor disc production cycle up to three times as well as elimination of working residuals of electric steel close-cut strips. The project price made up above UAH 11

mln. ZTR has collaborated with one of the well-known companies in German – «Georg» over a number of years. For the period the Company has confirmed its first-class manufacturer image repeatedly and gained ZTR confidence. Today, «Georg» manufactures the

plants for processing of band materials and special metalworking machines with inbuilt electronic control systems. For the period of partnership, electric steel slitting and cross-cut lines, E-Stacker for transformer cores, assembly stands, etc. were installed at ZTR. Installed new equipment manufactured in Germany is high-tech machines which ensure realization of more precise, rapid and quality operations for «Zaporozhtransformator» PJSC specialists.

In 2013, paper-cutting machine МРБ-02, manufactured in Russia was put into operation for cutting of all paper types; its price is above UAH 900 thsd. Ne equipment ensures performance of high quality cutting of all paper types to be used for manufacture of the transformers and the reactors: cable paper, crepe paper, general-use cardboard with thickness up to 0,5 mm. Implementation of new paper-cutting machine МРБ-02 improves effectiveness of cutting process as for all paper types employed at «ZTR» PJSC, as well as allows reduction of production wastes during cutting up to 8%.

Within the scope of implementation of new technologies, the vacuum-lifting traverse VLM manufactured by VLMB «FEZER», Germany, was purchased and adopted last year for movement of laminated cardboard. Equipment ensures transportation of laminated cardboard sheets with mass up to 1000 kg, and this facilitates significantly the operations related to material preparation for carrying and increases work effectiveness. Price of the project made up about UAH 100 thds. Also, for the purpose of relocation of sheets, work-pieces,

production residuals of laminated cardboard, means for small-scale mechanization for transporting of mentioned materials were purchased. Vacuum traverse ensures significant improvement of equipment operation effectiveness by reducing the time required for

work-pieces' transportation and positioning, provides safety labor condition in line with valid norms.

ZTR systematically continues implementation of investments and realizes new projects. Thus, within the scope of investment realization in 2014, mounting, adjustments and commissioning of five-axial processing center manufacture by CMS, Italy, were completed. In the near future it is planned to implement the up-to-date, highly-efficient equipment for cardboard and laminated material processing – 4-sided lengthwise planning machine manufactured by Weing, Germany, and sawing center manufactured by Comec, Italy, and in the second half of the current year – milling center manufactured by EiMa, Germany. These will ensure complex technical extension of insulation production

which by-turn should provide improvement of technology of insulation parts' manufacture, reduction of technological cycles, organization of in-house production of individual types of parts instead of their procurement, with disabling of outdated technological equipment and introduction of economic effect. Thus, for example, implementation of four-sided lengthwise planning machine Weing Powermat-1200 equipped with programmed control will ensure in-house production of calibrated strips for the spacers. Due to mass scale of application of such parts in the transformers, this would allow achievement of significant economic effect



up to USD 150000 per year.

Introduction of new equipment is one more step for quality improvement, increase of production effectiveness and enhancement of ZTR products' competitiveness.

## ZTR has participated in major exhibition in Middle East

«Zaporozhtransformator» PJSC has participated in the 39-th International Energy and Electrotechnical Exhibition «Middle East Electricity 2014» (MEE 2014). Exhibition took part in Dubai International Exhibition Centre (Dubai, United Arab Emirates).

More than 100 worldwide representatives of various branches took part in MEE 2014 Exhibition and presented their developments, equipment and technical solutions. «Zaporozhtransformator» PJSC products were widely represented among them.

As noted by ZTR specialists, participation in MEE 2014, major energy and electrotechnical exhibition in Middle East allows entering into business relationship, strike-up own availability in new market and employ advantageously Middle East Companies aimed to the markets of United Arab Emirates, Saudi Arabia, Kuwait, Bahrain as well as Lebanon, Jordan, Syria.

Within the scope of exhibition, «ZTR» PJSC sales department specialists, jointly with representatives of Ukrainian-Austrian

Company «ZTR-ENESTA» conducted in a series of meetings both with new partners (general contracting enterprises, consulting companies, suppliers of components and technological equipment for transformer production, etc.), and with permanent customers), for the purpose of discussions concerning the current projects and further collaboration in the market of Middle East.



Within exhibition, «ZTR» PJSC stand was attended by representative of Embassy of Ukraine in United Arab Emirates and in Bahrain as the second job – Head of Economical Department, Yuriy Malich. Mr. Malich has noted that he was always interested in assistance and solutions as for issues related to promotion of collaboration and the market extension for ZTR transformer equipment sales in Middle East countries.

«ZTR» PJSC was the only Ukrainian company which took part in Exhibition «Middle East Electricity 2014», and displayed the broad spectrum of up-to-date technologies in transformer manufacturing and support services.