

## ZTR has delivered the shunt reactor to Latvia



«Zaporozhtransformator» PrJSC (ZTR) has delivered the shunt reactor type RTDH-120000/330-Y1 with adjustable reactive power for high-voltage networks of Latvia AS «Augstsprieguma tīkls», SS Aizkraukle.

Conventional design of the shunt reactor does not include installation of on-load tap changer (OLTC). But according to the present project, the Customer put forward the requirement to manufacture the reactor equipped with the tap changer. Prior to this, ZTR has already supplied the equipment of such type to Poland.

In addition to power adjustment under load, the special feature of this reactor is the property providing regulation by means of on-load tap changer to ensure switching at minimum permissible temperature minus 40°C.

To ensure functioning of the

tap changer device at such low temperatures, special oil having reduced viscosity is used in the compartment of on-load tap changer.

To ensure the convenience of inspection during operation, the on-load tap changer is placed into separate compartment filled with special oil.

This reactor is also unique due to the fact that insulating plate is installed between the tank of the reactor and the compartment of tap changer device, which provides possibility to carry out maintenance of on-load tap changer without draining the oil from the main tank.

In accordance with the Contract terms, the reactor has already been delivered to the site and ZTR supervision engineer has already left to supervise installation and commissioning of the equipment.

## ZTR visited Annual International Exhibition CWIEME-2018

«Zaporozhtransformator» PrJSC (ZTR) visited Annual International Exhibition of Insulating and Conducting Materials, Electrical Steels, Equipment and Technologies for Production of Electric Equipment – CWIEME 2018. The exhibition was held in Exhibition Center Messe Berlin (Berlin, Germany).

This exhibition consolidates the highly qualified engineers and procurement specialists for the purpose of meetings with new and existing suppliers, discussion of the issues related to investments to new and innovative products and solutions, while staying in know of the latest trends in the industry. «Zaporozhtransformator» PrJSC, being the largest producer of the transformer equipment, traditionally took part in this exhibition.

CWIEME was attended by such global manufacturers as Stalprodukt S.A., Thyssenkrupp AG, ABB AB, WEIDMANN ELECTRICAL TECHNOLOGY A, MR, Enpay, which presented within the scope of this exhibition their designs, equipment and technical solutions.



As part of the exhibition, the employees of «ZTR» PrJSC procurement department discussed the issues of delivery of new materials, components and equipment for existing ZTR investment projects, their quality, as well as after-sales service and maintenance.

Annual participation of «ZTR» PrJSC in International Exhibition CWIEME ensures an opportunity to discuss current issues of cooperation, search for new alternative suppliers of the materials and the components.

# Ukraine marches confidently towards energy independence with reliable ZTR equipment

Ukraine has significant potential in use and development of renewable energy sources, which, according to Institute of Renewable Energy of National Academy of Sciences of Ukraine, allows covering about 50% of the total energy consumption in the country. In substantiation of this, the bioenergy sector is actively developing today. In accordance with National plan of renewable

New transformers of ZTR PrJSC for solar power plants had been modernized as for design and technology, ensuring the following:

1. Functional extension of the transformers type TRMG due to new design of LV winding with axial splitting.

2. Reduction of overheating resulted from higher harmonic components due to adoption of additional design and technological measures, the best estimate calculation of losses and winding hot spot temperature.

3. Improvement of insulation dielectric strength by upgrading the drying modes of crossover winding units and oil filling under vacuum using special processing equipment, calculation of electrical effects on insulation and selection of the best technical solutions.

4. Improvement of electrodynamic withstand (EDW).

The Company has already implemented a number of projects for production of such kind of transformer equipment for the following projects: Tokmak Solar Energy, FES Afanasyevka, FES Rykovo, SES Stepnogorsk, SES



energy until 2020, Ukraine should reach 11% as referred to production of energy using «clean» sources in the final energy consumption. Ukraine's energy strategy has more challenging task – 25% of «green» energy by 2035.

One of the most promising and dynamically developing branches of renewable (unconventional) energy is solar energy. Climatic conditions and geographical position of Ukraine are favorable for development of solar energy and construction of solar power plants.

Zaporozhtransformator keeps pace with the times and offers for its customers the modernized products that meet both standard and special requirements for all alternative energy facilities, including wind and solar photovoltaic power plants.

For this purpose, the company has established the office for sales of equipment for renewable energy sources. Design documentation has been developed and the manufacturing technology of transformers rated for capacity from 1 MVA up to 2.5 MVA and voltage classes 10 kV and 35 kV for solar photovoltaic power plants has been improved immensely.



Bedriktivtsy, etc.

Today it has become obvious that the future of Ukrainian energy sector lies with renewable energy sources. Zaporozhtransformator confidently looks to the future and creates the reliable platform for the implementation of the ideas and the projects in this promising direction.