

PJSC "Zaporozhtransformator" test station ensures testing of the equipment of maximum capacities and voltage classes

PJSC "Zaporozhtransformator" test station (ZTR) ensures performance of the complex of equipment testing in complete score, stipulated by the national standards and international standards ISO, ANSI, IEC and the special requirements of the Clients. All equipment, manufactured at PJSC "Zaporozhtransformator" is thoroughly controlled and all tests correspond to the recommendations of national, international and interstate standards (DSTU, ISO/IEC/IEEE, GOST, etc.).

Each first (main) unit of the transformer equipment having new constructive solutions is subjected to the acceptance, special and type tests. Each subsequent (serial) unit is subjected to the routine tests. According to the client's option, PJSC "Zaporozhtransformator" assures the special types of tests at international accredited test laboratories.

For example, short-circuit electrodynamic stability test. Today, ZTR test station ensures testing of three-phase power transformers rated for capacity up to 1000MVA, voltage up to 550kV, one-phase units – rated for capacity up to 700MVA, voltage up to 1150kV; three-phase controlled shunt reactors rated for capacity up to 200MVA and voltage up to 550kV, one-phase units – up to 110MVA, 765kV according to the requirements of CIS national and interstate standards (DSTU and GOST), international standards (IEC), USA's standards (IEEE, ANSI).

The test stations of CIS transformer plants are equipped with similar test apparatus which ensures testing of transformers and shunt reactors according to standards, but for lower capacities and voltage classes.

PJSC "Zaporozhtransformator" is the only test station that ables to test the transformers and the shunt reactors of maximum capacities and voltage classes. PJSC "Zaporozhtransformator" test station



is equipped with two up-to-date generators of impulse voltage LIG - 3200 kV and LIG -3600 kV, «HIGHVOLT», (Germany). The above test equipment enables testing of complete complex of impulse voltages of transformer equipment (full lightning impulse test, chopped – wave lightning impulse test).

Since 2010 the regular implementation of automatic panel for test control using digital software has been realized and this ensures currently to perform testing at completely new level.

PJSC "Zaporozhtransformator" test station throughput as referred to testing of the transformers and the shunt reactors reaches 50 000 MVA per year.

New types of measurements on the transformers been the contractual requirements previously, and currently included into international standards, such as frequency-response analysis (FRA) of transformers, are implemented.

In 2012 the new type of tests, the measurements of transformer's transfer characteristics, was realized. Moreover, PJSC "Zaporozhtransformator" test stations perform testing of tap changers related to different types as well as their drives, cooling system control cabinets, built-in current transformers and transformer oil tests as well.

PJSC "Zaporozhtransformator" test stations are equipped with the following: skilled personnel, up-to-date measuring and testing transformer apparatus manufactured by HIGHVOLT, HEAFELY, OMICRON, EPRO, etc.; the unique test complex to perform thermal and electromagnetis tests. All above components ensure realization of all inspections and tests of transformer equipment, rated for maximum capacities and voltage classes at high technical level, according to the client's requirements and standards that is the essential condition of safe and trouble-free operation.



ZTR test laboratory corresponds to international standards



“Zaporozhtransformator” PJSC (ZTR) has received certificate on accreditation of company test laboratory as for correspondence to requirements of DSTU ISO/IEC 17025:2006 (ISO/IEC 17025:2005) within the branch of the transformer and reactor testing. Certification was performed by National agency of accreditation of Ukraine (NAAU).

«In February of the year 2012 ZTR has submitted accreditation request into NAAU, - mentioned Quality Director of “ZTR” PJSC, Mikhail Osevaser. – At the beginning of the current year representatives of

national accreditation body of Ukraine audited test laboratory of “Zaporozhtransformator” PJSC. Several remarks were revealed during auditing, but efficiently removed by specialists of the company. As result National agency of accreditation of Ukraine issued certificate on accreditation which provides recognition of ZTR laboratory as well as test reports of transformers and reactors at international level».

NAAU is the associated body as well as subscriber of doubled-party agreement with European cooperation (EA) and affiliated body of International cooperation of laboratory accreditation (ICLA). Due to system of International agreement ZTR test laboratory receives International recognition and provides recognition of data accompanied export goods in the external market. It significantly reduces charges due to decrease or disposal of necessity to repeat product tests in other countries.

New magnetic core equipment was implemented by ZTR

Automatic line for production of shunt reactor disc sheets (segments) TRKA/M/EL 500x400-CAS manufactured by GEORG was put into operation at the magnetic core workshop of “Zaporozhtransformator” PJSC within the investment program as for improvement of conditions and labour efficiency. Total price of the project made up Euro 930 thnds.

«Automatic line is intended for cutting of electrical steel with thickness 0,23-035mm as well as production of shunt reactor disc sheets, - mentioned Technical Director of “ZTR” PJSC, Leonid Kontorovich. – Line in automatic mode puts cut disc into sectors and stacks them on the stacker sections by means of transport robots. Due to this new equipment ZTR specialists have already performed works as for stacking sectors of shunt reactor discs for ROM



80 MVA 765 kV for India”.

For effective and qualitative equipment operation staff of magnetic core workshop was successfully trained as for operation of new line by the representatives of GEORGE company.

In accordance with opinions of ZTR specialists implementation of new automatic line for sheet production has permitted to exclude manual labour during disc sector stacking, improve accuracy of sheet production, reduce cycle of disc production, improve quality of manufactured production and provide stability during execution of production schedules without

interruption of contract terms. Implementation of new equipment is another step to increase competitiveness of ZTR production, improve quality and reduce labour content.

ZTR has proved the compliance with International Standard ISO 3834

PJSC “Zaporozhtransformator” (ZTR) has successfully passed the first supervisory audit as for compliance with international standard ISO 3834-2 in the area of welding control. The audit was realized by the audit company BureauVeritasCertification (Ukraine) – representative office of similarly named independent authority of France as for certification, recognized by more than 100 world countries.

PJSC «ZTR» became one of the first companies in CIS that has successfully passed the audit and proved the compliance with International Standard ISO 3834-2, – mentioned Mr. Dmitry Ivanov, Head of PJSC “ZTR” Quality Department. – Within inspection of functioning of welding production control system, the auditors have noted the considerable improvement as for professional



skills of the staff. Currently, the knowledge and skills obtained by the specialists ensure significant perfection of metal structure quality and provide reliability of ZTR equipment ». The supervisory audit of welding production control system was resulted in approval of ZTR compliance with the requirements of international standard ISO 3834-2. Independent approval of welding techniques by internationally recognized certification authority, attestation of the staff according to the requirements of international standards and availability of the certificate, proving the quality stability within welding operations, ensure withstanding of hard competition with other transformer manufacturers as well as consolidation of ZTR image in the world power market.