A TECHNICAL PRESENTATION

CONSORTIUM

CONSTRUCTION, INSTALLATION AND ENGINEERING COMPANY'S

«INTERENERGOSTROY”

for the «turnkey» construction and rehabilitation of thermal, hydro, wind & solar power plants

January 2016

Ukrainian market has created an environment in which the specialized industrial enterprises of Ukraine produce about 95% of all equipment, machinery and materials necessary in hydraulic and thermal power facilities construction. This is turbine equipment, generator equipment, transformer equipment, basic hydro mechanical and hydropower equipment, high-voltage and low-voltage equipment, as well as the full range of cable and wire products, DC equipment, reliance high voltage from 6 up to 750 kV.

The power industry of Ukraine

Structure of Power Generation in Ukraine

According to the results in 2013 the structure of power generation in Ukraine as follows:

Thermal Power Plants & Combined Heat Power Plants — 57,5 % (25 472 MW)

Nuclear Power Plants — 29,6 % (13 107 MW)

Hydro Power Plants &

Pumped Storage Power Plants — 12,4 % (5 500 MW)

Solar Power Plans — 0,3 % (130 MW)

Wind Power Plans — 0,2 % (86 MW)

CONSORTIUM «INTERENERGOSTROY” unites specialized of CONSTRUCTION, INSTALLATION AND ENGINEERING COMPANY'S for the «turnkey» construction and rehabilitation hydraulic, thermal and nuclear power construction projects, railway tunnels and subways, railways and supporting infrastructure.

STRATEGIC PARTNERS

CUSTOMER

FINANCING, MANAGEMENT, OPERATIONAL, CONTROL

Mastercraft s.r.o.

Management Company

Consortium

«INTERENERGOSTROY”

CONSTRUCTION MANAGEMENT, DESIGN, PLANNING,
INSTALLATION and COMMISSIONING

CONSORTIUM STRATEGIC PARTNERS

«INTERENERGOSTROY"

DESIGN, CONSTRUCTION AND INSTALLATION

FINANCING, PLANNING, MANAGEMENT, OPERATIONAL, CONTROL

«TEPLOENERGOMONTAZH»
PJSC

«UKRVODPROEKT»
PJSC

«ENERGOPROJECT»
Kharkiv Research and Design Institute OJSC

KIESI "ENERGOPROJECT"
STATE COMPANY

DNEPR-SPETSHYDROENERGOMONTAZH
PJSC

Strategic partners: project companies, equipment manufactures, engineering works, consulting, etc.

«Design institute «UKRSPETSTUNELPROYECT»
JSC

KYIVMETROBUD
PJSC

TURBOATOM
OJSC

ELEKTROTYAZHMASH
State enterprise plant

ZAPOROZHTRANSFORMATOR
PJSC

THE LIST OF STRATEGIC PARTNERS

№	Name of organization	Type of works
1	«TEPLOENERGOMONTAZH» , PJSC	Manufacture, supply and installation of steel structures and hydraulic and auxiliary equipment
2	«MASTERCRAFT» s.r.o.	Planning and management
3	«ENERGOPROECT» Kharkiv Research and Design Institute, OJSC	Design, supervision and inspection of hydro power plant. Engineering support.
4	KIISI « ENERGOPROJECT», State Company	Engineering and survey work for the implementation of engineering surveys on hydroelectric complex. Drilling and cementation work for the implementation of cementation and drainage curtains.
5	«TURBOATOM», JSC	Design, manufacture, supply, installation supervision, commissioning and maintenance on hydro power plant turbine equipment
6	"ELECTROTYAZHMASH", State plant	Design, manufacture, supply, installation supervision, commissioning, and maintenance on hydro power plant generating equipment
7	«UKRHYDROMECH» JSC	Design, manufacture, supply, installation supervision, commissioning, and maintenance on hydro power

8	«ZAPORIZHZHA TRANSFORMER PLANT», JSC	Manufacturing of transformer equipment
9	«Design institute «UKRSPETSTUNELPROYECT» PJSC	Design of railway tunnels, subways and bridges Railway paths and infrastructure. Development measures against landslides. Design subways and buildings.
10	«KYIVMETROBUD», PJSC	Construction of transport tunnels and underground structures
11	«ZAPOROZHGIDROSTAL» Special Design Engineering end Technological Office, PJSC	Design, engineering, supervision and inspection of mechanical equipment and special steel structures of hydrotechnical constructions
12	«DNEPR-SPETSHYDROENERGOMONTAZH», JSC	Installation work on the main hydropower and hydro mechanical equipment
13	«CHERNOMORENERGOSPETSMONTAZH», LLC	Electrical work on electrotechnical part. Construction of transmission lines.
14	«Electroyuzhatommontazh» LLC	Electrical work on electrotechnical part. Construction of substations
15	«RPS-PARTNER», LLC	Concrete and reinforced concrete works on hydro power plant
16	«ALLIANCE», LLC	Concrete and reinforced concrete works on hydro power plant

TEPLOENERGOMONTAZH PJSC

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- Fax: +38 057 702 05 53
- E-mail: office@tem.com.ua
- Web: www.tem.com.ua

PUBLIC JOINT STOCK COMPANY

TEM

TEPLOENERGOMONTAZH

90 years
in power industry

KHARKOV

TEM

Among assembly organizations of Ukraine and countries of CIS PJSC "Teploenergomontazh" is one of the oldest and conducting enterprises for editing the heat power equipment of power stations. For its 90-year's activity TEM has put into operation 39GW power generating, steam generators and boiler plants of total capacity 10 000 t steam/hour.

The qualified workers, engineering and engineers PJSC TEM took part and rendered the technical help at a structure of power stations in 29 countries.

PJSC "Teploenergomontazh" has the highly skilled personnel, has advanced technologies and equipment, has the necessary licenses and is ready to carry out all complex of works on erection, commissioning, reconstruction and repair of thermal and nuclear electrical stations, industrial power installations according to the modern requirements and European quality both in Ukraine, and behind its limits.



PJSC "TEPLOENERGOMONTAZH"

THE LARGEST Ukraine enterprise on power stations erection; beginning the industrial activity as branch of joint-stock Company "HEAT & POWER" in 1925.

PERFORMS a scope of work on erection, fabrication, repair, adjustment, putting, into operation and servicing of heat power generation equipment at terminal and atomic power station, power generating facilities, industrial enterprises, heating and industrial boiler units.

Has industrial divisions in all regions of Ukraine, carries out works on Zaporozhskaya, Yuzhno-Ukrainskaya, Khmelnitskaya NPPs, on the largest thermal power stations of Ukraine, carried outworks on solar power installation C3C-5 in Crimea, thermonuclear installation "TOKAMAK", geothermal power plant on Kamchatka.

Specialized activities of the company:

- Thermal power plants
- Nuclear power plants
- Hydro power plants
- Alternative Energy
- Heating supply
- Power engineering in metallurgy and industry
- Gas and petroleum production and transit.

PJSC "TEPLOENERGOMONTAZH"

today provides a full cycle of works "turnkey" in energy facilities, including:

- design and survey works
- construction and installation work
- supply of equipment
- repair and maintenance of equipment
- balancing and commissioning works

A close cooperation and years of experience with the world's leading manufacturers of equipment allows us to implement various types of energy projects and customer requirements

Availability of own production space and specialized equipment allows to produce:

- Metalware
- Pipelines
- Elements of steam generators
- Tanks and containers
- The foundation parts
- Non-standard equipment for TPP and NPP

Laboratory of metals PJSC "TEM" performs quality control of welded joints and base metal equipment and structures at energy facilities

JSC "TEPLOENERGOMONTAZH"

IS READY TO PERFORM WITH GOOD QUALITY AND IN DUE TIME THE FOLLOWING JOBS:

1. Erection, updating, repair, adjustment, putting into operation and servicing of NPP termomechanical equipment.
2. Erection, updating, repair, adjustment, putting into operation and servicing of industrial and heating boiler units, thermomechanical and process equipment of industrial enterprises.
3. Erection, updating, repair, adjustment, put ting into operation and servicing of SPP termomechanical equipment, including equipment operating at supercritical parameters.
4. Manufacture of metal structures, boiler auxiliary and non-standard equipment and low pressure pipelines (up to 2,2 MPa)
5. Start -up and adjustment procedures, comprehensive test of heat generating equipment of SPP, NPP, industrial and heating boiler units.
6. Mode and adjustment test of stream and water-heating boilers, water preparation and evaporation units, condensate purification plants.
7. Preparation of operating diagrams and instructions
8. Development of techniques and diagrams on the treatment of fuel and oil systems of turbogenerators, boiler units and auxiliary systems at TPP and NPP.
9. Development of techniques and diagrams on cleaning of condensate feed water duct and heating surface of hot water and power generation boilers.
10. Engineering: consulting, technical supervision during erection and adjustment of heat power generating equipment diagnostic of industrial and heating boiler house equipment.

Latest implemented projects

Name of the object	Description of the works	Country
Yuzhno-Ukrainskaya NPP	Installation of the pipelines, fittings and auxiliary equipment of unit N1 Yuzhno-Ukrainskaya NPP within the State program of extend the life of NPP equipment for 10 years.	Ukraine
Lisichansk Oil Refining Factory	Installation work in the reconstruction of technological of high pressure pipes TPP	Ukraine
PJSC "Alchevsk Iron & Steel Works"	Commissioning works on the technological systems of compressor equipment shop №4	Ukraine
Ivankovskaya TPP	Installation and commissioning works of technological systems of bio-thermal power 18MW	Ukraine

Major implemented energy facilities of PJSC "Teploenergomontazh"

Luganskaya TPP

Capacity: 2300 MW
(7x100 MW and 8x200 MW)

Ukraine

Slavyanskaya TPP

Capacity: 2100 MW
(5x100 MW and 2x800 MW)

Ukraine

Uglegorskaya TPP

Capacity: 3600 MW
(5x100 MW and 2x800 MW)

Ukraine

Yuzhno-Ukrainskaya NPP

Capacity: 3000 MW
(3x1000MW)

Ukraine

Zaporozhskaya NPP

Capacity: 6000 MW
(6x1000MW)

Ukraine

Khmelnitskaya NPP

Capacity: 2000 MW
(2x1000MW)

Ukraine

Tashlykskaya PSPP

Capacity: 906 MW
(6x151 MW)
turbine mode

Ukraine

Aleksandrovskaya HPP

Capacity: 11.5 MW
(2x5.75 MW)

Ukraine

Daffo HPP

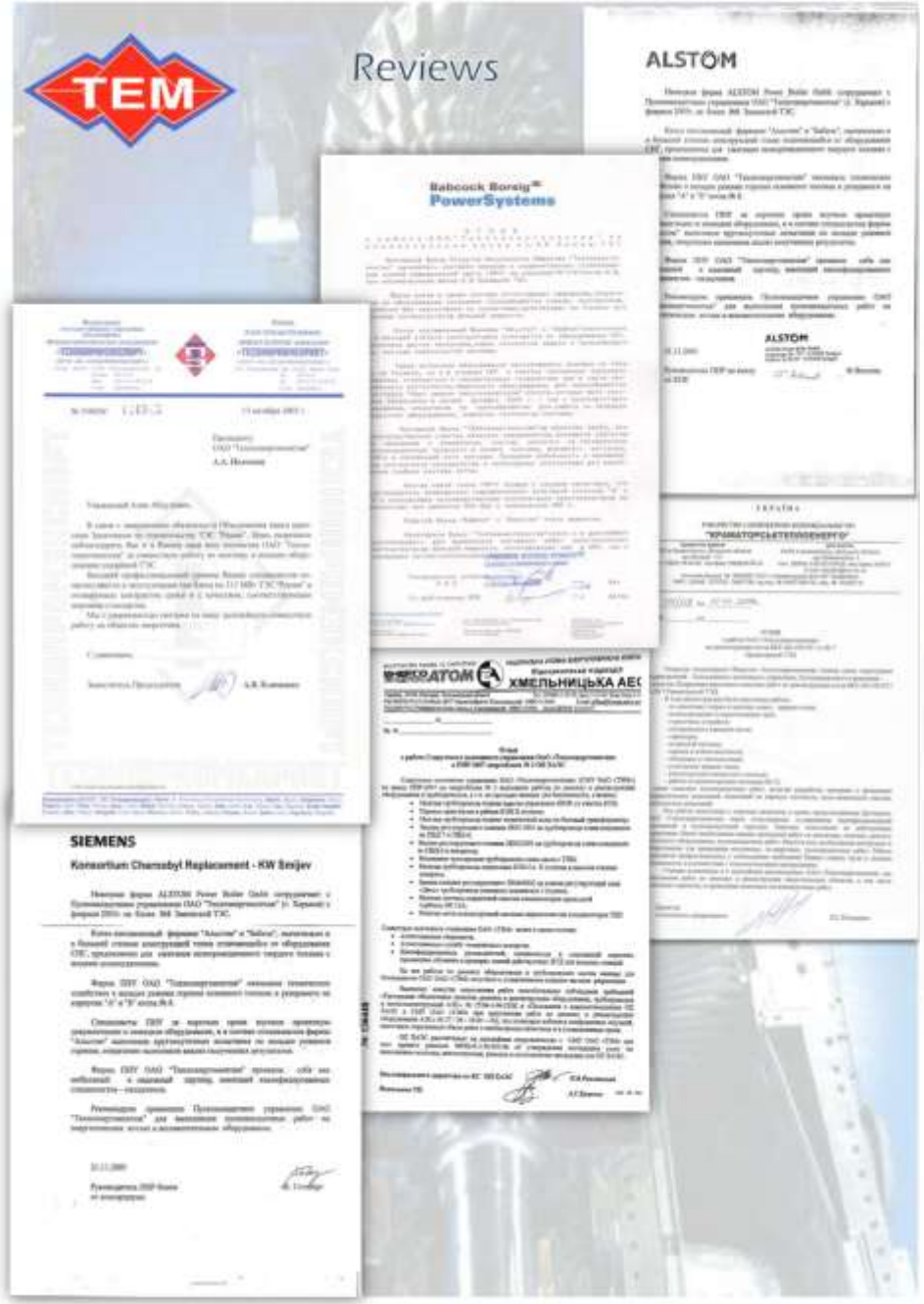
Capacity: 30 MW
(2x15 MW)

*- the project is being implemented

Nigeria

- License for construction activity Subsidiary Konstantinovskiy Assembly Department Teploenergomontazh (S KAD TEM) - АД №039142;
- Validation certificate S KAD TEM - №206-14;
- Permission for works of increased danger S KAD TEM – №326.12.48-42.99/33.12./25.11;
- Permission to operate machinery, tools, equipment of increased risk S KAD TEM - №325.12.48-42.99/33.12/25.11
- License for performing of ionizing radiation sources S KAD TEM – № ОВ 040070;
- License for construction activities PJSC "Teploenergomontazh" – АВ №559264;
- License for construction activities Subsidiary Slavutskiy Assembly Department Teploenergomontazh (S SAD TEM) - АЕ №180802;
- Decision on the approval of vendor for Rovenskaya NPP, Zaporozhskaya NPP, Khmelnitskaya NPP, Yuzhno-Ukrainskaya NPP S KAD TEM – РШ.П.023,016-13;
- Permission of the Commissioning Department TEM to perform works of increased danger № 086.10.63-45.21.5;

Reviews



PJSC "Teploenergomontazh" has all necessary licenses and permits in accordance with Ukrainian legislation on part of construction and installation works on energy facilities and production equipment.

Major markets of PJSC “Teploenergomontazh”

№	Name of organization	Located	Technical specifications
Nuclear Power Plant			
1	**Yuzhnoukrainsk Nuclear Power Plant**	Nikolaev region, Ukraine	Capacity – 3000 MW Number of units – 3: - 3 – 1000 MW.
2	**Zaporizhzhia Nuclear Power Plant**	Zaporizhzhia region, Ukraine	Capacity - 6000 MW Number of units – 6: - 6 - 1000 MW
3	**Juragua Nuclear Power Plant**	Cuba	Capacity – 880 MW Number of units – 2: - 2 -440 MW. Construction stopped.
4	**Khmelnitsky Nuclear Power Plant**	Khmelnitsky region, Ukraine	Capacity – 2000 MW Number of units – 2: - 2 -1000 MW.
5	**Kursk Nuclear Power Plant**	Russian Federation	Capacity – 4000 MW Number of units –4: - 4 -1000 MW.

Thermal Power Plant			
1	**Zmyiv Thermal Power Plant**	Kharkiv region, Ukraine	Capacity - 2200 MW Number of units – 10: - 6 - 175 MW - 3 – 275 MW - 1- 325 MW
2	**Kharkiv – 5 Central Thermal Power Plant**	Kharkiv region, Ukraine	Capacity - 540 MW Number of units – 3: - 2 – 120 MW - 1 – 300 MW
3	**Slavayansk Thermal Power Plant**	Donetsk region, Ukraine	Capacity - 1680 MW Number of units – 4: - 2 – 80 MW - 1 - 720 MW - 1 – 800 MW.
4	**Zuevka Thermal Power Plant**	Donetsk region, Ukraine	Capacity - 1220 MW Number of units – 4: - 3 – 300 MW - 1 - 320 MW
5	**Lugansk Thermal Power Plant**	Lugansk region, Ukraine	Capacity - 2300 MW Number of units – 15: - 7 – 100 MW - 8 - 200 MW
6	**Kremenchug Central Thermal Power Plant**	Poltava region, Ukraine	Capacity - 555 MW Number of units – 4: - 3 – 150 MW - 1 - 105 MW

7	**Kurakhovo Thermal Power Plant**	Donetsk region, Ukraine	Capacity - 1482 MW Number of units – 7: - 1 – 200 MW - 4 - 210 MW - 1- 220 MW - 1- 222 MW
8	**Pridneprovskaya Thermal Power Plant**	Dnepropetrovsk, Ukraine	Capacity - 2400 MW Number of units – 14: - 6 – 100 MW - 4 - 150 MW - 4- 300 MW
9	**Uglegorsk Thermal Power Plant**	Donetsk region, Ukraine	Capacity - 3600 MW Number of units – 7: - 4 - 300 MW - 3 – 800 MW.
10	**Mironovka Central Thermal Power Plant**	Donetsk region, Ukraine	Capacity - 500 MW Number of units – 5: - 5 - 100 MW
11	**Kramatorsk Central Thermal Power Plant**	Donetsk region, Ukraine	Capacity - 120 MW Number of units – 2: - 2 - 60 MW
12	**Iriklinskaya State District Power Plant**	Orenburg region Russian Federation	Capacity - 2400 MW Number of units – 8: - 8 - 300 MW
13	**Stavropol State District Power Plant**	Stavropol region Russian Federation	Capacity - 2400 MW Number of units – 8: - 8 - 300 MW
14	**Ekibastuz-1 State District Power Plant**	Pavlodar region, Kazakhstan	Capacity - 4000 MW Number of units – 8: - 8 - 500 MW

15	**Ekibastuz-2 State District Power Plant**	Pavlodar region, Kazakhstan	Capacity - 1000 MW Number of units – 3: - 2 - 500 MW - 1 - 600 MW.
16	**Severo-Zapadnaya Central Thermal Power Plant**	St. Petersburg Russian Federation	Capacity - 1350 MW Number of units – 3: - 3 - 450 MW.
17	**Tbilisi State District Power Plant**	Tbilisi Georgia	Capacity - 1800 MW Number of units – 10: - 8 - 150 MW - 2 – 300 MW.
18	**Ramin Thermal Power Plant**	Islamic Republic of Iran	Capacity - 2550 MW Number of units – 8: - 6 – 315 MW - 2 – 330 MW
19	**Isfahan Thermal Power Plant**	Islamic Republic of Iran	Capacity - 1600 MW Number of units – 8: - 8 – 200 MW
20	**Yousifiyah Thermal Power Plant**	Republic Iraq	Capacity - 1200 MW Number of units – 6: - 6 – 200 MW Under construction
21	**Harta Thermal Power Plant**	Republic Iraq	Capacity - 800 MW Number of units – 4: - 6 – 200 MW
22	**Thermal Power Plant and Desalination Complex in Aden city**	Republic of Yemen	Capacity - 125 MW Number of units – 5: - 5 – 25 MW
23	**Jijel Thermal Power Plant**	People's Democratic Republic of Algeria	Capacity - 630 MW Number of units – 3: - 3 – 210 MW

24	**Siddirganch Thermal Power Plant**	People's Republic of Bangladesh	Capacity - 210 MW Number of units – 1: - 1 – 210 MW
25	**Gudi Thermal Power Plant**	Federal Republic of Nigeria	Capacity - 600 MW Number of units – 2: - 2 – 300 MW
	Geothermal Power Plant		
1	**Mutnovsk Geothermal Power Plant**	Kamchatka Territory Russian Federation	Capacity - 50 MW Number of units – 2: -2 – 25 MW
	Hydro Power Plant		
1	**Aleksandrovka Hydro Power Plan**	Nikolayev region Ukraine	Capacity - 12 MW Number of units – 2: -2 – 6 MW.
2	**Tashlyk Hydro Pumped Storage Power Plan**	Nikolayev region Ukraine	Capacity - 906 MW Number of units – 6: -2 – 151 MW - 4 - Under construction
3	**Gudi Hydro Power Plant**	Federal Republic of Nigeria	Capacity - 60 MW Number of units – 2: - 2 – 30 MW
4	**Vossa Hydro Power Plant**	Republic of Benin	Capacity - 80 MW Number of units – 2: - 2 – 40 MW

«ENERGOPROJECT»
Kharkiv Research and Design Institute PJSC

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ОАО Харьковский научно-исследовательский и проектно-конструкторский институт «Энергопроект»

Энергопроект

Open joint-stock company Kharkiv Scientific Research and Design Institute «Energoproekt»

Energoproekt

Энергопроект

Основан
31 Марта 1932 года
Founded in March 31, 1932

ОАО Харьковский научно-исследовательский и проектно-конструкторский институт «Энергопроект»

ОАО Харьковский научно-исследовательский и проектно-конструкторский институт «Энергопроект» осуществляет проектирование энергетических объектов с 1932 года, в том числе проектирование атомных электростанций с 1970 г.

Традиции и опыт проектирования многих поколений специалистов Харьковского института «Энергопроект» воплощены в проектах 88 тепловых и 8 атомных станций общей установленной мощностью 52 млн. кВт.

Только в Украине по нашим проектам на тепловых и атомных электростанциях введено более 35 млн кВт энергетических мощностей.

Мы сохраняем и приумножаем эти традиции и достижения.

Сегодня институт принимает участие в разработке проектов для объектов тепловой и атомной энергетики в Украине, России, странах ближнего и дальнего зарубежья и уверенно расширяет масштабы своей деятельности.

Система управления качеством, международные стандарты, современные высокоинтегрированные компьютерные системы проектирования составляют основу стратегии деятельности и развития института.

Харьковский институт «Энергопроект» – это гарантия качества, надежности, эффективности и профессионализма.

Работайте с нами и Вы в этом убедитесь.

Бадзым Павел Сергеевич
Председатель правления –
директор института

OJSC Kharkiv Scientific Research & Design Institute "Energoproekt"

OJSC Kharkiv Scientific Research & Design Institute "Energoproekt" is engaged in designing of power objects since 1932 including designing of nuclear power plants since 1970.

Traditions and experience of many generations of the specialists of Kharkiv Institute «Energoproekt» are embodied in 88 thermal power plants (TPPs) and 8 nuclear power plants (NPPs) with their total output of 52 million kW.

Only in Ukraine, as per institute's designs at NPPs and TPPs, objects with more than 35 million kW total output power were put into operation.

We keep and extend these traditions and achievements.

Today the institute takes part in designing of projects of thermal and nuclear power plants in Ukraine, Russia, and other countries, steadily expanding its business.

Institute's business and development strategy is based on a quality management system, international standards and modern highly integrated CAD systems.

The Kharkiv Institute Energoproekt is a guarantee of quality, reliability, efficiency, and professionalism.

Let's work together and you will see it for yourselves.

Pavel Badzym
Chairman of Board –
Director of Institute

Предлагаемые институтом виды работ

ОАО ХИ «Энергопроект» готов выполнить:

Комплексное проектирование тепловых, атомных электростанций и других объектов энергетики;

Реконструкцию, техническое переоснащение действующих энергоблоков тепловых и атомных электростанций;

Проектирование хранилищ отработанного ядерного топлива, хранилищ твердых и жидких радиоактивных отходов;

Проектирование учебно-тренировочных центров для подготовки эксплуатационного и ремонтного персонала;

Разработку типовой, организационно-методической, а также нормативно-технической документации по вопросам, связанным с энергетикой.

Техническая проверка зданий и сооружений.

Институт заинтересован:

В налаживании деловых партнерских отношений с ведущими мировыми проектными и инжиниринговыми компаниями по выполнению совместных проектных и инжиниринговых работ в области тепловой и атомной энергетики, а также в области альтернативных источников энергии.

Types of projects proposed by the institute

OJSC Khl Energoproekt is ready to carry out:

Complete design of thermal, nuclear and other power plants;

Reconstruction, technical upgrade of the operating units at thermal and nuclear power plants;

Design of spent fuel storages, solid and liquid radioactive waste storages;

Design of training centers for operation and maintenance personnel;

Production of typical, procedural and regulatory documentation on energy-related issues.

Technical inspection of buildings and structures.

The Institute is interested in:

Arranging of business partner relations with global design and engineering leaders for co-execution of design and engineering works in the sphere of thermal and nuclear power industry as well as in the sphere of alternative energy sources.

Лицензии и сертификаты

– Лицензия Государственной архитектурно-строительной инспекции на хозяйственную деятельность, связанную с созданием объектов архитектуры;

– Лицензия Государственного департамента пожарной безопасности Министерства по чрезвычайным ситуациям Украины на проектирование установок пожаротушения, пожарной сигнализации, оповещение о пожаре и управление эвакуацией людей, противодымной защиты, передачи тревожных сообщений, устройств молниезащиты, огнезащитной обработки на объектах с высокой, средней и незначительной степенью риска по пожарной безопасности;

– Сертификат на соответствие системы управления качеством института требованиям стандартов серии ISO 9000 (выдан международным органом сертификации «Бюро Веритас Сертификейшн Украина»);

В соответствии с законом Украины «Об архитектурной деятельности» ответственные исполнители работ, выполняемых институтом, получили соответствующие квалификационные сертификаты.

В 2013 году институту было присвоено звание «Лідер галузі 2012» и «Лідер галузі 2013» с вручением национальных сертификатов.

Licenses and Certificates

– License of the State Architectural and Building Inspectorate for construction activity related to the creation of architectural objects;

– License of the State Department of Fire Safety of the Emergency Situations Ministry of Ukraine entitling to design fire-extinguishing equipment, fire alarm, fire annunciation and managing the evacuation of people, smoke protection, transfer of alarm messages, lightning arresters, fireproof treatment on plants with a high, medium, and low risk degree with respect to fire safety;

– Certificate of accordance of the institute's Quality Management System to the requirements of standards of ISO 9000 series (issued by an international certification body of "Bureau Veritas Certification, Ukraine");

In accordance with the Law of Ukraine "On architecture activity", responsible designers of works, performed by the institute, have obtained the appropriate qualification certificates.

In 2013, the institute was awarded by a title of "Lider galuzi 2012" ("Branch lider") and "Lider galuzi 2013" with the presentation of national certificate.

В 2010 году институт был принят в члены СРО НП «Союзатомпроект» (Российская Федерация) с вручением свидетельства о допуске к работам, оказывающим влияние на безопасность особо опасных, технически сложных, уникальных и других объектов капитального строительства при подготовке проектной документации.

Руководство института является экспертами ООО «Центр технических компетенций атомной отрасли», образованного СРО атомной отрасли и имеет соответствующие сертификаты Российской Федерации.

In 2010, the institute was admitted to the membership of SRO NP "Souzatomproekt" (Russian Federation) with the presentation of competency certificate for the works, which influence the safety of special dangerous, technically complicated, unique and other objects of capital construction during the preparing of project documentation.

Institute management is experts of "Center of technical competences of nuclear field", LLC, established by SRO of nuclear field and has the appropriate certificates of Russian Federation.

Наши основные партнеры:

Россия:
ОАО «Силовые машины» (г. Санкт-Петербург)
ОАО «Атомэнергопроект» (г. Москва)
ЗАО Институт «Оргэнергострой» (г. Москва)
ООО «Атомэнергопроект» (г. Нижний Новгород)
ЗАО «Предприятие «Атомэнергостройпроект»
ОАО «Атомэнергопроект» (г. Нижний Новгород)

Украина:
Министерство энергетики и угольной промышленности Украины
ГП НАЭК «Энергоатом»
ОП «Запорожская АЭС»
ОП «Южно-Украинская АЭС»
ПАО «Харьковская ТЭЦ-5»
СЕ «Мироновская ТЭС»
«Змиевская ТЭС»
«Луганская ТЭС»
ЗАО «Харьковская ТЭЦ-3»
ОП «Атомэнергомаш»
ПАО Киевский институт «Энергопроект»
«Теплоэлектропроект» (г. Донецк)
«Укрэнергосетьпроект»
Институт проблем экологии
ЧАО «Экоэнергия» (Алчевский металлургический комбинат)
ЗАО НПП «Радий»
ЗАО «Импульс».

Our key partners:

Russia:
OJSC "Power Machines" (Saint-Petersburg)
OJSC "Atomenergoproekt" (Moscow)
CJSC Institute "Orgenergostroy" (Moscow)
"Atomenergoproekt", LLC (Nizhniy Novgorod)
CJSC "Atomenergostroyproekt company"
OJSC "Atomenergoproekt" ((Nizhniy Novgorod)

Ukraine:
Ministry of Energy and Coal Industry of Ukraine
NNEGC "Energoatom"
SE "Zaporizhzhya NPP"
SE "South Ukrainian NPP"
PJSC "Kharkovskaya TPP-5"
BU "Mironovskaya TPP"
"Zmievskaya TPP"
"Luganska TPP"
CJSC "Kharkovskaya TPP-3"
SE "Atomenergomash"
PJSC Kiev institute "Energoproekt"
"Teploelektroproekt" (Donetsk)
"Ukrenergosetproekt"
Institute of ecology problems
CJSC "Ecoenergy" (Alchevsk iron and steel works)

CJSC SPA "Radiy"
CJSC "Impulse".

Проектирование АЭС

По проектам института сооружено и введено в эксплуатацию 22 млн. кВт на АЭС с реакторами ВВЭР-1000 и РБМК-1000.

Институт является генеральным проектировщиком Южно-Украинской и Запорожской АЭС, принимал участие в проектировании Ровенской АЭС, Балаковской, Ростовской, Курской и Смоленской АЭС в России и АЭС «Козлодуй» в Болгарии.

К числу наиболее мощных станций, спроектированных институтом, относятся:

Наименование станции (объект)	Страна	Мощность, МВт	Основное оборудование	
			турбины шт х тип	реакторы шт х тип
Запорожская АЭС	Украина	6000	6 х К-1000-60/1500	6 х ВВЭР-1000
Курская АЭС (машзал)	Россия	3000	6 х К-550-60/1500	3 х РБМК-1000
Южно-Украинская АЭС	Украина	3000	2 х К-1000-60/1500 1 х К-1000-60/3000	3 х ВВЭР-1000
Смоленская АЭС (машзал)	Россия	2000	4 х К-550-60/1500	2 х РБМК-1000
Балаковская АЭС Бл. 1, 2 (машзал)	Россия	2000	2 х К-1000-60/1500	2 х ВВЭР-1000
АЭС «Козлодуй» Бл. 5, 6 (машзал)	Болгария	2000	2 х К-1000-6-/1500	2 х ВВЭР-1000
Ровенская АЭС	Украина	1000	1 х К-1000-60/3000	1 х ВВЭР-1000
Ростовская АЭС Блок 1 (машзал)	Россия	1000	2 х К-1000-60/1500	1 х ВВЭР-1000

Designing of Nuclear Power Plants

Under institute's designs, 22 million kW of NPPs with VVER-1000 and RBMK-1000 reactors were built and put into operation.

The institute is a chief designer of the South-Ukrainian and Zaporizhzhya NPPs. It has taken part in designing the Rivne NPP (Ukraine); Balakovo, Rostov, Kursk, and Smolensk NPPs (Russia); and NPP Kozlodui (Bulgaria).

Among the largest power plants designed by the institute are as follows:

Name of power plant (portion)	Country	Power output, MW	Main equipment	
			turbines No. x type	reactors No. x type
Zaporizhzhya NPP	Ukraine	6000	6 x K-1000-60/1500	6 x VVER-1000
Kursk NPP (turbine building)	Russia	3000	6 x K-550-60/1500	3 x RBMK-1000
South-Ukrainian NPP	Ukraine	3000	2 x K-1000-60/1500 1 x K-1000-60/3000	3 x VVER-1000
Smolensk NPP (turbine building)	Russia	2000	4 x K-550-60/1500	2 x RBMK-1000
Balakovo NPP Units 1 & 2 (turbine building)	Russia	2000	2 x K-1000-60/1500	2 x VVER-1000
NPP Kozlodui, Units 5 & 6 (turbine building)	Bulgaria	2000	2 x K-1000-6-/1500	2 x VVER-1000
Rivne NPP	Ukraine	1000	1 x K-1000-60/3000	1 x VVER-1000
Rostov NPP Unit 1 (turbine building)	Russia	1000	2 x K-1000-60/1500	1 x VVER-1000






Наша деятельность *сегодня*

В настоящее время институт занимается реконструкцией и техническим перевооружением атомных и тепловых электростанций, а также повышением безопасности, надежности эксплуатации атомных электростанций. Институт выполняет комплексное проектирование газотурбинных электростанций (ГТУ), парогазовых установок (ПГУ) и других энергетических объектов.

Основные работы института последних лет:

Наименование станции (объект)	Страна	Наименование работ
АЭС:		
Запорожская АЭС	Украина	Проектные работы по повышению безопасности и надежности работы энергоблоков. Продление сроков эксплуатации действующих энергоблоков. Проект сухого хранилища отработанного ядерного топлива Проекты по компоновки переработки твердых и жидких радиоактивных отходов Разработка отчетов по анализу безопасности
Южно-Украинская АЭС		Проектные работы по повышению безопасности и надежности работы Проекты по компоновки переработки твердых и жидких радиоактивных отходов Разработка отчетов по анализу безопасности
АЭС «Куданкулам» (Бл. №1 и №2, 2х1000 МВт)	Индия	Рабочая документация по турбинному отделению Рабочая документация по пуско-резервной котельной и другим вспомогательным сооружениям
АЭС «Кайга» (Бл. №1 и №2, 2х220 Вт)		Компоновочные чертежи и чертежи трубопроводов турбогенераторов
АЭС «Раджастан» (Бл. №5 и №6, 2х500 МВт)		Компоновочные чертежи и чертежи трубопроводов турбогенераторов
АЭС «Бушир» (Бл. №1 1000 МВт)	Иран	Проект трубопроводов в машзале
Нововоронежская АЭС-2	Россия	Рабочая документация по турбинному отделению

Our projects *today*

At present, the institute is engaged in reconstructing and technical upgrading of nuclear and thermal power plants as well as in raising of the operational safety and reliability of nuclear power plants. The institute produces complete designs of gas turbine power plants (GTPPs), combined cycle power plants (CCPPs), and other types of power plants.

Among the institute's latest projects are:

Name of power plant (portion)	Country	Description of works
NPPs:		
Zaporizhzhya NPP	Ukraine	Design works for raising the operational safety and reliability of power units Service life extension of operating power units Design of a spent fuel dry storage Designs of treatment facilities for solid and liquid radioactive waste Production of safety analysis reports
South Ukrainian NPP		Design works for raising the operational safety and reliability Designs of treatment facilities for solid and liquid radioactive waste Production of safety analysis reports
Kudankulam NPP (Unit 1 & 2, 2x1000 MW)	India	Detailed design for the turbine building Detailed design for the service standby boiler house and other auxiliary facilities
Kaiga NPP (Unit 1 & 2, 2x220 MW)		Layout drawings and design of turbine generator piping
Rajasthan NPP (Unit 5 & 6, 2x500 MW)		Layout drawings and design of turbine generator piping
Bushir NPP (Unit 1, 1000 MW)	Iran	Design of piping within the turbine building
Novovoronezhskaya NPP-2	Russia	Detailed design of the turbine building

Наименование станции (объект)	Страна	Наименование работ
ТЭС и ТЭЦ:		
Змиевская ТЭС Бл. №8 (300 МВт)	Украина	Проект и рабочая документация по реконструкции с целью восстановления проектной мощности и продление срока службы на 15-20 лет, замена электрофильтров Проект и рабочая документация установки системы сероочистки
Бл. №9 (300 МВт)		Технико-экономическое обоснование реконструкции и технического перевооружения
Трипольская ТЭС Бл. №2 (300 МВт)		Технико-экономическое обоснование реконструкции и технического перевооружения
Харьковская ТЭЦ-3		Рабочий проект установки турбогенератора мощностью 20 МВт Реконструкция системы техводоснабжения
Разданская ТЭС Бл. №5 (300 МВт)	Армения	Технико-экономическое обоснование и рабочий проект по модернизации блока с надстройкой газовыми турбинами
ТЭС «Нассирия» Бл. 4×200МВт	Ирак	Проект реконструкции автоматизированных систем управления технологическими процессами (АСУТП)
ТЭС «Южный Багдад» Бл. №3 и №4 (2х50МВт)		Проектная документация по замене устаревшего оборудования «Джемерал Электрик»
ТЭС «Обра» Бл. 5х50МВт	Индия	Реконструкция
Другие энергетические объекты:		
Газотурбинная электростанция комбинированного цикла (ГТС КЦ), 2х151,5 МВт	АМК (Алчевский металлургический комбинат), г. Алчевск, Украина	Проектная и рабочая документация
Дизель-электростанция (ДЭС), 25 МВт	г. Москва, Россия	Проектная документация

Name of power plant (portion)	Country	Description of work
TPPs and CHPPs:		
Zmievskaya TPP Unit No. 8 (300 MW)	Ukraine	Basic and detailed design for reconstruction to restore the unit to the designed power output and to extend its service life by 15 to 20 years, replacement of electrical precipitators. Basic and detailed design for installation of a desulphurization system
Unit No. 9 (300 MW)		Feasibility study of reconstruction and technical upgrade
Tripolskaya TPP Unit No. 2 (300 MW)		Feasibility study of reconstruction and technical upgrade
Kharkovskaya CHPP-3		Detailed design of a 20 MW turbine generator. Reconstruction of a service water supply system
Razdan TPP Unit No. 5 (300 MW)	Armenia	Feasibility study and detailed design of unit modernization by adding gas turbines
Nassiria TPP Unit 4×200MW	Iraq	Reconstruction project of distributed control systems (DCS)
South Baghdad TPP Units No.3 & No.4 (2x50MW)		Basic design for replacement of the outdated equipment manufactured by General Electric
Obra TPP Unit 5x50MW	India	Reconstruction
Other power plants:		
Gas Turbine Combined Cycle Power Plant (GT CCPP), 2x151.5 MW	AISW (Alchevsk iron and steel works), Alchevsk, Ukraine	Basic and detailed design
Diesel engine power plant (DEPP), 25 MW	Moscow, Russia	Basic design

Запорожская АЭС

Zaporizhzhya NPP

Газотурбинная электростания комбинированного цикла мощностью 303 МВт (ГТС КЦ)

г. Алчевск, Алчевский металлургический комбинат

303 MW gas turbine combined cycle power plant (GT CCPP)

Alchevsk, Alchevsk iron and steel works

KIEV INSTITUTE OF ENGINEERING SURVEYS AND INVESTIGATIONS "ENERGOPROJECT" STATE COMPANY

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- Fax: +380 044 236 31 42
- E-mail: atomep@ukr.net
- Web: www.atomep.com.ua

History of the Institute

Since 1944. Till 31.03.1988 - engineering investigation department of the Kiev branch of All-Union State Design Institute (VSPI) "Teploelectroproject" the Kiev branch of the Institute "Atomteploelektroproekt" Kiev Scientific - Research and Design;

Design Branch of the Institute "AEP";

From 31.03.1988 - Kiev Institute of Research Division "AEP (former engineering investigation department) were allocated as an independent organization as a production unit at the expense of a separate economic balance;

From 05.06.1991 - renamed the Kiev Institute survey "AEP" with the theme of the development of science - the technical documentation of engineering surveys, mainly to justify the design and construction of the nuclear power and thermal power;

On 30.12.1991 renamed Kiev State Institute of Engineering Research and Studies "Energoprojekt" as the successor of the Kiev Institute survey "AEP";

On 13.01.2003 renamed State Enterprise "Kyiv Institute of Engineering Research and Studies" Energoprojekt, which refers to the management of the Ministry of Fuel and Energy of Ukraine.

State enterprise "Kyiv Institute of Engineering Research and Studies" Energoprojekt under the Ministry of Energy and Coal Industry of Ukraine.

Institute approved the basic organization for the development and updating of technical standards in the direction of engineering surveys and studies.

The Institute is the leading organization in the development of scientific and technical documentation of the following directions:

- elevated groundwater thermal and nuclear power plants during construction and operation;
- Organization of hydrogeological services at venues TPP and NPP;
- seismological studies and seismic micro zoning for justification of NPP;
- assessment methods karst areas TPP nuclear and hydro power;
- the introduction of various geophysical methods in engineering research;
- Development of industry regulations in the field of engineering research for energy facilities.

The Institute participated in the inventory development sites for new nuclear power plants in Ukraine as a priority, the "Action Plan for the implementation of the energy strategy of Ukraine for the period up to 2030."

Institute has experience at nuclear, thermal and hydropower Ukraine, foreign objects in Russia, Belarus, Cuba, Bulgaria, Syria, Libya, Iraq, North Korea, Republic of Equatorial Guinea.

The Institute cooperates with foreign firms in France, USA, England, Germany, Italy, performing design work on the orders of Ukraine.

The Institute has the archive of survey materials for thermal and nuclear power plants.

The Institute is fully licensed to carry out all geotechnical investigations

Engineering geological and hydrogeological investigations

- *Assessment of the karst areas , zoning by the conditions and extent of karst development ;*
- *Assessment of dispersed and rocky soils by complex method for structure foundations;*
- *Design, organization, monitoring of the groundwater regime , materials analysis , assessment of technological component ;*
- *Geo-ecological research;*
- *Determination of the dynamic characteristics of soils;*
- *Forecast of changes in the groundwater regime in the construction and operation of the facility under the influence of techno genic factors.*

For obtaining the regulatory and calculated values of physical parameters and filtration properties of soils "in situ" and in vitro the Institute carries out a complex field and special geotechnical works:

- *pressiometric testing of soil by the Menard pressure meter ;*
- *soil testing by static loads using stamps of S =2500 - 5000 cm2 in pits and spiral stamp of S = 600 cm2 in wells to the depth of 25-30 m with loads up to 1.0 MPa;*
- *soil testing by dynamic loadings using vibrostamps of S = 10000-13000 cm2 ;*
- *soil testing static and dynamic sounding ;*
- *soil testing for pile foundation option (inventory and reference piles);*
- *Testing of sandy soils of disturbed structure in a large compression unit (PAC -1) to determine the deformation properties of soils with allowance for of lateral pressure and determination of Poisson's ratio in different ranges of humidity and density with loads up to 2.0 MPa.*

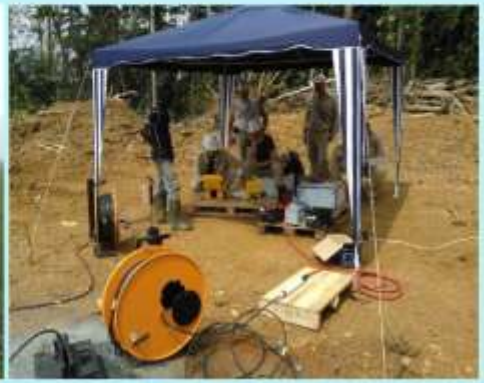
Engineering geophysics

- *Seismic , geoelectric studies, complex of geophysical studies in wells (logging) ;*
- *seismic sounding of crosshole space and rocks to determine the physical and mechanical properties of soils (Young's modulus , Poisson's ratio , shear modulus, bulk modulus , modulus of deformation) in -situ soils;*
- *Monitoring of changes in density and moisture of rocks underlying foundation of the facilities being operated.*
- *complex of geophysical studies in wells ;*
- *Seismic micro zoning by the methods of geotechnical analogies , seismic stiffness , registration of MS and explosions.*

Ionizing radiation sources (IRS) management .

Performed during geophysical research by means of devices with IRS.

Radioisotope research methods to estimate the density and moisture content of soil bases.

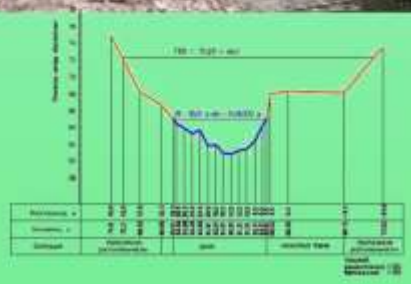


Topographic and geodesic works

- *Complex of topographic and geodesic survey to design large-scale industrial facilities*
- *on-ground survey with topographic digital mapping:*
  - *cadastral survey;*
  - *line survey;*
  - *location survey and staking out of buildings and structures;*
- *study of the dynamics of landslides;*
- *determination of tilt of high engineering structures;*

Hydrology and meteorology

- *engineering and hydrological surveys of wet facilities;*
- *carrying out of hydrological calculations;*
- *meteorological observations for selecting a representative state meteorological station possessing perennial data to determine the climatic conditions in the area of NPP (including microclimatic conditions);*
- *studies of aerologic conditions by stationary points data to determine conditions for dispersion of pollutants in the atmospheric boundary layer.*



SPKTB «ZAPOROZHGIDROSTAL» PJSC

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Private Joint Stock Company
SPKTB «ZAPOROZHGIDROSTAL»
Special Design & Technological Office
Time - proved design solutions

"SPKTB „Zaporozhgidrostal"

Geography of design activities

Far - abroad countries

ALGERIA · ARGENTINA · VIETNAM · INDIA · IRAN · CANADA · KOREA · LITHUANIA · MEXICO · POLAND · SYRIA · CHILE · ECUADOR

ANGOLA · AFGHANISTAN · EGYPT · IRAQ · YEMEN · CUBA · MOROCCO · MONGOLIA · PANAMA · ROMANIA · SOMALIA · TUNISIA

NIGERIA · EQUATORIAL GUINEA · ETHIOPIA

CIS countries

RUSSIA · UZBEKISTAN · GEORGIA · KAZAKHSTAN · MOLDOVA · TURKMENISTAN

BELARUS · AZERBAIJAN · ARMENIA · TAJIKISTAN · KYRGYZSTAN

Special Design & Technological Office
SPKTB «Zaporozhgidrostal»

Special Design & Technological Office "Zaporozhgidrostal" is a leading specialized organization in Ukraine, realizing a range of works in design, engineering, supervision and inspection of mechanical equipment and special steel structures of hydrotechnical constructions in energetic, irrigation and water economics.

The history of SPKTB "Zaporozhgidrostal" takes its rise from 1944 when it was set up on the basis of Dnieprovsky Management "Gidromontazh" for recovery of Dneprovsky hydroelectric power plant destroyed during the war.

For the years of SPKTB "Zaporozhgidrostal" activities there is accumulated great experience in design of complexes of mechanical equipment, developed recommendations, methods of calculation, reports about performed laboratory researches, model tests as well as the results of on-site investigations for the period of operation.

This has made it possible to develop the projects pursuant to which there is manufactured and successfully in operation the mechanical equipment practically at all large-scale water resources developments and power projects in Ukraine, Russia, CIS countries and at 77 projects in 26 countries of Europe, Asia, Africa and Latin America.

Judging by the opinion of the customers, the equipment manufactured as per design of SPKTB "Zaporozhgidrostal" is reliable in operation and competitive at the world market.

High quality is guaranteed by many years experience in the world market and confirmed by acting in SPKTB "Zaporozhgidrostal" of quality management system corresponding to international standards ISO series 9001-2008, certified by certification body TUV NORD CERT as well as appropriate permission of self-regulatory organization SRO.

Technical developments of SPKTB "Zaporozhgidrostal" are asserted by more than 70 inventor's certificates.

SPKTB «Zaporozhgidrostal» has its own informational, normative-technical and design-technological base, equipped with modern computer utilities and copy-duplicator machines, ensuring execution of research and development work with the help of up-to-date software product CAD

Manufacture of mechanical equipment designed by SPKTB «Zaporozhgidrostal» is performed by most technologically equipped factories in Ukraine, such as Zuevskiy power-mechanical plant, Novokakhovskiy plant "Ukrgidromeh", Zaporozhye crane factory "Zaporozhkran", Novokramatorskiy machine-building plant. Except factories of Ukraine, the equipment per projects of SPKTB «Zaporozhgidrostal» is manufactured in Russia on factories (Syzran plant "Tyazhmash", Chekhovskiy plant "Gidrostal", Podporozhskiy mechanical plant, Permskiy plant "Uralgidrostal") as well as factories of Slovenia, Spain, Vietnam, Iran, Mexico.

Installation of equipment is performed by projects of work organization and execution developed by SPKTB «Zaporozhgidrostal».

SPKTB «Zaporozhgidrostal» is considerably experienced in reconstruction and modernization of mechanical equipment and special steel structures of operating power facilities, melioration, navigation and industry.

SPKTB «Zaporozhgidrostal» maintains close cooperation with the largest institutes in Ukraine, Russia and other countries.

SPKTB "Zaporozhgidrostal" building

SPKTB "Zaporozhgidrostal" collective

Special Design & Technological Office
SPKTB «Zaporozhgidrostal»

In SPKTB «Zaporozhgidrostal» there are at work 132 highly skilled specialists, 106 of which have higher education, 46 specialists at the age before 35 years old.

All leading specialists are experienced in projects construction designed by SPKTB «Zaporozhgidrostal»

Today SPKTB «Zaporozhgidrostal» is:

7 specialized departments:

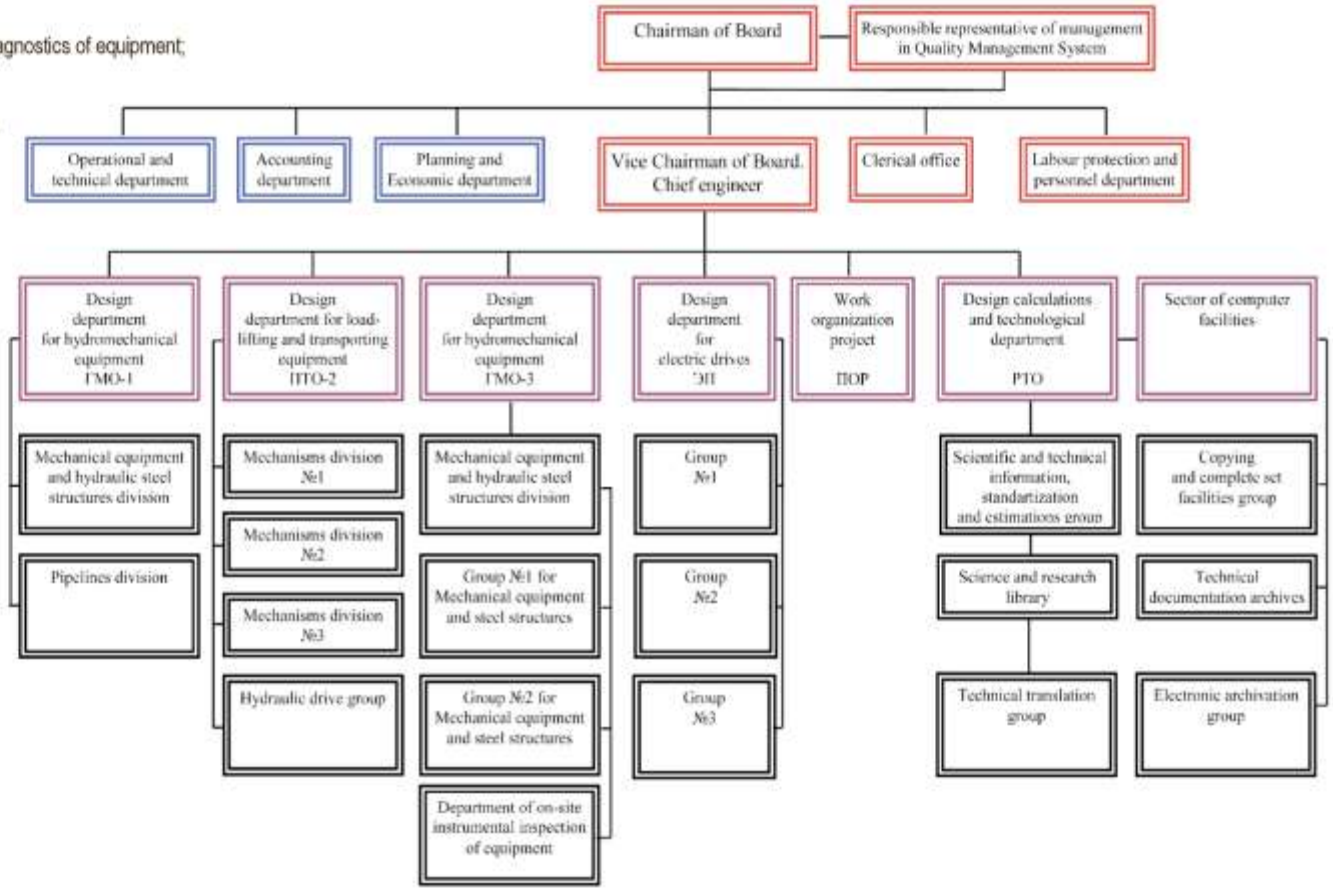
- two departments of hydromechanical equipment;
- department of load-lifting and tranporting equipment;
- department of electrical equipment;
- design department of installation works;
- department of instrumental investigation and diagnostics of equipment;

Accounting department;

Planning and economic department;

Operational and technical department;

Technical Department.



SPKTB «Zaporozhgidrostal» quality assurance system for designing of mechanical equipment

The basis of quality system of hydro-mechanical equipment (HME) is «Quality management system HME» represented as a set of companies standards regulating organizational structure, obligations and responsibility of personnel, control and quality management at all stages of HME realization, corresponding to the requirements of international standard ISO 9001.

Given quality management system is protected by the certificate

TUV NORD 78 100 06 1076-003

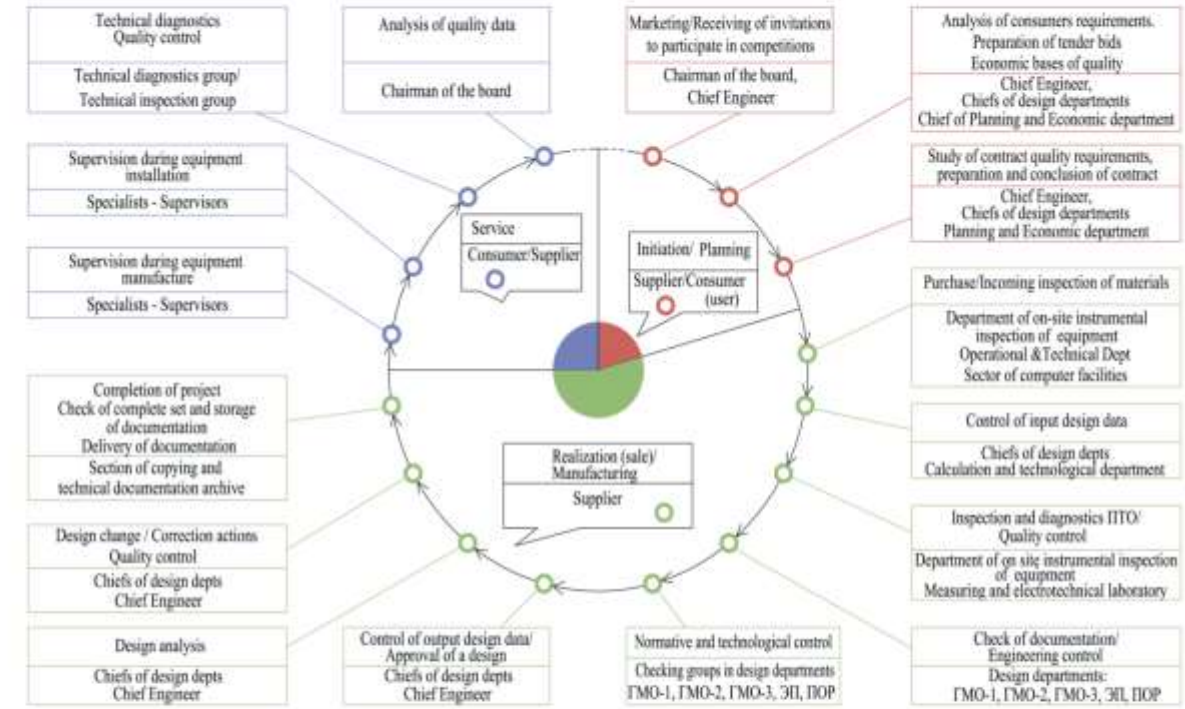
The warrantor of qualitative work performance as for creation of mechanical equipment and special steel structures for hydrotechnical constructions is 70-years experience in design, manufacture, installation and operation as well as required qualification of engineers and technicians.


CERTIFICATE TÜV NORD

Management system as per:
ISO 9001 : 2008

OJSC "SPKTB Zaporozhhydrostal"
Victor's Boulevard, 28
69015, Zaporozhye
Ukraine

Designing, manufacturing, installation of mechanical equipment and special steelworks of hydraulic structures of hydraulic, storage, thermal and nuclear power plants, unique/certified equipment and structures for power engineering and industrial plants. Production of welding materials. Fusion welding of metallic materials.



Realization of quality policy is effected on account of:

- systematic meetings of scientific and technical council on reviewing of engineering developments at different stages of design;
- design, technological and normalized control of all design documentation;
- evaluation of technical level and quality of developments;
- performance of hydraulic calculations and application the results of earlier performed model hydraulic investigations;
- utilization the experience of mechanical equipment operation accumulated due to on-site investigations of hydrotechnical facilities;
- the work of committee on evaluation the quality of design documentation, holding «The days of quality», technical studies, arrangement of review competitions for better engineering solution etc.

List of foreign projects of power engineering and industry, the mechanical equipment of which designed by SPKTB «Zaporozhgidrostal»

ALGERIA	H/s Dzher
ANGOLA	H/s Capanda
ARGENTINA	HPP Los Caracoles; HPP Punta-Negro
AFGHANISTAN	H/s Kokcha; HPP Naghlu
VIETNAM	H/s Hoa Binh; HPP Yali; H/s Chian; HPP Kan Don; HPP Thac Mo; HPP Shrok Fu Mieng; HPP Se San 3a; HPP Se San 4; HPP Buon Kuop; HPP Ban Chak, HPP A-Vuong; HPP Plei Krong; HPP Dong Nai 4; HPP Dong Nai 5; HPP Dak Mi 4 a; Dak Mi 4 в, HPP Son La; HPP Lai Chau
GEORGIA	Khramshes-2 HPP; Tqvarch'eli HPP; Tkibuli HPP; Bzhuzha HPP; Perepadnaya- 2 HPP; Enikendskaya HPP; Galidzga HPP; Adjametsk irrigation system; Rystavskij hydrosystem; Dulese-Mta storage-pool
INDIA	Boccaro Iron & Steel works Water Supply; HPP Indira Sagar; NPP Kudan-Kulam
IRAQ	H/s Al-Baghdadi; H/s Nassiriah; H/s Haditha
IRAN	H/s Aras; Milsko-Muganskaya intake dam; Isfagan Steel works Water Supply; H/s Karkheh; H/s Shahid-Abbaspour; H/s Masjed-E-Soleiman; H/s Karun III; H/s Godar-E-Lander
YEMEN	TPP Al-Khisva
KOREA	Chendinskiy Iron & Steel Works (Bridge cranes)

CUBA	H/s El-Mate; H/s Paso-Seko, H/s El-Khibaro, H/s Minerva, H/s La-Plata, H/s Sasa. Cranes of Hose Marti Steel Works
LITHUANIA	Ignalina NPP
MAROCCO	H/s Mansour-Eddahbi; H/s Al-Wahda
MEXICO	H/s San Rafael; HPP Patla; HPP El Cajon; Gates of Mexico city drainage system; HPP Cerro de Oro; HPP La Yesca
MONGOLIA	Water supply to Ulan Bator city; Bridge crane of MCC Erdenet
PANAMA	HPP Bajo de Mina; HPP Baitun
POLAND	Special gantry cranes for Vlotslavek HPP
ROMANIA	H/s Kosteshty-Stynka
SYRIA	Euphrates hydraulic system; Water intake for water supply to Aleppo city; H/s Northen Kebir; Baath dam on Euphrates river; Irrigation of lands at Meskene massive; H/s Tishrin
SOMALI	H/s Fanole
TUNISIA	Jumin dam
CHILE	H/s La Higuera
ECUADOR	H/s Toachi, H/s Pilaton
EQUATORIAL GUINEA	HPP Sendje
ETHIOPIA	HPP GERDP

HYDROPOWER ENGINEERING

PSPP Dnestovskaya (Ukraine)

HPP Baksanskaya (Russia)

HPP Bajo de Mina (Panama)

HPP Son La (Vietnam)

For hydropower engineering projects of new constraction, modernization and reconstraction, SPKTB "Zaporozhgidrostal" specialize of projects of mechanical equipment and special steel structures are important integral part of hydrotechnical constructions. Mechanical equipment ensures required regulation of water level in water storage basin, regulation of water flow through outlet structures, purification of water from contamination by floating or weighed rubbish, discharge of ice and floating articles through the dam, removal of accumulated deposits, closure of water conveyance channels of hydraulic structures in case of emergency, passage of fish, ships and driftwood through hydro system facilities, repair procedures and number of other functions.

SPKTB "Zaporozhgidrostal" is a leading specialized organization executing a complex of work in design, engineering, designer supervision, investigation, reconstruction and modernization of mechanical equipment, special steel structures, hoist mechanism, operational and constructional cranes of being built and reconstructed projects of power industry, irrigation and water economy.

They are as follows:

-gates of different type with embedded parts;

-guard barriers (trash-racks, rotary water cleaning screens, booms);

-hoist & handling mechanisms for gates and trash-racks including hydraulic drives, screen rakes, cranes with a set of suspended equipment (lifting beams, traverse beams, clamshells);

-equipment of navigation facilities (sluice gates, gates, collars, float-type mooring rings, safeguards for protection from ships impact against the gates);

-penstocks with isolation valves, steel lining, pipe-line supports, expansion bends;

-equipment of fish protection and fish-passing facilities (plain and conical rotary screens, fish-barriers, fish elevators);

-hoist & transportation equipment for erection work;

-crane and service bridges, trestles for mechanisms, gate storages, devices for equipment repair etc.

HPP Capanda (Angola)

HPP Karun III (Iran)

HPP La Yesca (Mexico)

HPP GERDP (Ethiopia)

HEAT - POWER ENGINEERING

Water treatment rotary screens
Ladyzhinskaya SRPP (Ukraine)

Ladyzhinskaya SRPP (Ukraine)

Installation of metal structures
of main building of Tolyatti TPP (Russia)

Installation of penstock of water intake
structure of Zaporozhye SRPP (Ukraine)

For heat-power engineering projects of new construction, modernization and reconstruction, SPKTB «Zaporozhgidrostal» performs development of projects of the following trends:

-mechanical equipment of water intake facilities of process water supply;
-equipment for fine water purification;
-circulating water conduits and industrial water pipe-lines;
-frameworks, roofing and load-bearing structures for technological equipment of machine, boiler, de-aerator, smoke extractor plants and other auxiliary facilities;
-hoist and transportation mechanisms;
-installation works on main building and auxiliary structures (including smoke chimneys and cooling towers);
-designer supervision during manufacture and installation of equipment and constructions.

Name of project	Country	Name of project	Country	Name of project	Country
Pridneprovskaya SRPP	Ukraine	Barnaulskaya TPP-3	Russia	Berezovskaya SRPP	Byelorussia
Ladyzhinskaya SRPP		Cherepetskaya SRPP		Minsk-2 TPP	
Zaporozhskaya SRPP		Krasnovodskaya TPP		Chishinau-2 TPP	Moldavia
Uglegorskaya SRPP		Krasnoyarskaya SRPP-2		Semipalatinsk TPP	Kazakhstan
Dobrotvorskaya SRPP		Minusinskaya TPP		Ekibastuz-2 SRPP	
Zmievskaya SRPP		Neryungrinskaya SRPP		Shirvan TPP	Azerbaijan
Tripolskaya SRPP		Nevinomysskaya SRPP		Azerbaijan SRPP	
Mironovskaya SRPP		Novo-Cherkasskaya SRPP		Hrazdan SRPP	Armenia
Burshtynskaya SRPP		Tyumenskaya TPP		Novo Angren SRPP	Uzbekistan
Krivorozhskaya SRPP		Vladimirskaya TPP-3		Taxiatash SRPP	
Kirovogradskaya TPP		Yakutskaya SRPP		Tashkent SRPP	
Odesskaya TPP		Zainskaya SRPP		Al-Khisva TPP	Yemen
Chigirinskaya SRPP					

NUCLEAR - POWER ENGINEERING

Balakov NPP (Russia)

Khmelnitsk NPP (Ukraine)

For nuclear power engineering SPKTB «Zaporozhgidrostal» performs development of projects of the following trends:

-mechanical equipment of water intake facilities of process water supply;

-station pipe-lines of process water supply and pipe-lines of safety systems of pump station;

-steel structures of protective shell of reactor compartment;

-hoist and transportation mechanisms;

-organization of installation works;

-special equipment, constructions, accessories for preliminary large-size assembly and performance of large-block erection;

-on-site special production bases for manufacture of constructions;

-designer supervision during manufacture and installation of equipment and constructions.

Name of project	Country
Chernobyl	Ukraine
Khmelnitsk	
Rovno	
Yuzhno-Ukrainsk	
Zaporozhye	
Balakov	Russia
Bashkirskaya	
Kalinin	
Kursk	
Rostov	
Smolensk	
Tatarskaya	
Kudan Kulan	India
Ignalina	Lithuania

Yuzhno-Ukrainsk NPP (Ukraine)

Zaporozhye NPP (Ukraine)

IRRIGATION AND WATER SUPPLY ENGINEERING

Pump station and penstocks of Baksan HPP (Russia)

Main channel of Kakhovka irrigation system (Ukraine)

The following complex of work is carried-out on the installations of land improvement and drainage:

-design of mechanical equipment for pump stations (gates of various type, trash-racks, water purification screens);

-design of hoist and transportation mechanisms, pressure pipe-lines, special hydrotechnical steel structures;

-development the projects of installation of equipment mentioned above;

-development the projects of hydraulic test of pressure pipe-lines;

-designer supervision during manufacture and testing of mechanical equipment;

-instrumental on-site investigation of mechanical and hoist-conveying equipment with issue of technical conclusions including recommendations on elimination of revealed defects and possibility of further operation.

Fish barrier of Dnieper-Donbass channel (Ukraine)

Floating station for lifting the float-type gate of Dangarian irrigation tunnel (Tajikistan)

Name of project	Country
Bazavlutskaya pump station	Ukraine
Dunai-Dnestrovskaya irrigation system	
Inguletskaya irrigation system	
Kakhovskaya irrigation system	
Priazovskaya irrigation system	
Pump stations of Koncha Zaspa-Plyuty	
Severo-Rogachinskaya irrigation system	
Balakovskaya irrigation system	Russia
Krasnodarskaya irrigation system	
Great Stavropol channel	
Agrichai water-storage basin	Azerbaijan
Agstafachay water-storage basin	
Milsko-Mugan irrigation system	
Velishchay water-storage basin	
Verkhne-Karabakh channel	
Verkhne-Khanbulanchay water-storage basin	
Verkhne-Shirvan channel	
Dzher hydraulic system	Algeria
Pump station Nassiriah	Iraq
Aksai irrigation system	Kyrgyzstan
El-Mate hydraulic system	Cuba
La-Plata hydraulic system	
Minerva hydraulic system	
Paso-Seco hydraulic system	
Irrigation of Pavlodar massive	Kazakhstan
Kaushanskaya irrigation system	Moldavia
Land irrigation from Yalpug lake	
Land irrigation of Meskene massive	Syria
Hydraulic system Northern Kebir	
Dangarinskiy hydrotechnical tunnel	Tajikistan
Gissarskiy channel	
Karakumskiy channel	Turkmenistan
Tashauzskiy channel	
Dzhumin dam	Tunisia
Golodnostepskiy channel	Uzbekistan
Dzhizakskaya irrigation system	
Karakumskiy channel	
Karshinskiy diversion channel	

NAVIGATION FACILITIES ENGINEERING

Zaporozhye one-chamber Lock (Ukraine)

Kanev Lock (Ukraine)

SPKTB «Zaporozhgidrostal» performs development of projects of mechanical equipment and special steel structures for navigation and fish-pass facilities, floating and dry docks of shipbuilding and ship-repair yards:

-lock gates of various type (double-leaf, lift-and-falling, rolling);

-gates of various type (plain and radial ones) for lock chamber filling and emptying systems;

- lock-gate mechanisms (rope, chain, rack ones and hydraulic drives);

-handling mechanisms of gates for filling and emptying culverts of lock chambers;

-safety guard devices for protection of gates against ships impact;

-equipment for ship mooring (floating and stationary mooring rings, etc.);

SPKTB «Zaporozhgidrostal» performs development of erection projects of mechanical equipment above mentioned. It performs on-site investigations of mechanical equipment and designer supervision during manufacture, installation and testing.

Name of project	Country
Dneprodzerzhinsk navigation lock	Ukraine
Kakhovka navigation lock	
Kanev navigation lock	
Kiev navigation lock	
Kremenchug navigation lock	
Zaporozhye one-chamber navigation lock	
Zaporozhye three-chamber navigation lock	
Dry dock of Nikolaev ship-buiding plant «Ocean»	
Dry dock of Kerch ship-repair plant «Zaliv»	
Dry dock of Severodvinsk ship-building plant «Zvezdochka»	Russia
Kochetov navigation lock of Volgo-Donskoy channel	
Konstantinov navigation lock of Volgo-Donskoy channel	
Nikolaev navigation lock of Volgo-Donskoy channel	
Nizhnekamsk navigation lock	
The locks of Moscow channel	
Shulbinskiy navigation lock	Kazakhstan

The lock of Moscow channel (Russia)

The lock of Volgo-Donskoy channel (Russia)

The lock of Moscow channel (Russia)

Kakhovka Lock (Ukraine)

Dry dock of Severodvinsk ship-building plant «Zvezdochka» (Russia)

Shulbinskiy navigation lock (Kazakhstan)

MECHANICAL EQUIPMENT
Radial & Plain gates

Radial gate
HPP El Cajon (Mexico)

Radial gate
HPP Se San 3a (Vietnam)

Installation of gate into the slots

Radial gate
HPP Indira Sagar (India)

Plain wheel gate

Plain slide gate
Kanevskaya HPP (Ukraine)

Experience and qualification of SPKTB «Zaporozhgidrostal» in development of articles

Radial gates

Project	Country	Dimension of openings		Head-flow, m	Handling mechanism
		Width, m	Height, m		
Euphrates hydraulic system	Syria	5,5	12,0	67,2	Hydraulic drive L.c. 300 t
Hydrosystem Hoa Binh	Vietnam	6,0	10,0	61,0	Hydraulic drive L.c. 350 t
HPP El Cajon	Mexico	12,0	20,703	19,403	Hydraulic drive L.c. 2x160 t
Hydraulic system Chian	Vietnam	15,0	16,3	16,0	Gantry crane L.c. 2x 125 t
Irganaiskiy hydraulic system	Russia	18,0	15,0	14,5	Rope mechanism L.c. 2x100t
HPP Indira Sagar	India	20,0	18,323	17,193	Hydraulic drive L.c. 2x225 t
HPP GERDP	Ethiopia	4,5	5,5	101,5	Hydraulic drive L.c. 2x130 t

Plain gates

Project	Country	Dimension of openings		Head-flow, m	Handling mechanism
		Width, m	Height, m		
H/s Hao Binh	Vietnam	5,65	13,22	84,0	Hydraulic drive L.c. 800t
HPP El Cajon	Mexico	6,244	7,95	71,13	Hydraulic drive L.c. 270 t
H/s Capanda	Angola	6,8	8,6	49,7	Gantry crane L.c. 160 / 2x50 t
HPP Yali	Vietnam	15,0	16,3	16,0	Gantry crane L.c. 2x125 t
Baath dam	Syria	14,5	16,0	26,25	Rope mechanism L.c. 2x200 t.
Cheboksarskaya HPP	Russia	20,0	16,0	16,0	Gantry crane L.c. 2x225 t
HPP GERDP	Ethiopia	6,2	7,6	150,3	Hydraulic drive L.c. 360 t

MECHANICAL EQUIPMENT

Penstocks & Lifting beams

Penstock of HPP A-Vuong (Vietnam)

Penstocks of Baksanskaya HPP (Russia)

Penstocks of Kiev PSPP (Ukraine)

Engagement of gate by means of lifting beam

Double-hook lifting beam

One-clamping devices lifting beam

Experience and qualification of SPKTB «Zaporozhgidrostal» in development of articles

Penstocks

Project	Country	Diameter,m	Head-flow, m	Type of laying
Kiev PSPP	Ukraine	3,84	116,3	free-laid, open
Dniepr-Donbass channel	Ukraine	2,0	100	buried
HPP A-Vuong	Vietnam	3,8	416	free-laid, open
Hydrosystem Yali	Vietnam	4,5	260	concreted
Hydrosystem Capanda	Angola	6,4	130	embedded in mining
HPP El Cajon	Mexico	8,0	205	embedded in mining
H/s Masjed –E-Soleiman	Iran	9,5	210	embedded in mining

Lifting beams

Project	Country	Lifting capacity,t	Clear span,t	Type	Number of clamping devices
Boguchanskaya HPP	Russia	230	12,128	hydraulic	one
Kanevskaya HPP	Ukraine	2x210	12,0	hydraulic	two
Kievskaya HPP	Ukraine	2x125	12,0	pneumatic	two
HPP El Cajon	Mexico	120	6,844	mechanical	one
HPP A-Vuong	Vietnam	190	5,2	mechanical	one
Tashlikskaya PSPP	Ukraine	280	8,0	mechanical	one
Kievskaya HPP	Ukraine	2x150	12,0	mechanical	two
Dnestrovskaya PSPP	Ukraine	350	7,5	mechanical	one

LIFTING EQUIPMENT

Gantry & Bridge cranes

Gantry crane L.c. 500/250t
Boguchanskaya HPP (Russia)

Gantry crane L.c. 2x420t
Dnestrovskaya PSPP (Ukraine)

Gantry crane L.c. 2x75/3,2t
HPP La Yesca (Mexico)

Traverse beam L.c. 785t
Dnestrovskaya PSPP (Ukraine)

Bridge crane L.c. 400/50t
HPP La Yeska (Mexico)

Bridge crane L.c. 180+2x70t
Training center of Zaporozhye NPP (Ukraine)

Traverse beam L.c. 720t
HPP La Yesca (Mexico)

Experience and qualification of SPKTB «Zaporozhgidrostal» in development of articles

Gantry cranes

Project	Country	Lifting capacity, t		Crane span,m / Crane base,m	Lifting height, m Main / Auxiliary
		Main	Auxiliary		
Dnestrovskaya PSPP	Ukraine	2x420	16	20,5 / 12,75	56 / 76
Boguchanskaya HPP	Russia	500/250	10	13 / 14	22,27 / 19,84 / 20,5
Zaramagskaya HPP	Russia	63	3,2	12 / 8,05	518 / 522
Shulbinskaya HPP	Kazakhstan	2x350 /2x175	2x80 / 2x16 / 5 / 2	15 / 14	53 / 78 / 84
H/s Capanda	Angola	160	2x50	14,0 / 12,94	58,5 / 65
H/s Hoa Binh	Vietnam	2x250	32	12,5 / 15,32	20,6 / 40
HPP La Yesca	Mexico	2x75	3,2	8,8 / 8,6	110 / 18

Bridge cranes

Project	Country	Lifting capacity, t		Crane span,m / Crane base,m	Lifting height, m Main / Auxiliary
		Main	Auxiliary		
Ignalinskaya NPP	Lithuania	125	20	22 / 5,7	30 / 35
HPP Shakhid-Abbas-Pur	Iran	320	20	23 / 8,1	27 / 25,8
Tupolangskaya HPP	Uzbekistan	160	50	17,5 / 8,8	25 / 27
Lebedinskiy MCC	Russia	400	32	11,41 / 8,8	32 / 50
HPP Sesan-4	Vietnam	250	80+10	19 / 5,27	30 / 6
HPP Alurikin	Ecuador	250	20	15,2 / 8	23 / 30
HPP GERDP	Ethiopia	500	80+16	24,5 / 8,12	23,07 / 23,62

LIFTING EQUIPMENT

Hydraulic drives & Stationary mechanisms

Hydraulic cylinder

Hydraulic drives of hydrosystem San Rafael (Mexico)

Rope winch with pulling force 80 t

Stationary mechanism for handling by gates of navigation lock

Control column

Oil pump plants

Hydraulic drive of HPP El Cajon (Mexico)

Stationary mechanism L.c. 2x63t

Stationary rope mechanism

Experience and qualification of SPKTB «Zaporozhgidrostal» in development of similar articles

Hydraulic drives

Project	Country	Lifting force, holding force, additional pressure force t, full stroke of piston, m	Diameter, piston /rod, mm	Speed of lifting/ lowering, m/min	Pressure of hydrosystem at lifting/ lowering, MPa
H/s San Rafael	Mexico	100-40-0-10,6	320/140	0,58 / 1,5	16,2/0
HPP Los Caracoles	Argentina	193-49-172-3	450/200	0,27/0,22	15,9/11,4
HPP El Cajon	Mexico	200-270-0-9,6	400/160	1,2 /26..1,9	19,9/24,3
H/s Capanda	Angola	300-20-180-5,3	450/220	0,33/0,25	26,1/11,9
Shulbinskaya HPP	Kazakhstan	500-700-150-12,8	710/320	0,745/2,5	15,9/4,0
H/s Hoa Binh	Vietnam	800-500-63-14,8	710/320	0,142/0,113	27/1,7
HPP Yali	Vietnam	450-160-0-7,8	500/220	0,26/2,53	29,9/0

Stationary mechanisms

Project	Country	Type	Lifting capacity, t.	Lifting height, m	Distance between suspension points, m
Ezminskaya HPP	Russia	Chain	50	5,0	one point
Antonovskaya HPP	Russia	Rack	2x15	5,0	3,0
Bajo de Mina	Panama	Rope	2x63	48	3,0
Tyuyamuyunskiy hydrosystem	Uzbekistan	Rope	2x160	20	19,2
Baath dam	Syria	Rope	2x200	18,5	one point

MECHANICAL EQUIPMENT

Trash-racks & Clamshells

Trash-rack of Dneprovskaya HPP (Ukraine)

Trash-rack of Dneprodzerzhinskaya HPP (Ukraine)

Clamshell type «Polypus»

Plain-jaw clamshell

Experience and qualification of SPKTB «Zaporozhgidrostal» in development of articles

Trash-racks

Project	Country	Dimension of openings		Head-flow, m
		Width, m	Height, m	
Pump station Nassiriah	Iraq	6,0	3,9	1,0
Dneprodzerzhinskaya HPP	Ukraine	6,5	18,0	3,0
HPP Yali	Vietnam	7,6	14,0	3,0
HPP La Higuera	Chile	7,0	7,0	1,0
Hydraulic system Capanda	Angola	10,5	14,0	3,0
Shulbinskaya HPP	Kazakhstan	11,5	21,0	3,0

Clamshells

Project	Country	Clamshell type	Number of jaws	Working width
Dnestrovskaya PSPP	Ukraine	Hydraulic clamshell «Polypus»	6	1,73
HPP Dakmi 4a, 4b	Vietnam	Hydraulic clamshell «Polypus»	6	1,73
Shulbinskaya HPP	Kazakhstan	Hydraulic plain-jaw clamshell	1 movable 1 immovable	11,5
Verkhne-Krasnogorskaya HPP	Russia	Hydraulic plain-jaw clamshell	1 movable 1 immovable	7,56
HPP Yali	Vietnam	Hydraulic plain-jaw clamshell	1 movable 1 immovable	7,6

SPKTB «Zaporozhgidrostal»
Reconstruction and modernization of hydrotechnical facilities

During reconstruction and modernization of hydrotechnical facilities, SPKTB «Zaporozhgidrostal» renders comprehensive range of services: complex instrumental investigation of mechanical equipment and structures, design, consulting, designer supervision of manufacture, repair and installation.

At that, there is performed:

- evaluation of mechanical equipment condition;
- diagnostics of hoist equipment with determination of remaining service life;
- accomplishment of design documentation with technical solutions making it possible to reduce the cost and duration of reconstruction, optimize operational conditions.

By force of certified specialists of SPKTB laboratory provided with necessary equipment and having passed accreditation for the right to carry-out measurements by nondestructive test method, there is performed in stages the instrumental investigation of mechanical equipment and special steel structures

In technical reports of performed on-site investigations of equipment and special steel structures there is given complete evaluation of technical condition of equipment and its separate units:

- measurement of main parameters; form and dimensions (availability of general and local deformations);
- wear and tear of sealing, support-travelling units and embedded parts;
- availability of cracks and mechanical damages;
- location and area of sections with general corrosive wear, local corrosive destruction;
- revealing the sections of erosion and cavitation destruction, abrasive wear;
- condition of weld and bolt joints of base metal;
- condition of paint coat;
- measurement of vibrations;
- condition of electrical equipment.

By the results of on-site investigations there is prepared the list of defects and assessment of possibility of further equipment operation, its reconstruction or replacement.

In the last 15 years there is investigated the mechanical equipment of the following projects:

Name of project	Country	Name of project	Country
Kievskaya HPP	Ukraine	Kiev navigation lock	Ukraine
Kievskaya PSPP		Kanev navigation Lock	
Kanevskaya HPP		Kremenchug navigation Lock	
Kremenchugskaya HPP		Dneprodzerzhinsk navigation Lock	
Kahovskaya HPP		Zaporozhye navigation Lock	
Dneprodzerzhinskaya HPP		Kakhovka navigation Lock	
Dnestrovskaya PSPP		HPP Niva-1	Russia
Aleksandrovskaya HPP		HPP Niva-2	
Gaivoronskaya HPP		Verkhne-Tulomskaya HPP	
Severskiy Donets-Donbass channel		Svetogorskaya HPP	
		Lesogorskaya HPP	
Severokrimskiy channel		Dubossarskaya HPP	Moldavia
Channel of Pridneprovskaya HPP		Shardarinskaya HPP	Kazakhstan
		Shulbin navigation Lock	
		Tuyamuunskiy hydraulic system	Uzbekistan

Modernization of HPP of Dnieper river and Dniester river hydraulic power systems (Ukraine)

On-site investigation of mechanical equipment of hydrotechnical constructions

PROJECTS OF EQUIPMENT INSTALLATION

Large-size assembly of sections of highway bridge of Dneprovskaya HPP (Ukraine)

Reloading by A-frame L.c. 170t of new rotor wheels for plant units of Sayan-Shushenskaya HPP

Installation of support frames of flood-gates of protective structures from overflow water of St. Petersburg city

Erection of nuclear reactor vessel

Practically for all hydraulic engineering structures in construction of which SPKTB «Zaporozhgidrostal» takes part, it develops projects of equipment installation.

The most interesting one may mention the following projects:

-dismantling and installation of floating gates, each 850 tons in mass, for the docks of shipbuilding plants;

-large-block installation of protective shells of nuclear reactors 47 meters in diameter and mass 360 tons;

-installation of bridge frameworks 100m long and up to 200 tons by mass;

-installation of power transmission line supports 200 m high, using a tilting self-climbing portal.

-replacement of double-leaf gates of downstream end of Kakhovka lock with the help of special hoist device moving along the lock chamber;

-installation of unique constructions of caissons (spherical supports and support frames of navigation passage C-1 of complex of protective structures from flooding of St.Petersburg city;

-installation of steel lining of vertical shaft 510m deep of turbine penstock of Zaramagskaya HPP-1.

Erecting gauntry crane
L.c. 63/3,2t hoisting height 518m
Zaramagskaya HPP (Russia)

Large-size assembly of protective shell and dome of nuclear power plants

Installation of service gate leaf of the lock by means of special mounting mechanism

Replacement of guard gate of downstream end of Kakhovka lock

List of the most large hydrotechnical projects, the mechanical equipment of which designed by SPKTB «Zaporozhgidrostal» for the last 15 years

Country	Name of project	Power, MW	Mass of mechanical equipment, t	Design completion year
Vietnam	HPP Kan Don	144	1230	2001
Argentina	HPP Los Caracoles	550	646	2001
Uzbekistan	Tupolangskaya HPP	175	546	2001
Russia	Yumaguzinskiy hydraulic system	45	380	2001
Iran	Masjed-E-Soleiman	Penstocks Ø 9,5; H=210 m	2510	2002
Iran	HPP Karun III	2280	5120	2002
Ukraine	Tashlykskaya SRPP	1900	5300	2002
India	HPP Indira Sagar	1000	5058	2003
Vietnam	HPP Se San 3	255	219	2004
Vietnam	HPP A-Vuong	210	3228	2004
Mexico	HPP El Cajon	794	6250	2004
Vietnam	HPP Shrok Fu Mieng	51	1510	2005
Vietnam	HPP Buon Kuop	280	1175	2005
Vietnam	HPP Se San 4	120	2938	2005
Vietnam	HPP Plei Krong	110	547	2005
Russia	Irganaiskiy hydraulic system	400	956	2006
Vietnam	HPP Dong Nai 4	340	1294	2006
Vietnam	HPP Ban Chak	220	956	2006
Algeria	Dzher hydraulic system	Water intake structure	30	2007

Country	Name of project	Power, MW	Mass of mechanical equipment, t	Design completion year
Tadjikistan	Sangtudinskaya HPP	670	413	2007
Chile	HPP La Higuera	155	363	2008
Russia	Boguchanskaya HPP	3000	585	2008
Panama	HPP Bajo de Mina	47	972	2009
Mexico	HPP La Yesca	794	3028	2009
Vietnam	HPP Son La	2400	11757	2009
Vietnam	HPP Dakmi 4a	70	5410	2009
Vietnam	HPP Dakmi 4b	45	895	2009
Panama	HPP Baitun	98	990	2010
Byelorussia	Grodnenskaya HPP	17,8	1056	2010
Russia	Baksanskaya HPP	17	320	2011
Vietnam	HPP Lai Chau	1200	3976	2012
Vietnam	HPP Dong-Nai 5	150	1433	2013
Equatorial Guinea	HPP Sendje	200	3910	2014
Ecuador	Toachi hydraulic system	204	1362	2015
Ecuador	Pilaton hydraulic system	50,4	554	2015
Russia	Moscow channel	Navigation lock	3825	2011
Ukraine	Reconstruction of mechanical equipment of 8 - HPP on Dnieper cascade	4657	–	2016
Ethiopia	HPP GERDP	6000	50712	2016

Special Design & Technological Office
SPKTB «Zaporozhgidrostal»

ATTENTION TO CUSTOMERS !

SPKTB "Zaporozhgidrostal" performs the following works:

-development of the design documentation by regional and international standards ISO: mechanical equipment, special hoist mechanisms and steel structures of hydrotechnical constructions HPP, PSPP, TPP, SRPP, NPP, installations with nonconventional power sources, other projects of power engineering, irrigation and water economy;

- development of projects on organization and execution of works on installation of mechanical equipment, industrial enterprises, high-rise structures, transportation passages, cooling towers etc;

- carrying out investigations of technical condition of hoisting cranes with issue the conclusion about possibility of their further operation;

- carrying out investigations and on-site testing of mechanical equipment and special steel structures of operating hydrotechnical installations with issue of recommendations and technical documentation on reconstruction or modernization.

Enjoying high reputation in the world market, "SPKTB "Zaporozhgidrostal" ensures:

- professional approach;
- high quality;
- carrying out of project design in a short period of time;
- reliability and long-life of equipment and constructions.

We can realize the most large-scale and exclusive designs.

«UKRVODPROEKT» PJSC

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- Fax: +38 044 244-04-21
- E-mail: uvp@uvp-kiev.com.ua
- uvp@ksv.net.ua
- Web:www.uvp-kiev.com.ua

PJSC "Ukrvodproekt" is the successor of the design, survey and research institute "Ukrgiprovodkhoz" that was founded in 1936.

Activities

Engineering survey

Water supply

Sewerage

ISO 9001:200

Roads

Water projects developm

Flood protection

Landscape engineering

UKRVODPROEKT

Irrigation and drainage systems

Institute designs:

- irrigated systems on the area more than 1.8 million ha ;
- drainage systems on the area of 2.2 million ha ;
- open channels and conduits for water transfer.

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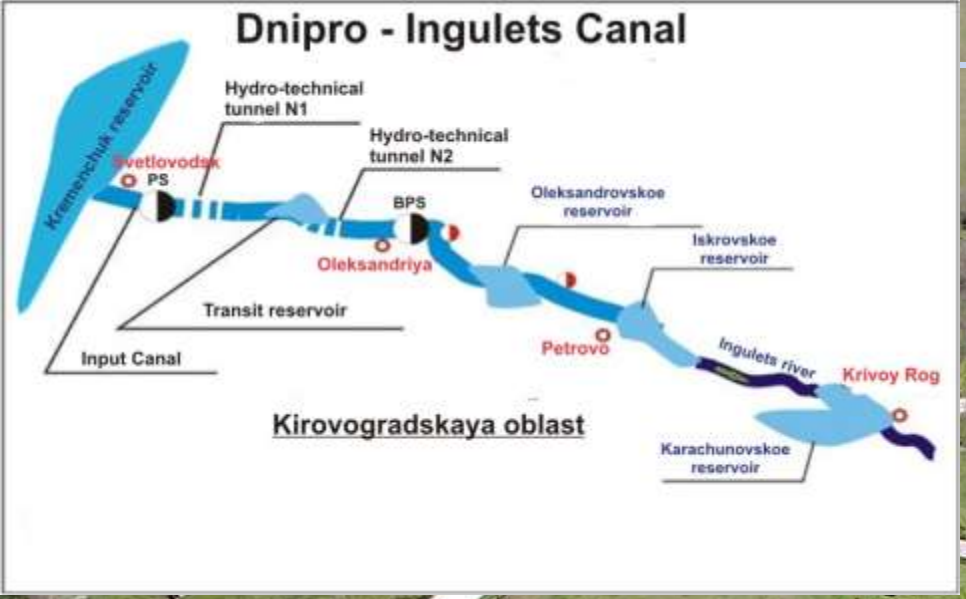
hovka Main Canal

main channel length is 123 km,
n pumping station capacity is 530 m³/s

UKRVODPROEKT



Dnipro - Ingulets Canal

The canal length is 117 k
Capacity is 37 m³/s
Two tunnels of 5 m diam
with the total length of

UKRVODPROEKT

Noth Crimea Canal

The main canal length is 400 km.

The capacity is 340 m³/s.

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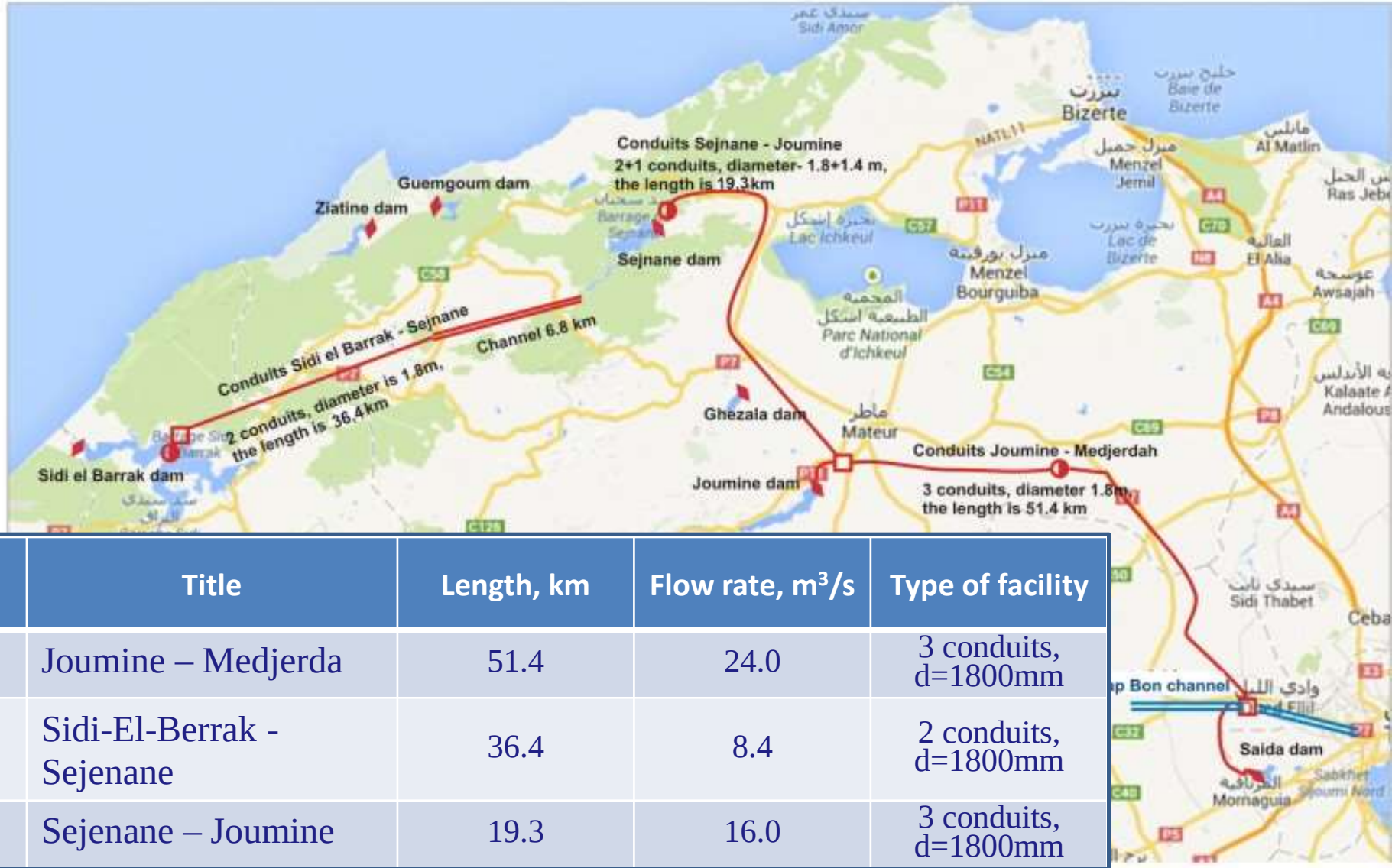
Interbasin water transfer in Tunisia

Scheme of water transference from extreme North of Tunisia



№	Title	Length, km	Flow rate, m³/s	Type of facility
1	Joumine – Medjerda	51.4	24.0	3 conduits, d=1800mm
2	Sidi-El-Berrak - Sejenane	36.4	8.4	2 conduits, d=1800mm
3	Sejenane – Joumine	19.3	16.0	3 conduits, d=1800mm

Water supply of Khenchela, Tamza and N`Siga cities, Algeria.

Water source is reservoir Babar .

Pressure conduits diameter is 500 mm, total length is 34.4 km. Low lift and Boosting Pumping stations with capacity 250 l/s.

Water treatment plant with capacity of 250 l/s.

Water storage tank 600 m^3.

Water towers total volume is 600 m^3.

Head reservoirs total volume is 4000 m^3.

UKRVODPROEKT

Ivanivka combination water service, Ukraine.

The source of water is the Kakhovka main chennale.

The total population of the area is 26 800 people.

Water pipeline capacity is 22 030 m^3/day.

Main conduit length is 132.4 km, diameter is 1000 mm.

The length of the distribution networks is 219.4 km.

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Water supply and sewerage of the Ammonia-carbamide complex (FS), LLP "KazAzot", Kazakhstan.

Situation is industrial zone Aktau (Kazakhstan).

Influent navigation canal has the length of 2.7 km. Port length is 0.8 km.

Pumping station capacity is 32 m^3/s , the head is 63 m.

Pressure conduit diameter is 1800 mm, the length is 950 m.

Assessment of waste channel capacity and existing collector capacity.

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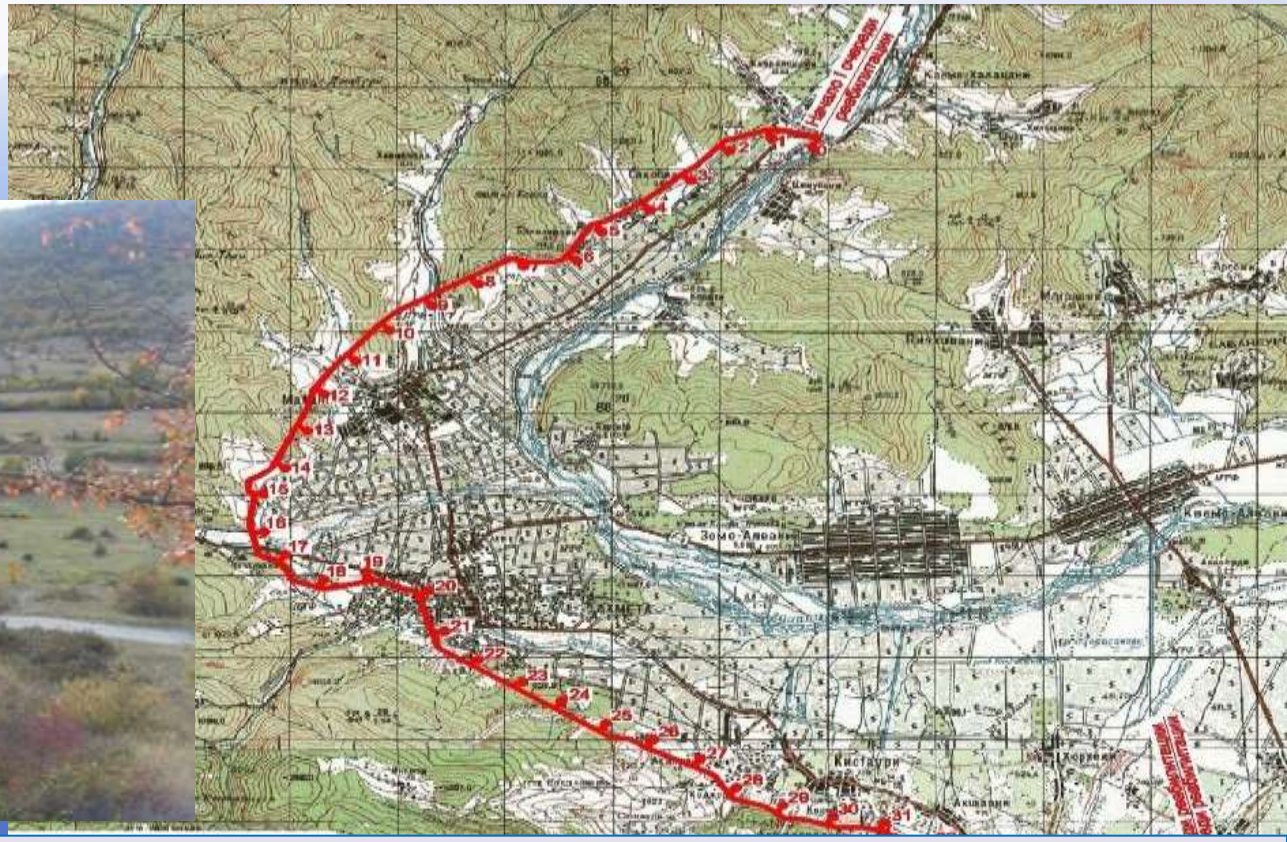
Upper Alazani channel (rehabilitation), Georgia (2013)



Rehabilitation of the existing irrigation channel with total length of 71,4 km and flow rate of 12 m^3/s.

Conduits : 2 steel pipes of 3000 mm with total length of 1720m.

UKRVODPROEKT

Irrigation of the Iori land in the Dedoplistskaro municipality, Georgia (2014)

Reservoir Dalis-

Water supply source is reservoir Dalis-Mta.
Irrigation area is 24500ha.
2 presser pipe lines with diameter of 1600mm, total length is 83.53 km,
2 presser pipe lines with diameter of 1000 mm, total length is 37.13km

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Рис.1

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- Fax: +38 044 279-38-84
- E-mail: metrobud@metrobud.kiev.ua
- Web:www.metrobud.kiev.ua


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ISO 14001:2004


ЛІЦЕНЗІЯ


УКРЭНЕРГОСЕРТ
CERTIFICATE
Public joint-stock company
KYIVMETROBUD
OHSAS 18001:2007


CERTIFICATE
PUBLIC JOINT STOCK COMPANY "KYIVMETROBUD"
ISO 9001: 2008

Tunneling boring machine Herrenknecht EPB 6.35







Cutting diameter - 6,35 m.; Length of complex – 95 m.; Speed of passing (complete cycle) – 100 -185 r.m.; Assembling of tubing is made by the mechanized packer of blocks; Gross weight – 315 tones.

Tunneling boring machine Wirth TB 6.28

Cutting diameter - 6,28 m.; Length of complex – 125 m.; Speed of passing (complete cycle) – 90 -180 r.m.; Assembling of tubing is made by the mechanized packer of blocks; Gross weight – 212 tones.


ENEX

Kyiv metro map

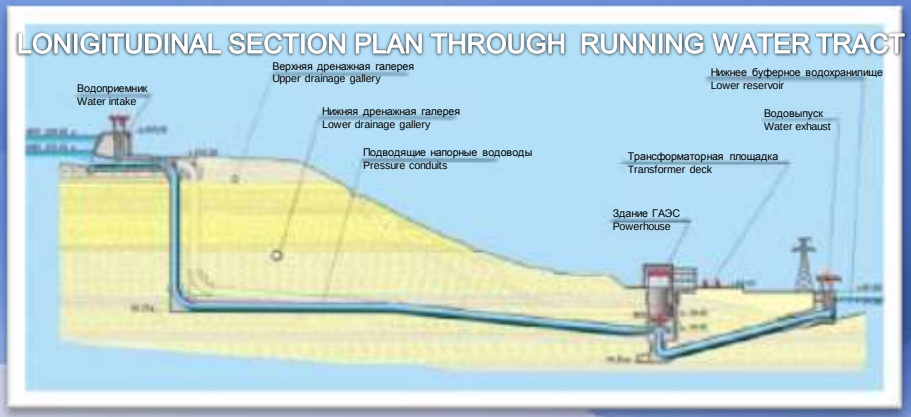
Since 1949, the forces Kievmetrostroya was built 73 km of track. Along the length of subway lines Kiev sure among the top ten European capitals.

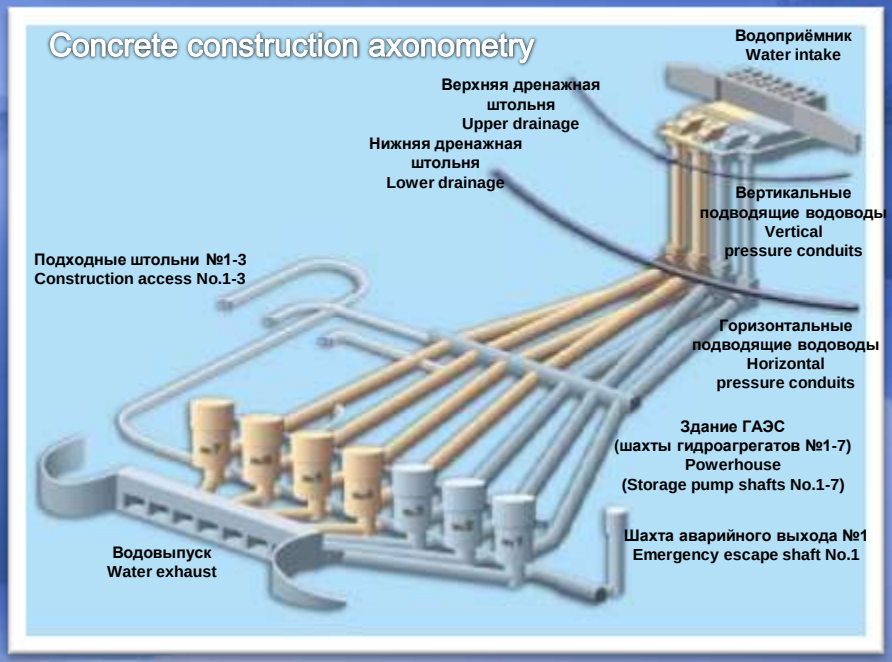
Currently, Kiev metro has three operating lines. The passengers 52 stations with three interchange nodes located in the historical triangle of the city center.

Of the 52 metro stations Kiev 6 - land. Of the 22 underground stations and 24 deep-level fine. The deepest station is the station "Arsenal" (105.5 m). At the same time, it is considered the deepest in the CIS and Europe.

I STAGE OF DNIESTR PUMPED STORAGE – ONE OF THE LARGEST IN EUROPE

Dniester Pumped Storage Power Station have installed capacity 2268/2947MW (generator/ pump mode) contain seven 324/421 MW reversible storage pumps. The structure Dniester Pumped Storage Power Station includes following :upper reservoir;water intake;pressure conduits;power house; buildings and facilities of HPSP yard; Outlet tunnels; Water exhaust; Drainage channel; Lower reservoir with protective constructions complex.





VERTICAL SHAFTS OF DNIESTR PUMPED STORAGE

HORIZONTAL AND GENTLE CONDUITS OF DNIESTR PUMPED STORAGE

Execution of Hydraulic engineering work on Dniester Pumped Power Station Second Stage








International projects:

- Metro station DWARKA SECTOR 21 in New Delhi, India;
- J&K Rail Link Project – Dharam – Qazigund Section. Construction of Tunnel T-74R, India;
- International air terminal in the city of Indore, India;
- International air terminal with approach lines in the city of Raipur, India;
- International air terminal with approach lines auxiliary buildings and facilities, underground parking etc. in the city of Pune, India;
- Hydraulic tunnel in Don main channel (6,0 km, diameter is 6,0 m), Russia;
- Novorossiysk petroleum-pipeline tunnel (length is 3,3 km, diameter is 5,6 m), Russia;
- One-rail tunnel in Idzhevan-Razdan railway line (diameter is 8,5 m), Armenia;
- Other

International air terminal in the city of Indore, India

International air terminal with approach lines auxiliary buildings and facilities, underground parking etc. in the city of Pune, India

Metro station DWARKA SECTOR 21 in New Delhi

J&K Rail Link Project – Dharam – Qazigund Section. Construction of Tunnel T-74R, India

TURBOATOM OJSC

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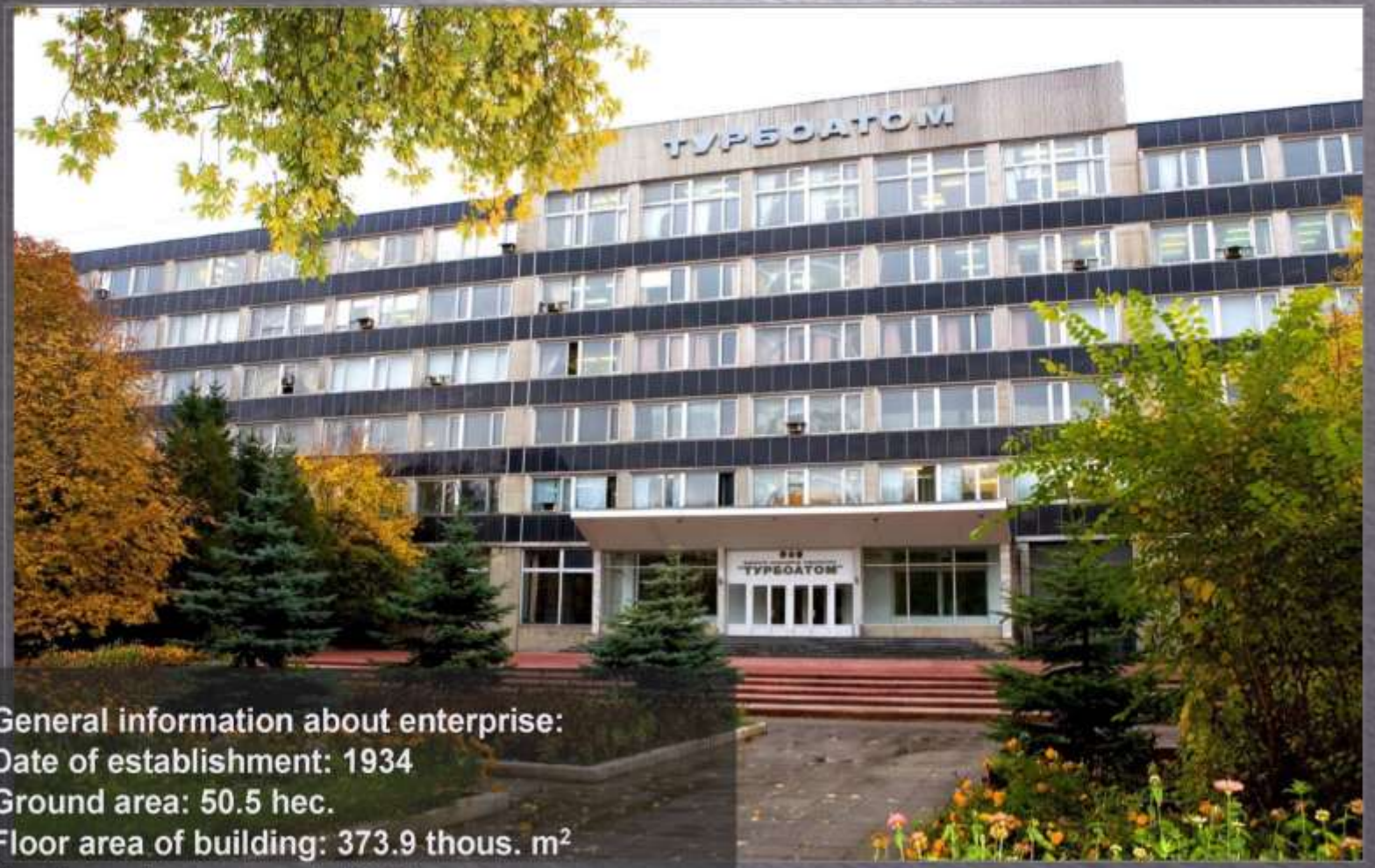
OJSC Turboatom



General information about enterprise:
Date of establishment: 1934
Ground area: 50.5 hec.
Floor area of building: 373.9 thous. m^2
Number of personnel: 5800 persons

General information about the Works

OJSC "Turboatom" is one of the greatest enterprises in the world which is engaged in manufacturing of the power-generating equipment. It was founded in 1934.

Since 1953 the Works manufactures all the types of power-generating equipment for domestic and foreign HPPs and PSPs.

The Works manufactures the reaction hydraulic turbines and hydraulic valves of different types.

Practically, during manufacturing of the turbines the closed cycle in manufacturing of the power-generating equipment is performed: from development and research, manufacturing, assembly and shop tests of the turbines, dispatch – up to erection under supervision and starting and adjusting works. The enterprise performs the works in marketing, engineering, servicing, repair and rehabilitation of the turbines.

OJSC Turboatom

OJSC "Turboatom" – an enterprise which has the International Certificate of Quality Management System ISO 9001:2008

CERTIFICATE OF REGISTRATION

Настоящим подтверждается, что:

Открытое Акционерное Общество «ТУРБОАТОМ»

разработало, внедряет и поддерживает

СИСТЕМУ МЕНЕДЖМЕНТА КАЧЕСТВА

в соответствии с требованиями

МС ИСО 9001:2008

в следующей области

Проектирование, производство, шефмонтаж и обслуживание стационарных паровых турбин, паротурбинных установок, гидравлических турбин, предтурбинных затворов, подогревателей, дымовых вытяжных вентиляторов, конденсаторов для паровых турбин и эжекторов.

Certificate No: QEC27079

Issued: 14 November 2012
Expires: 14 January 2016

Originally Certified: 11 October 1996
Current Certification: 12 November 2012

ANAB IAF

SAI GLOBAL

The OJSC "Turboatom" Quality Management System is executed in a form of documentary presentation and certified with ISO 9001:2008 by the independent Australian Company SAI GLOBAL. Certificate No.: QEC27079.

The main task of the Quality Management System is concentration on Customer's interests on the whole and satisfaction of Customer's requirements in particular; ensuring of standard requirements under execution of processes.

In the Guide consecution and interaction of quality management system processes are defined:

- *Contract Review and Design Control;*
- *Storage and Delivery;*
- *Purchasing;*
- *Production, Inspection and Testing;*
- *Continuous Improvement Cycle.*

QMI Certificate of Registration

Open Joint Stock Company "TURBOATOM"

ISO 9001:2000

1000 MW turbine rotor of Zaporozhskaya NPP

Zaporozhskaya NPP

00 MW turbine rotor

K-325-23.5 steam turbine rotor for «Ekibastuz» TPP (Kazakhstan)

K-240-4.0 steam turbine for «Kaiga» NPP (India)

Steam and gas turbine manufacture

Yakutskaya TPP (Russia)

Gas turbine ГТЭ – 45

Assembly of steam turbine K-300-65-3000 on the works test bench

Balancing stand for steam turbine rotors

steam and gas turbine manufacture

Eight turbines K-220-44 are installed at "Paks" NPP, Hungary

Steam turbine K-160-130 at "Paroshen" TPP, Romania

With capacity from 300 to 350 MW

Year of manufacture	Plant, Unit, Country	Turbine type	Output (MW), Speed (s^{-1})	Steam main/reheat (MPa/°C/MPa/°C)	Note
2012	Krivorozhskaya 1, Ukraine	K-300-240-2	**300** 50	23.6/565/3.5/565	Modernization of assembly units
2013	Zuevskaya 3, Ukraine	K-300-240-2	**300** 50	23.6/565/3.5/565	Modernization of assembly units
2000	Zmievskaya 8, Ukraine	K-325-23.5	**325** 50	23.6/565/3.5/565	HPC – Siemens IPC and LPC – Turboatom
2004	Novocherkasskaya 6, Russia	K-310-23.5-3	**310** 50	23.6/565/3.5/565	
2005	Aksu 3, Kazakhstan	K-325-23.5	**325** 50	23.6/540/3.65/540	
2006	Aksu 1, Kazakhstan	K-325-23.5	**325** 50	23.6/540/3.65/540	
2007	Novocherkasskaya 7, Russia	K-325-23.5	**325** 50	23.6/540/3.65/540	Replacement of HPC, IPC, 1st flow LP
2008	Aksu 2, Kazakhstan	K-325-23.5	**325** 50	23.6/540/3.65/540	
2008	Zuevskaya 2, Ukraine	K-300-240-2	**300** 50	23.6/565/3.5/565	Modernization of assembly units
2008	Novocherkasskaya 7, Russia	K-325-23.5	**325** 50	23.6/540/3.65/540	LPC replacement
2009	Zuevskaya 1, Ukraine	K-300-240-2	**300** 50	23.6/565/3.5/565	Modernization of assembly units
2010	Novocherkasskaya 9, Russia	K-330-23.5	**330** 50	23.6/540/3.6/540	
2011	Aksu 6, Kazakhstan	K-325-23.5	**325** 50	23.6/540/3.65/540	
2012	Zuevskaya 4, Ukraine	K-325-23.5	**325** 50	23.6/540/3.65/540	
2013	Zaporozhskaya 1, Ukraine	K-325-23.5	**325** 50	23.6/540/3.65/540	
2012	Zaporozhskaya 3, Ukraine	K-325-23.5	**325** 50	23.6/540/3.65/540	
2012	Tripolskaya 2, Ukraine	K-325-23.5	**325** 50	23.6/540/3.65/540	

With capacity from 500 to 600 MW

Year of manufacture	Plant, Unit, Country	Turbine type	Output (MW), Speed (s^{-1})	Steam main/reheat (MPa/°C/MPa/°C)	Note
1965	Nazarovskaya 7, Russia	K-500-240	500 50	23.6/540/4.1/540	
1972	Troitskaya 8, Russia	K-500-240-2	**500** 50	23.6/540/4.1/540	
1975	Troitskaya 9, Russia	K-500-240-2	**500** 50	23.6/540/4.1/540	
1976	Reftinskaya 7, Russia	K-500-240-2	**500** 50	23.6/540/4.1/540	
1977	Reftinskaya 8, Russia	K-500-240-2	**500** 50	23.6/540/4.1/540	
1978	Reftinskaya 9, Russia	K-500-240-2	**500** 50	23.6/540/4.1/540	
1978	Ekibastuzskaya 1, Kazakhstan	K-500-240-2	**500** 50	23.6/540/4.1/540	
1979	Ekibastuzskaya 2, Kazakhstan	K-500-240-2	**500** 50	23.6/540/4.1/540	
1980	Ekibastuzskaya 3, Kazakhstan	K-500-240-2	**500** 50	23.6/540/4.1/540	
1980	Reftinskaya 10, Russia	K-500-240-2	**500** 50	23.6/540/4.1/540	
2013	Ekibastuzskaya 1, Kazakhstan	K-540-23.5	**541.6** 50	23.6/540/4.1/540	
2013	Erkovetskaya 1 Russia	K-660-23,5	**660** 50	23.6/540/4.1/540	stages of the project
2014	Slavyanskaya 1 Ukraine	K-800-23,5	**800** **50**	23.6/540/4.1/540	stages of the project

With capacity from 500 to 600 MW

Year of manufacture	Plant, Unit, Country	Turbine type	Output (MW), Speed (s^{-1})	Steam main/reheat (MPa/°C/MPa/°C)	Note
2010	Smolenskaya 2, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2010	Smolenskaya 1, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2011	Leningradskaya 4, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2011	Smolenskaya 3, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2011	Smolenskaya 4, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2011	Smolenskaya 5, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2008	Kurskaya 5, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2008	Kurskaya 6, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2008	Leningradskaya 2, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: -LPC flow path
2008	Leningradskaya 5, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2009	Kurskaya 7, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2009	Kurskaya 8, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2009	Smolenskaya 6, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2009	Leningradskaya 6, Russia	K-550-65/3000	**572.7** 50	6.46/280.4/0.31/265	Modernization: - replacement of LPC flow path
2009	Leningradskaya 7, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2009	Leningradskaya 8, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - flow path of 2 LPC - replacement of 2 LPC flow path
2010	Leningradskaya 1, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2010	Leningradskaya 3, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2010	Kurskaya 3, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path
2010	Kurskaya 2, Russia	K-550-65/3000	**566** 50	6.46/280.4/0.31/265	Modernization: - LPC flow path

With capacity from 750 to 850 MW

Year of manufacture	Plant, Unit, Country	Turbine type	Output (MW), Speed (s^{-1})	Steam main/reheat (MPa/°C/MPa/°C)	Note
1981	Ignalinskaya 1, Lithuania	K-750-65/3000	**808** 50	6.37/280/0.49/263	
1982	Ignalinskaya 2, Lithuania	K-750-65/3000	**808** 50	6.37/280/0.49/263	
1984	Ignalinskaya 3, Lithuania	K-750-65/3000	**808** 50	6.37/280/0.49/263	
1985	Ignalinskaya 4, Lithuania	K-750-65/3000	**808** 50	6.37/280/0.49/263	
1987	Ignalinskaya 5, Lithuania	K-750-65/3000	**808** 50	6.37/280/0.49/263	
1987	Ignalinskaya 6, Lithuania	K-750-65/3000	**808** 50	6.37/280/0.49/263	

With capacity from 1000 MW

Year of manufacture	Plant, Unit, Country	Turbine type	Output (MW), Speed (s^{-1})	Steam main/reheat (MPa/°C/MPa/°C)	Note
1980	Yuzhnoukrainskaya 1, Ukraine	K-1000-60/1500	**1114** 25	5.88/274.3/1.2/250	
1982	Kalininskaya 1, Russia	K-1000-60/1500	**1114** 25	5.88/274.3/1.2/250	
1982	Zaporozhskaya1, Ukraine	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1983	Yuzhnoukrainskaya 2, Ukraine	K-1000-60/1500	**1114** 25	5.88/274.3/1.2/250	
1983	Balakovskaya 1, Russia	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1983	Zaporozhskaya 2, Ukraine	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1984	Kalininskaya 2, Russia	K-1000-60/1500	**1114** 25	5.88/274.3/1.2/250	
1984	Kozloduy 9, Bulgaria	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1985	Balakovskaya 2, Russia	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	

1985	Zaporozhskaya 3, Ukraine	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1986	Zaporozhskaya 4, Ukraine	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1986	Balakovskaya 3, Russia	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1986	Kozloduy 10, Bulgaria	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1986	Rostovskaya 1, Russia	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1987	Balakovskaya 4, Russia	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1987	Zaporozhskaya 5, Ukraine	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1987	Rostovskaya 2, Russia	K-1000-60/1500-2	**1114** 25	5.88/274.3/1.2/250	
1988	Balakovskaya 5, Russia	K-1100-60/1500-2M	**1100** 25	5.88/274.3/1.2/250	
1988	Zaporozhskaya 6, Ukraine	K-1100-60/1500-2M	**1100** 25	5.88/274.3/1.2/250	
1988	Rostovskaya 3, Russia	K-1100-60/1500-2M	**1100** 25	5.88/274.3/1.2/250	
1989	Tatarskaya 1, Russia	K-1100-60/1500-2M	**1100** 25	5.88/274.3/1.2/250	
1989	Belene 1, Bulgaria	K-1100-60/1500-2M	**1100** 25	5.88/274.3/1.2/250	
1989	Bashkirskaya 1, Russia	K-1100-60/1500-2M	**1100** 25	5.88/274.3/1.2/250	
2009	Rostovskaya 2, Russia	K-1000-60/1500-2M	**1100** 25	5.88/274.3/1.2/250	Complete the set of turbine
2011	Rostovskaya 3, Russia	K-1000-60/1500-2M	**1100** 25	5.88/274.3/1.2/250	Modernization of HPC and LPC
2015	Rostovskaya 4, Russia	K-1100-60/1500-2M	**1100** 25	5.88/274.3/1.2/250	

ELEKTROTYAZHMASH STATE ENTERPRISE PLANT

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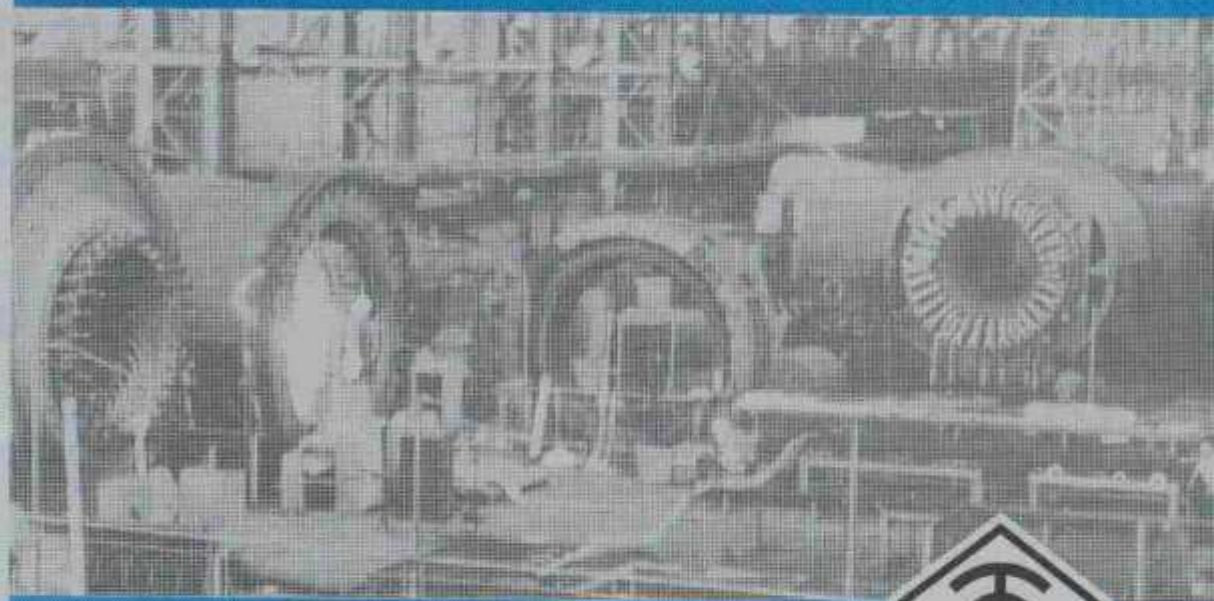


State Enterprise Plant

"Electrotyazhmash"

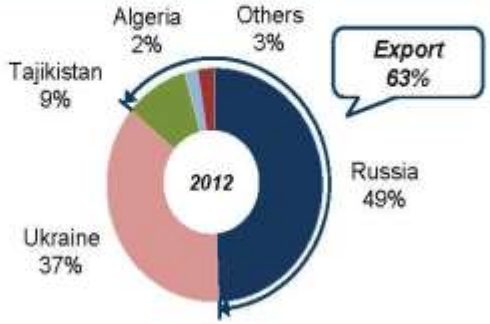
LEADER OF UKRAINE ELECTRICAL ENGINEERING INDUSTRY

TURBOGENERATORS

General information

- Founded in 1946
- Located in Kharkov (Ukraine)
- 100% State-owned
- Specialization – electric equipment for energy, transport, metallurgy and mining
- Products are installed in over 50 countries worldwide
- Annual investments in equipment modernization are $20 million.

Realization structure



Key facts

Annual turnover	$300 million.
Territory	60 hectar
Workshop premises	400 000 sq. m
Personnel	6 700
Quality Certification	ISO 9001:2008

Products range

- Rolling mills and mine hoists
- Unit capacity up to 12,6 MW
- Production capacity 27 units per year

Large PC motors

- Hydro and Pumped-Storage Power Plants
- Unit capacity up to 660 MW
- Production capacity 1 000 MW per year

- Railway and urban electric transport
- Production capacity 1 200 sets per year

Traction electric equipment

Turbogenerators

- Thermal and nuclear power plants
- Unit capacity up to 1 000 MW
- Production capacity 3 300 MW per year

Products of SE plant "Electrotyazhmash" are installed in more then 50 countries

Turbogenerators

Type	Capacity
With complete air cooling	4–120 MW
With complete hydrogen cooling	200–330 MW
With direct hydrogen cooling of the stator core and the rotor winding and water cooling of the stator winding	220–500 MW
Asynchronized with longitudinal and cross excitation	200 MW

Turbogenerator type

TGV-250

Turbogenerator type

TGV-200M

Turbogenerator type

TGV-320-2

Turbogenerator type

TGV-500-2

Турбогенератор ТГВ-215-2ПТЗ для ТЭС «Бандель» (Индия) на испытательном стенде

Ротор турбогенератора ТГВ-325-2АУЗ на участке сборки

Рама сердечника статора турбогенератора

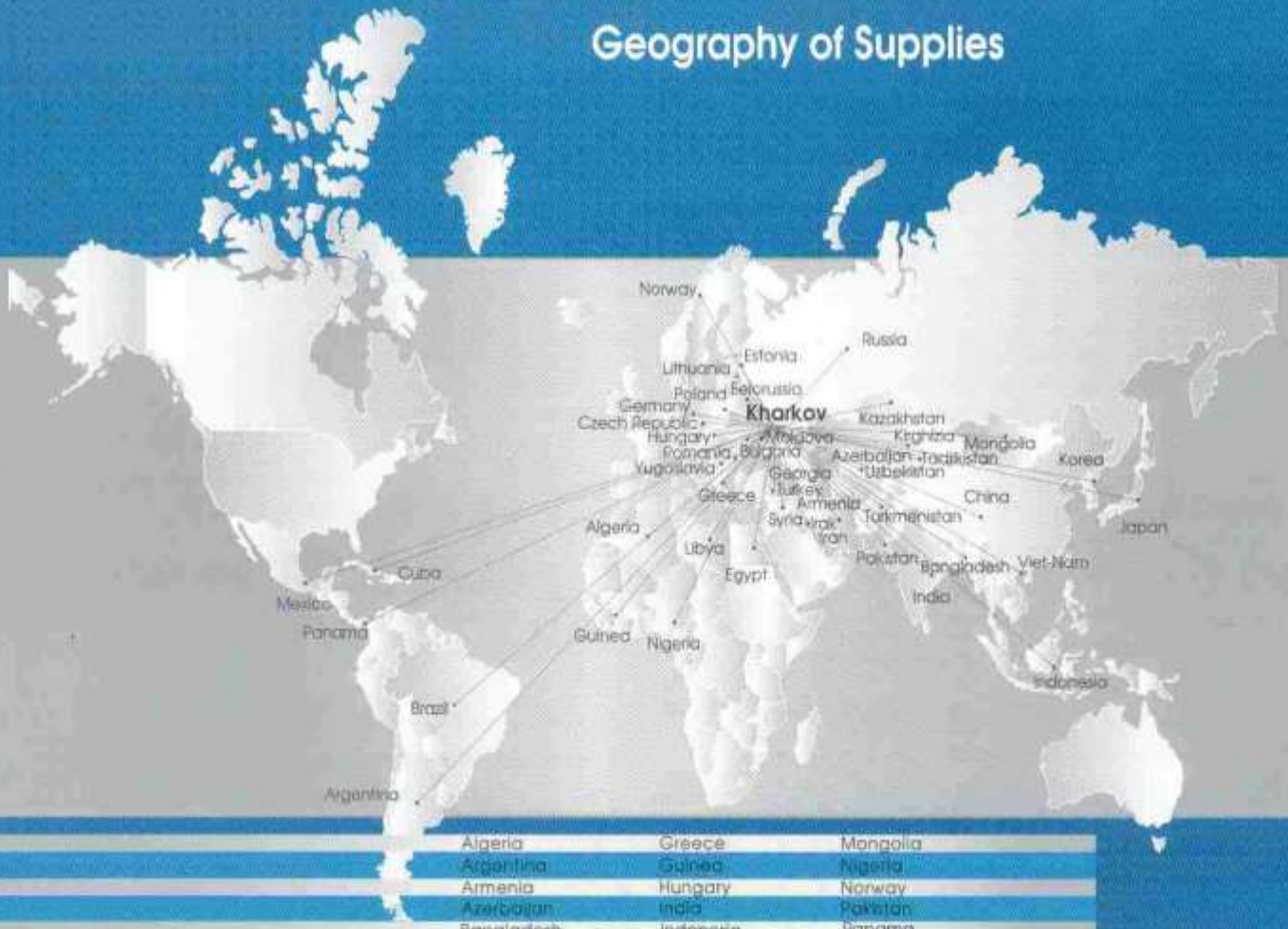
Recently completed projects in thermal power generation

Station	Country	Unit	Equipment	Project	Results
Tripolskaya TPP	Ukraine	No.2 – 2012	TGV-330	Replacement of TGV-300 power 300 MW by TGV-330 MW using existing foundation	Capacity increase up to 330 MW
Smolenskaya SDPP	Russia	No.2 – 2012	TGV-200-2M	Replacement of stator winding	Generator life time extension
Novocherkasskaya SDPP		No.7 – 2011	TGV-300	Replacement of TGV-300 power capacity 300MW by TGV-330-2MU3 using existing foundation	Capacity increase to 350 MW
Ryazanskaya SDPP		No.7 – 2010	TGV-320-2PU3	Replacement of turbogenerator TVV-320-2EU3 without replacement of foundation	Capacity increase to 320 MW
Verhnetagilskaya SDPP		No.9 – 2007	TGV-200	Replacement of stator	Turbogenerator capacity increase to 220 MW
Nazarovskaya SDPP		No.7 – 2009	TGV-500	Replacement of stator	Turbogenerator life time extension
Troitskaya SDPP		No.8 – 2009	ТГВ-500	Replacement of stator winding	Turbogenerator life time extension

Recently completed projects in thermal power

Station	Country	Unit	Equipment	Project	Results
Luganskaya TPP	Ukraine	No.10 – 2012	TGV-200	TGV-200 stator replacement by TGV-235-2U3 Major repairs of the rotor	Capacity increase up to 210 MW
Kurahovskaya TPP		No. 5 – 2009 No. 6 – 2011 No. 7 – 2010 No. 8 – 2011	TGV-200-2M	Stator winding replacement; Major repairs of the rotor	Generator's capacity increase up to 225 MW and lifetime extension
Zuevskaya TPP		No. 1 – 2011 No. 4 – 2012	TGV-300	Major repairs of the turbogenerator	Turbogenerator capacity increase up to 325 MW and lifetime extension
Aksu TPP	Kazakhstan	No. 1 – 2007 No. 2 – 2011 No. 3 – 2010 No. 4 – 2009 No. 5 – 2012 No. 6 – 2012	TGV-300	Replacement of TGV-300 with a capacity 300 MW by TGV-325-2AU3(M) with a capacity 350 MW without foundation replacement	Turbogenerator capacity increase up to 350 MW
Ekibastuzskaya SDPP-1		No. 4 – 2013	TGV-500	Stator winding supply	Turbogenerator lifetime extension
		No. 1 – current project	TGV-560	Generator TGV-500 replacement by TGV-560 without foundation replacement	Turbogenerator capacity increase up to 560 MW

Geography of Supplies



Algeria	Greece	Mongolia
Argentina	Guinea	Nigeria
Armenia	Hungary	Norway
Azerbaijan	India	Pakistan
Bangladesh	Indonesia	Panama
Belorussia	Irak	Poland
Bulgaria	Iran	Romania
Brazil	Japan	Russia
China	Kazakhstan	Syria
Cuba	Kirghizia	Tadjikistan
Czech Republic	Korea	Turkey
Egypt	Libya	Turkmenistan
Estonia	Lithuania	Uzbekistan
Georgia	Mexico	Viet-Nam
Germany	Moldova	Yugoslavia

STATE ENTERPRISE PLANT
"Electrotyazhmash"

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ZAPOROZHTRANSFORMATOR PJSC

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RELIABLE PARTNER
RELIABLE EQUIPMENT

ZTR
ZAPOROZHTRANSFORMATOR

Company

Group «Energy Standard»

ENERGY STANDARD GROUP S.A.

- «Energy Standard Group» – financial and industrial group (FIG), main shareholder of ZTR
- FIG «Energy Standard» aims to become one of the key players among the private companies in power engineering branch in Eastern Europe.
- Number of employees – more than 40 000 people

- «Energy Standard Group» develops the following business areas:
  - mechanical engineering
  - production of equipment for oil and gas extraction
  - electrical power engineering
  - river and sea freights
  - ship repair

Power engineering branch of «Energy Standard Group» in Ukraine is represented by the following companies:

Zaporozhtransformator
Zaporozhye city

Zaporozhye cable plant
Zaporozhye city

Frunze company
Sumy city

Small size transformers plant
Zaporozhye city

Super high voltage transformers plant
Zaporozhye city

Turboatom
Kharkov city

Quality

- Integrated Management System, functioning at ZTR, aimed at comprehensive solution of products‘ quality, occupational safety and environmental issues.
- Quality management system corresponding to requirments of the international ISO 9001 standard has been implemented in 1995. After the recertification in 2009 the system complies with ISO 9001:2008 standard.
- In 2011 management system was certified for coorespondence to ISO 14001 and OHSAS 18001 standards.

Management system certificates

ISO 9001:2008
SGS-ICS
2009

OHSAS 18001:2007
Bureau Veritas
2011

ISO 14001:2004
Bureau Veritas
2011

ISO 3834-2:2005
Bureau Veritas
2012

DSTU ISO/IEC 17025:2006

GOST-R ISO 9001:2008
GOST-R, Russia
2009

Products

Products and fields of applications

Products and services

- Power Transformers
  - 1 MVA – 1250 MVA
  - 10 kV - 1150 kV

- Electrical Reactors
  - up to 128 MVAr
  - up to 800 kV

- Controlled Shunt Reactors
  - up to 180 MVAr
  - up to 500 kV

- After Sales Service

- Equipment can be designed and manufactured in accordance with international and local standards:

ANSI BSI IEEE UNE IEC PCT IRAM

Clients

Electricity companies

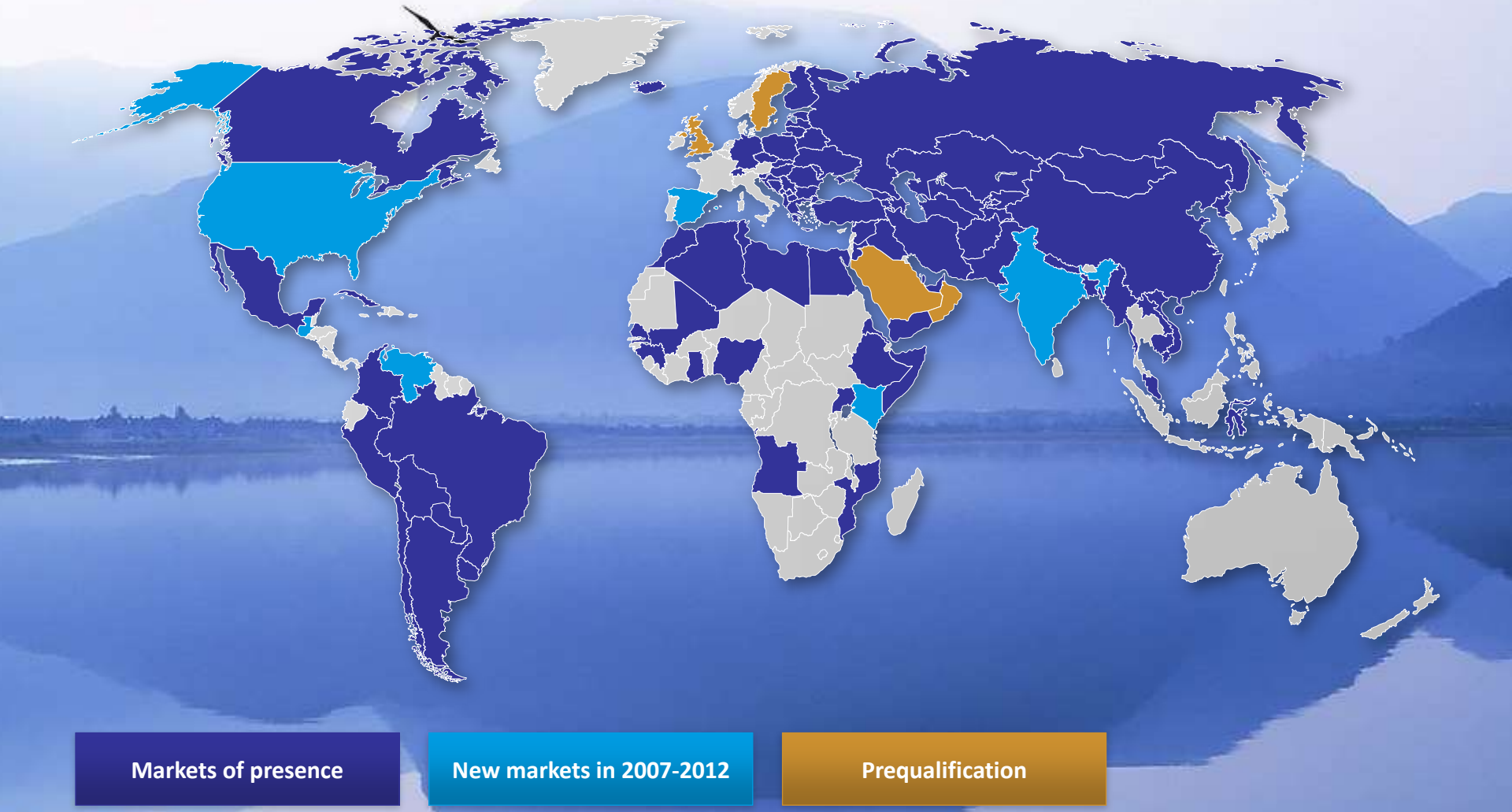
- Power Generation Plants
  - Hydro
  - Heat
  - Nuclear
  - Solar
  - Wind
  - Geothermal
- Transmission grids
  - 110 – 1150 kV substation
- Distribution grids
  - 35 – 132 kV substation

Industrial companies

- Oil & Gas
- Metallurgy
- Railway
- Mining
- Machinery

Market position

Geography of supplies – 86 countries



Markets of presence | **New markets in 2007-2012** | **Prequalification**

UKRHYDROMECH Nova Kakhovka Plant PJSC

- 2 Promyshlennaya str., Kherson region, Nova Kakhovka 74900, Ukraine
- Tel.: +380 55 49 4 21 36
- fax: + 380 55 49 5 18 11
- e-mail: 326840@mail.ru
- Web: www.ugm.com.ua

(The administrative building of the plant)

PJSC "Ukrhydromech"– enterprise specialized in manufacture and supply of hydro-mechanical equipment and metal structures for hydro, thermal and nuclear power plants, special lifting mechanisms for the waterworks.

The main type of product - low heard and high-head gates (plain, segment, sector, flap, ect.), paddles safety cage (trash racks, fine mesh rotary screen), penstocks, steel linings of power tunnels, ad gates chambers for HPS stations and waterworks, welding hinged bearing of segment and sector gates, fixed and mobil trash raking machines, rail crane tracks with accessories for thermal and nuclear power stations, load traverses for lifting and traveling of different loads, temperature and precipitation compensators, intermediate rolling dearings of open-type pipelines, gantries for moving of lifting cranes, steel structures of pipe canals and transport gantries, grabs and scoops for transportation of dry substances.

Besides the specialized hydro technical products, the plant also produces non-standard technological equipment, mechanisms, bearing steel elements of industrial structures and building (including steel framework of hydro, thermal, and nuclear power stations) , tanks and reservoirs.
The main kind of services is supervision engineering at site of the equipment and steel structures delivered by the plant.

Year of foundation - 1960.


(The shopfloor "Assembly and Welding")

Ukraine, Kherson region, 74900, Nova Kakhovka, Promyshlennaya str., Bid. 2, Tel./fax (05549) 5-18-11, E-mail: 326840@mail.ru

Ensuring the quality of products

In 1995 the plant has been certified by German TUV-NORD-CERT for the quality assurance system of ISO 9002-94 and from 2003 quality management system ISO 9001:2000 QMS.

From 2012 quality system certified according to ISO 9001:2008 (Certificate № TIC 15 100 8605 5 firm TÜV Thüringen eV, Jena, Germany).

Designed and implemented a program to achieve the quality objectives. Manufacturing operations that affect the quality are under control. In the Quality Management System factory installed and is running 27 processes.


CERTIFICATE TIC

for the management system
according to ISO 9001:2008

Public Joint-Stock Company
"Novokakhovsky plant "Ukrhydromash"
Bld. 2, Promyshlennaya Str., 74900 Nova Kakhovka,
Kherson region
Ukraine

Scope:

Production of hydromechanical equipment and metal structures for hydroelectric power plants, steam electric stations and nuclear power plants; special lead lifting mechanisms for hydraulic engineering constructions

TÜV

IAF

(Certificate ISO 9001:2008)

(The test of construction of the electric bridge crane 100/20t, HPP Kashkhatau Kabardino-Balkaria Republic of Russia, 2007)

Senior management of the plant set policies and objectives, analyzes the operation of the QMS. Work environment is in controlled conditions, and achieves conformity to product requirements.

Employees undergo regular training to develop and improve skills of many employees there have been a high level of technical knowledge and helps to achieve an objective of the company.

Product requirements established in the contracts and technical documentation. Production provided the design and technological documentation (which are methods and tools for monitoring, measurement, control, product testing and the criteria for its acceptance), industrial equipment and tools.

Ukraine, Kherson region, 74900, Nova Kakhovka, Promyshlennaya str., Bid. 2, Tel./fax (05549) 5-18-11, E-mail: 326840@mail.ru

(The control assembly gate segment for Polotsk hydropower, Belarus, 2013)

(Embedded parts of plain slide gates for Polotsk hydropower, Belarus , 2013)

(Fimshed goods before shipment, 2013)

(Shipment section of plain sliding gate for the Kama HPP, Russia, 2013)

(Shipment section for trash rack Votkinskaya HPP, Russia, 2013)

(Shipment section of plain sliding gate for the Nizhnegorodskaya HPP, Russia, 2013)

Ukraine, Kherson region, 74900, Nova Kakhovka, Promyshlennaya str., Bid. 2, Tel./fax (05549) 5-18-11, E-mail: 326840@mail.ru

DNEPR-SPETSHYDROENERGOMONTAZH PJSC

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- Phone: + 38 044 453 42 00
- Fax: +38 044 453 42 00
- E-mail: dnepr@sgem.com.ua
- Web: www.sgem.com.ua

1955-2014

- The history of “SpetsGydroEnergoMontazh” All-Union Complex Enterprise as a specialized organization dealing with assembly of state-of-the-art hydropower equipment for hydro power plants started in June 1942, when the Company restored the Volkhovskaya HPP near St. Petersburg (formerly Leningrad) destroyed in the war. For the above period SpetsGydroEnergoMontazh personnel assembled and put into operation over thousand hydro power units throughout the former Soviet Union and abroad. All hydro power plants in the former Soviet Union were built with participation of SGEM’s assembly experts and personnel.
- In Ukraine SpetsGydroEnergoMontazh commenced its operations in 1955 at the construction of the Kakhovskaya HPP, at that time it has the name of SGEM Dneprovskyi Assembly Department. Later on, it carried out its specialized work related to construction and overhauls of hydro power plants, pumping plants, water management facilities and civil and industrial objects, the Company increased its production and technical capacity and scope of work done, developed business relations, cooperation with colleagues and partners in Ukraine and abroad.


Днестровская ГАЭС
Dnister PSPP

OUR SERVICES

Mounting and installation works at hydraulic and pump stations, canal locks:

- Reconstruction of turbines
- Assemblage and installation of the new modernised rotor wheels
- Replacement of chambers of rotor wheels
- Reconstruction of guide vanes at the production base of Dnipro-SGEM
- Reconstruction of generators
- Installation of new generators with stacking and packing of cores and windings of stator in station conditions
- Installation of speed control systems
- Installation of control systems
- Installation of automatic control systems
- Installation of industrial pipe-lines, pneumatic systems, pressure water conduits and metal facing
- Control assemblages and reworking of individual units of hydroelectric generating set

Industrial construction:

- Installation of metal structures, prefabricated reinforced concrete and equipment of various technological purpose at water-power engineering objects
- Manufacturing of steel structures and frameworks

Designing and engineering:

- Development of construction organisation projects, projects for organisation and performance of works
- Complex delivery of auxiliary equipment of hydroelectric power stations, pump stations, objects of industrial purpose
- 15-year experience of general contractor's activities


European
Quality Award


УЧАСНИКУ ПРЕЗЕНТАЦІЙНОГО АЛЬМАНАХУ
ДІЛОВИЙ ІМІДЖ УКРАЇНИ
ПАРТНЕРСТВО ТА ІНТЕГРАЦІЯ У СВІТОВУ ЕКОНОМІЧНУ СПІВДРУЖНІСТЬ
Товариству з обмеженою відповідальністю
«Юг-СпецГідроЕнергоМонтаж»


EUROPEAN QUALITY


СЕРТИФИКАТ


ПОДЯКА


ЛАУРЕАТ РЕЙТИНГУ
УКРАЇНА
в номінації
Будівництво
ТОВ
«Юг-Спецгідроенергомонтаж»
Київ 2005


ДИПЛОМ

Rehabilitation activity

From 1996 till 2002 PJSC «DNEPR-SPETSGYDROENERGOMONTAZH» took part in the 1st stage of the Dniepr HPP's cascade rehabilitation.

The main goals of the rehabilitation were to extend the operational period for the hydro plants, to increase their capacities, output, reliability and safety, to improve protection of the environment, to obtain better quality of electricity due to introducing of modern control systems, to improve working conditions that meet current regulations.

As a result of rehabilitation of nine units at Kyiv HPP, six units at Dniepro HPP -1, and one at Kakhovka HPP, total installed capacity at design head increased by 88.1 MW.

The following equipment was completely or partially replaced at Kyiv HPP, Kyiv HPSP, Kremenchuk HPP, Dnieprodzerzhynsk HPP, Kakhovka HPP, Dnipro HPP -1, Dnipro HPP -2 was replaced: generator and block breakers, runner, speed regulation system.

In 2006 (till now) it was the second stage of the Dniepr HPP's cascade rehabilitation. At this stage 64 hydro units of Kyiv HPP, Kyiv HPSP, Kremenchuk HPP, Kaniv HPP, Dnieprodzerzhynsk HPP, Kakhovka HPP, Dnipro HPP -1, Dnipro HPP -2 will be upgraded. It is foreseen to increase the value installed capacity at design head by 235 MW.

Full reconstruction of hydro units includes:

- Assemblage and installation of the new modernized turbines;
- Works on replacement of chambers of driving wheels;
- Modernization of hydro generators in the conditions of station;
- Installation of new systems of regulation;
- Installation of new systems of automatic control.

Rehabilitation, modernization, recovery in Ukraine from 2006 till now

Name of Plant	Country	River	№ of hydro units		Installed capacity, MW		
			Total	Rehabilitation	Before Rehabilitation	After Rehabilitation	Increase
Kyiv HPP	Ukraine	Dnepr	20	19	434.9	478.5	43.7
Kaniv HPP	Ukraine	Dnepr	24	8	451	479	28
Kremenchuk HPP	Ukraine	Dnepr	12	2	686.40	696.0	9.6
Dnieprodzerzhynsk HPP	Ukraine	Dnepr	8	5	356.4	378.40	22
Dnipro HPP -1	Ukraine	Dnepr	9	6	627	669	42
Dnipro HPP -2	Ukraine	Dnepr	8	2	887.60	893.40	5.8
Kakhovka HPP	Ukraine	Dnepr	6	6	323.2	358	34.8
Kyiv HPSP	Ukraine	Dnepr	6	2	235.5	235.5	0
Dnister HPP-1	Ukraine	Dniestr	6	3	702	702	0

Installation activity

Major and Medium-sized Hydropower Plants and Hydropower storage Plants.

Name of Plant	Country	River	Total capacity, MW		№ of units	Year of installation
			Turbine mode	Pumping mode		
Kakhovka HPP	Ukraine	the Dniepr River	300	-	6	1956
Kremenchuk HPP	Ukraine	the Dniepr River	625	-	12	1960
Dnieprodzerzhynsk HPP	Ukraine	the Dniepr River	352	-	8	1964
Kyiv HPP	Ukraine	the Dniepr River	361	-	20	1968
Kaniv HPP	Ukraine	the Dniepr River	444	-	24	1975
Dnipro HPP -1	Ukraine	the Dniepr River	585	-	9	1947
Dnipro HPP -2	Ukraine	the Dniepr River	876.8	-	8	1981
Dnister HPP-1	Ukraine	the Dniester River	702	-	6	1983
Dnister HPP-1	Ukraine	the Dniester River	40.8	-	3	1999-2002
Alexandrovskaya HPP	Ukraine	the South Bug River	10.9	-	2	1999
Tereblya-Rikskaya HPP	Ukraine	the Tereblya River	27	-	3	1956
Krasnopavlovskaya HPP	Ukraine	Dniepr-Donbass Canal	30	-	4	1984
Gayvoronskaya HPP	Ukraine	the South Bug River	5.7	-	3	1964
Kyiv HPSP	Ukraine	the Dniepr River	235	139	6	1972
Dnister HPSP	Ukraine	the Dniester River	2268	2949	7	Commission of 1st unit in 2009, another units under construction

Installation activity

Major and Medium-sized Hydropower Plants and Hydropower storage Plants.

Tashlyk HPSP	**Ukraine**	**the South Bug River**	**906**	**1382**	**6**	**Commission of 1st unit in 2006, commission of 2nd unit in 2007, another units under construction**
La Yeska HPP	Mexico	Rio Grande de-Santjago	380,32	760,64	2	under construction

Presently as a general contractor for the works on assembly of hydro electrical equipment at Ukrainian HPP's PJSC "Dnepr-SGEM" carries out maintenance of the above listed HPP equipment, performing overhauls and current maintenance for hydroelectric units, upgrade subject to full disassembly of the respective unit, replacement of the generator stator core and winding at the plant, full replacement of turbines and further commissioning.

Foreign activity.

PJSC «DNEPR-SPETSGYDROENERGOMONTAZH» take part in Rehabilitation of hydro energy facilities in Russia, Kazakhstan, Hungary, Syria, Egypt, Iraq, Georgia, Mexico, Tadjikistan.

Name of Plant	Country	River	Total capacity, MW	№ of units	
Asuan HPP	Egypt	Nile River	2 160	12	
Yevfrat HPP	Syria	Yevfrat River	824	8	
Shul'binskaya HPP	Kazakhstan	Irtysh River	702	6	
Tkhak Ba HPP	Vietnam		120	3	
Vartsikhe HPP	Georgia	Rioni River	23.80	1	
Tolmachevskaya HPP-2	Russia. Kamchatka.	Tolmachev River	26.20	2	
Buhtarminsk HPP	Kazakhstan	Irtysh River	225	3	
La Yeska HPP	Mexico	Rio Grande de-Santjago	760,64	2	

Товариство з обмеженою відповідальністю

"Енергетично-дорожнє будівництво"

Dear Sirs,

Limited Liability Company «Enerhetychno-dorozhnie budivnytstvo» (Energy and road construction) is a large private enterprise that has been operating in the market of power and transport construction of Ukraine since 2005.

"Enerhetychno-dorozhnie budivnytstvo LLC" has at its disposal technical and personnel potential that allows fulfill works of any complexity level on construction of hydro- technical objects and different kinds of transport infrastructure.

Company and its top management have earned solid reputation both in the Ukravtodor (Ministry of Road Construction) and Ministry of Power and Fuel by successful realization of large-scale infrastructure projects, including road Kyiv-Odessa highway, Tashlyks'ka and Dniester pump-storage power plants, as well as long-term experience in the industry.

Our company is a contractor and is a leader in the development and application of advanced design solutions, new technologies, build structures and special equipment in the energy and transportation construction.

The company provides construction and reconstruction of energy facilities (NPP, PSP), dams, bridges and highways. The company is a member of the All-Ukrainian public organization "Association "UKRHIDROENERGO".

Maintaining and developing the traditions of the energy and transport construction, Ltd. "Enerhetychno-dorozhnie budivnytstvo LLC" has been active in various regions of the country.

During 2006-2013 years the company has taken an active part in the end of construction Tashlykska PSP Kanivska hydroelectric. Besides continuing the construction of the Dniester PSP and several other objects.

"Enerhetychno-dorozhnie budivnytstvo LLC" guarantees customer satisfaction through quality of design, construction, reliability and durability built structures.

The high professional level of engineering and technical personnel and skilled workers allows the company to large-scale projects - from inception of the idea to its full implementation.

In this basis strategy "Enerhetychno-dorozhnie budivnytstvo LLC" remains unchanged: excellent quality, meeting deadlines under highly productive labor.

Kindest regards,
Director ***V.Khmaruk***

CHERNOMORENERGOSPETSMONTAZH LLC

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Web: www.chesmtrans.com.ua

«CHESM» LLC is Ukrainian company, which specializes in a wide range of electric, start-adjusting works, transportation of large-size cargoes. The company was founded in 2000; today «CHESM» LLC is one of the biggest Ukrainian wiring companies. The main base of the enterprise, located in the principal transport nodal point and industrial centre of the country, city of Odessa. The project portfolio consists of projects all over Ukraine and abroad. The total number of employees and partners of the enterprise is more than 500 people. In 2010 the branch in the city of Kiev was opened.

During the years of its existence «CHESM» LLC showed itself as reliable and highly professional collective, which is able to resolve the most complicated objectives, connected with "turnkey" construction of objects.

In the last years the enterprise is actively engaged in expansion of the field of the services rendered, increase of quality, improvement of the technologies of works fulfilled, developing of new directions in power engineering (use of renewable sources of energy).

The pride of the enterprise is professional and qualified employees.

According to the results of work for 2004 by the decision of the council of experts of International image program «Leaders of the 21st century» enterprise was conferred international prize «European Quality».

According to the results of certification audit carried out in September 2010 enterprise has been issued the certificates of quality ISO 9001:2008, OHSAS 18001:2007 and ISO 14001:2004.

For high achievements and professionalism according to the results of 2010 «CHESM» LLC was awarded the winning first place in the nomination «Enterprise of the year» among 18 000 enterprises of Ukraine. It is confirmed by the figures of the national statistics and audits of the rating. KVED 45.21.3 «Construction of main pipelines, communication and power supply lines».

ELECTROYUZHATOMMONTASH *LLC*

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Fax: +38 057 766 20 75

E-mail: office@keum.com.ua

Web: www.keum.com.ua

Limited Liability Company

ELECTROYUZHATOMMONTAZH

Leader in electric installation

QUALITY

RELIABILITY

OPERATIONABILITY

INVITATION TO WIN-WIN COOPERATION

Dear Ladies and Gentlemen!

The Electroyuzhatommontazh Ltd. today is a high-tech Ukrainian company that fulfills works on construction of power projects including design, manufacture, installation of electrotechnical devices, metering, instruments and automation hardware as well as putting electric power stations and substations into operation.

Our prime task is qualitative fulfillment of works. We work in power engineering where safety and reliability of the installed equipment as well as functioning of the system as a whole are of the highest importance. Our company is licensed that implies that we offer only reliable solutions, qualitative products and services!

Partners of the Electroyuzhatommontazh Ltd. are our prime concern and therefore our company is willing and striving to long-term cooperation with them. Our customer is first of all our partner. That is why all design and technical decisions are developed with your active participation and with account of all your needs, and are put into life in compliance with the accepted and agreed design decisions and established demands.

We hope that information given in this booklet will present you the capabilities of our company and the advantages for you as the Partner of the Electroyuzhatommontazh Ltd.

Electroyuzhatommontazh Ltd. General Director — Vadim I. Semchna

OF OUR COMPANY

The Electroyuzhatommontazh Ltd. (EUAM Ltd.) was registered on 17 July 2009 and is the legal successor of the Joint-Stock Company «Corporation Electroyuzhmontazh» (JSC «KEUM») founded in 1993 on the basis of the trust «Electroyuzhmontazh», and has obtained invaluable experience of work at power engineering projects in Ukraine and abroad.

We are an associate to the «Ukrenergospecmontazh» Association.

EUAM Ltd. is a corporate supplier to the State Enterprise NNEGC «Energoatom» (Decision № РШ П 0.46.013-10). Our company is a founder of the Kursatomventelektro Ltd. accredited as an executor of installation and precommissioning of electrotechnical devices and automation systems, of development of manufacturing and technological documentation for projects of the JSC «Concern Electroatom» — a member of the Selfregulating Non-commercial Partnership Organization «Association of organizations engaged in construction, reconstruction an overhaul of the «Souzatomstroy» nuclear power projects.

Principal activities of our company:

- designing of electrical substations and switchgears, of power supply and electrical lighting, of automation and metering systems;
- designing of internal technological systems;
- construction of electrical substations and switchgears up to 35 kV and higher, installation of metering gear and automation systems, mounting of fire extinguishing installations, fire preventing treatment of cable products;
- certification of welders and quality inspectors;
- non-destructive inspection of welded joints including radiographic, capillary testing as well as destructive testing of welded joints;
- measuring and testing of electrotechnical equipment;
- precommissioning of electrotechnical devices and APCS at power engineering projects;
- manufacturing of sensors carrying stands and fixtures for mounting control-and-metering instrumentation and automation hardware at TPP and NPP;
- manufacturing of low-voltage complete devices;
- development of technical and technological documentation (construction organization procedure, work execution procedure, process flowcharts, production processes, etc.).

The quality management system at the EUAM Ltd. is certified for compliance with the demands of international standard ISO 9001.

Our company is swiftly developing: new technologies and kinds of work are readily assimilated, office, production and storage areas are expanding as well as the work volumes are increasing.
Electroyuzhatommontazh Ltd. is a reliable partner and guaranto of the rendered services quality.

PERSONNEL

Electroyuzhatommontazh Ltd. employs experienced specialists who perform their activities with high professionalism and quality assurance.

Leading specialists have been working in power engineering over 10 years, not once have been awarded with honorary diplomas by the Cabinet of Ministers of Ukraine and by the NNEGC "Energoatom".

The company practices the system for attraction of young specialists graduated from higher and special technical educational institutions.

In order to provide safety and high quality of works being carried out the production and engineering personnel regularly undergoes training and retraining in training and expert-technical centers either in Ukraine or in Germany, Sweden.

The company's executive personnel is certified for knowledge of normative and legal documents on nuclear and radiation safety.

Since registration of our company the staff of key employees has remained stable though the personnel is permanently growing in number and the obtained experience and knowledge are constantly increasing. At present our company employs 354 people.

The structure of our company includes production divisions:

- five mounting divisions;
- one electrical equipment precommissioning division;
- production divisions that work at foreign projects;
- design department;
- electrotechnical laboratory;
- laboratory of welding and control with experimental production workshop.

Every employee in every division performs his activity skillfully and responsibly providing thus complete cycle of the project implementation starting with the design documentation development and accomplishing with putting the project into operation.

The primary trade union organization at our enterprise is associated into the Kharkiv regional trade union of power engineering workers and workers of the electrotechnical industry of Ukraine.


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PROJECTS PUT INTO OPERATION

Description of work according to the contract	Works fulfilled by own labor force	Information of the Customer (name, location, contact telephone number)
Project for the 2–nd and 3–rd safety grades instrumentation pulse pipelines laying at NPP «Bushehr» Unit 1	Design works	FSUE «Atomenergoproject» 7, bld. 1, Bakulina Str., Moscow, RF,
Project for radiation control sampling pipelines at NPP «Bushehr» Unit 1	Design works	FSUE «Atomenergoproject» 7, bld. 1, Bakulina Str., Moscow, RF,
Complex of installation and pre–commissioning works at substation 330/110 kV «Poltava»	Installation and pre–commissioning	STBA Pivdennа Zaliznytsia 7, Krasnoarmeyska Str., Kharkiv, Ukraine tel. (057) 724–14–34
Complex of works connected with installation and mounting of the main autotransformer at substation 330 kV «Mirgorod»	Installation and pre–commissioning	STBA Pivdennа Zaliznytsia 7, Krasnoarmeyska Str., Kharkiv, Ukraine tel. (057) 724–14–34
Works on replacement of circuit breakers MB 10 kV by SF6 circuit breakers at substation 110/35/10 kV «Krasnograd»	Installation and pre–commissioning	JSC «Kharkivoblenergo» 149, Plekhanivska Str., Kharkiv, Ukraine tel. (057) 740–14–85, 740–11–25
Construction, mounting and pre–commissioning works at substation 330 kV «Melitopol»	Installation and pre–commissioning	Dniprovska PS to the SE «NPC «Ukrenergo» 2, Grebelna Str., Zaporozhye, Ukraine tel. (061) 252–35–70
Reconstruction of substation 110/35/10 kV «Mashevka»: reconstruction of switchgear 110 kV	Supply of equipment, mounting and pre–commissioning	JSC «Poltavaoblenergo» 5, Stary Podol Str., Poltava, Ukraine tel. (0532) 516–147
Construction, mounting and pre–commissioning works at substation 330 kV «Artsyz»	Installation and pre–commissioning	Southern PS to the SE «NPC «Energostrom» 11, Kobletska Str., Odessa, Ukraine tel. (048) 730–17–61, 730–17–35
Construction, mounting and pre–commissioning works for accomplishment of the substation 330 kV «Mirgorod» reconstruction	Installation and pre–commissioning	STBA Pivdennа Zaliznytsia 7, Krasnoarmeyska Str., Kharkiv, Ukraine tel. (057) 724–14–34
Supply of equipment, installation and pre–commissioning at substation 110/35/10 kV «Kremenchug–gorod»	Installation and pre–commissioning	JSC «Poltavaoblenergo» 5, Stary Podol Str., Poltava, Ukraine tel. (0532) 516–147
Electrical equipment installation and pre–commissioning on reconstruction of the power supply system for the arc steel furnace at the machine–building plant	Installation and tpre–commissioning	JSC «Novokramatorsky Machine–Building Plant 5, Ordzhonikidze Str., Kramatorsk, Donetsky Region, Ukraine
Construction and mounting works on reconstruction of P&A relays and anti–accident automatics system at substation 330 kV «Trykhaty», substation 330 kV «Pobuzhie»	Installation and pre–commissioning	SE «NPC «Ukrenergo» 25, Kominterna Str., Kyiv, Ukraine tel. (044) 287–67–47, 238–32–64

Description of work according to the contract	Works fulfilled by own labor force	Information of the Customer (name, location, contact telephone number)
Installation of electrotechnical equipment for the workshop of mixtures at the «KnaufGips Donbass» plant	Installation and pre–commissioning	Knauf Gips Donbass Ltd. 1, Volodarskogo Str., Soledar, Donetska Region, Ukraine
Installation and pre–commissioning of devices of P&A relays and anti–accident automatic system at substation 330 kV «Adzhalykska»	Installation and pre–commissioning	SE «NPC «Ukrenergo» 25, Kominterna Str., Kyiv, Ukraine tel. (044) 287–67–47, 238–32–64
Electric mounting and pre–commissioning at substation 110 kV «Zhemchuzhna»	Civil works on switchgear. Installation and pre–commissioning	JSC «Donetskoblenergo» 11, Lenin Avenue, Gorlovka, Ukraine tel. (0624) 57–83–30
Construction, mounting and pre–commissioning at substation 110 kV «Dobra»	Installation and pre–commissioning	JSC «Krymenergo» 74/6, Kyivska Str., Simferopol, AR Krym, Ukraine tel. (0652) 25–54–30
Construction, mounting and pre–commissioning on reconstruction of substation 110/35/10 kV «Novye Sanzhary»	Installation and pre–commissioning	JSC «Poltavaoblenergo» 5, Stary Podol Str., Poltava, Ukraine tel. (0532) 516–147
Electric mounting and pre–commissioning at substation 330 kV «Severna», and substation 330 kV «Novo–Kyivska»	Installation and pre–commissioning	SE «NPC «Ukrenergo» 25, Kominterna Str., Kyiv, Ukraine tel. (044) 287–67–47, 238–32–64
Electric mounting and pre–commissioning at substation 750 kV «Chernobylska»	Installation and pre–commissioning	SE «NPC «Ukrenergo» 25, Kominterna Str., Kyiv, Ukraine tel. (044) 287–67–47, 238–32–64
Works on reconstruction of main step–down substations 1 and 2 [State step–down substations 1 and 2)	Installation and pre–commissioning	JSC «Lisichansk Refinery» 371, Sverdlova Str., Lisichansk, Ukraine tel. (06461) 4–64–32
Reconstruction of switchgear 330 kV with substitution of air circuit breaker «6» by Siemens SF6 circuit breaker at substation 330 kV «Zaliutyno»	Installation and pre–commissioning	Northern PS to the SE «NPC «Ukrenergo» 12/14, Kooperatyvna Str., Kharkiv, Ukraine tel. (057) 730–23–08
Reconstruction of switchgear 330 kV with substitution of air circuit breaker «28» by Siemens SF6 circuit breaker at substation 330 kV «Zaliutyno»	Installation and pre–commissioning	Northern PS to the SE «NPC «Ukrenergo» 12/14, Kooperatyvna Str., Kharkiv, Ukraine tel. (057) 730–23–08
Reconstruction of accounting and metering circuits at substation 220 kV «Krasnodonska»	Installation and pre–commissioning	Donbasska PS to the SE «NPC «Ukrenergo» 11, Lenin Avenue, Gorlovka, Ukraine tel. (0624) 59–74–55, 59–71–37

Description of work according to the contract	Works fulfilled by own labor force	Information of the Customer (name, location, contact telephone number)
Overhaul of bus bridges 35 kV at substation 220/110/35 kV «Lisichanska»	Supply of equipment, mounting and pre-commissioning	Donbasska PS to the SE «NPC «Ukrenergo» 11, Lenin Avenue, Gorlovka, Ukraine tel. (0624) 59-74-55, 59-71-37
Reconstruction of accounting and metering circuits at substation 220 kV «Cherkasska»	Installation and pre-commissioning	Donbasska PS to the SE «NPC «Ukrenergo» 11, Lenin Avenue, Gorlovka, Ukraine tel. (0624) 59-74-55, 59-71-37
Reconstruction of accounting and metering circuits at substation 330 kV «Myrna»	Installation and pre-commissioning	Donbasska PS to the SE «NPC «Ukrenergo» 11, Lenin Avenue, Gorlovka, Ukraine tel. (0624) 59-74-55, 59-71-37
Reconstruction of accounting and metering circuits at substation 330 kV «Myrna» Works on modernization of P&A relays when installing vacuum circuit breakers at: substation 35 kV «Avrora», substation 35 kV «V-Tarasivka», substation 35 kV «Shevchenkivska», substation 35 kV «Mykhailivska»	Installation and pre-commissioning	JSC «EK «Dniprooblenergo» 22, Zaporizzke Shosse, Dnipropetrovsk, Ukraine tel. (056) 373-80-21, 776-66-35
Substitution of oil circuit breakers MKP-110 by SF6 circuit breakers at Sumska CHP plant	Design, supply of equipment, installation and pre-commissioning	Sumyteploenergo Ltd. 10, 2-nd Zheleznodorozhna Str., Sumy, Ukraine
Reconstruction of switchgear 110 kV with substitution of circuit breakers BHB-110 by Siemens SF6 circuit breakers, replacement of current transformers and disconnectors, and modernization of relay protection circuits and control circuits at Chernigivska CHP plant, sells 1 and 3	Design, supply of equipment, installation and pre-commissioning	Firm «Technova Ltd» 5, bld. 10-a, Dimitrova Str., Kyiv, Ukraine
Setting up, inspection of control and protection circuits, repair of switchgears and electrical equipment at the Lisichansk Refinery	Pre-commissioning	JSC «Lisichansk Refinery» 371, Sverdlova Str., Lisichansk, Ukraine tel. (06461) 4-64-32
Construction of substation 110 kV «Stalingradska»	Installation	JSC «Kharkivoblenergo» 12, Kooperatyvna Str., Kharkiv, Ukraine tel. (057) 740-11-25, 740-14-85
Electric power supply of the Altsem Ltd. cement plant site. Laying of cable lines from open switchgear 6 kV to closed switchgear 6 kV	Design	Altsem Ltd. Kerch, AR Krym, Ukraine

Description of work according to the contract	Works fulfilled by own labor force	Information of the Customer (name, location, contact telephone number)
Substitution of air circuit breaker BBД-330 by Siemens SF6 circuit breaker at Unit «Kurakhovska TPP», sells 825 and 865	Design, installation and pre-commissioning	Vostokenergo Ltd. Ukraine 11, Shevchenko Bulv., Donetsk, Ukraine tel. (062) 335-30-19, 335-61-16
Overhaul of the backup power supply cable line for switchgear 6 kV TTs TsIK Kurakhovska TPP. Cable line KП-6 kV laying from power unit № 8 complete switchgear 6 kV sell № 245 to the TTs complete switchgear 6 kV sell № 17 B	Design, installation and testing	Vostokenergo Ltd. Ukraine 11, Shevchenko Bulv., Donetsk, Ukraine tel. (062) 335-30-19, 335-61-16
Substitution of dividers and short circuit breakers 110 kV of transformers 1T and 2T, of sectional oil circuit breaker 110 kV of BMT-110 type by AREVA SF6 circuit breaker at substation 110/6 kV «Chekhovska»	Design	JSC «Sumyoblenergo» 7, Korotchenko Str., Sumy, Ukraine tel. (0542) 659-212, fax (0542) 659-379
Reconstruction of switchgear 110 kV with arrangement of "input-output" overhead power line 110 kV «Sumy-Uzlova» circuit № 1. Substation 110/6 kV «Okhtabrska»	Design	JSC «Sumyoblenergo» 7, Korotchenko Str., Sumy, Ukraine tel. (0542) 659-212, fax (0542) 659-379
Construction, mounting and pre-commissioning works on modernization of switchgear at substation «Losevo» (substitution of air circuit breaker 1B by SF6 circuit breaker	Installation and pre-commissioning	Northern PS to the SE «NPC «Ukrenergo» 12/14, Kooperatyvna Str., Kharkiv, Ukraine tel. (057) 730-23-08
Works on reconstruction of switchgear 110 kV at substation «Kirovska» 110/6 kV with arrangement of "input-output" overhead power line 110 kV	Design, supply of equipment, installation and pre-commissioning	JSC «Sumyoblenergo» 7, Korotchenko Str., Sumy, Ukraine tel. (0542) 659-212, fax (0542) 659-379
Works on reconstruction of switchgear 330 kV at substation «Losevo» (substitution of air circuit breaker 3B by SF6 circuit breaker of LTB 420E2 type)	Design, installation and pre-commissioning	Northern PS to the SE «NPC «Ukrenergo» 12/14, Kooperatyvna Str., Kharkiv, Ukraine tel. (057) 730-23-08
Works on reconstruction of switchgear 330 kV at substation «Poltava» (substitution of air circuit breaker 3B5 by SF6 circuit breaker of LTB 420E2 type)	Design, installation and pre-commissioning	Northern PS to the SE «NPC «Ukrenergo» 12/14, Kooperatyvna Str., Kharkiv, Ukraine tel. (057) 730-23-08
Modernization of switchgear 110 kV with substitution of oil circuit breakers by SF6 circuit breakers	Design, supply of equipment, installation and pre-commissioning	Sumyteploenergo Ltd. 10, 2-nd Zheleznodorozhna Str., Sumy, Ukraine

Description of work according to the contract	Works fulfilled by own labor force	Information of the Customer (name, location, contact telephone number)
Work organization procedure for installation of technical means of automation monitoring and control systems of the power unit and turbine K200-130-1 ЛМЗ control system during reconstruction of Luganska TPP Unit ct №10	Preparation	Vostokenergo Ltd. SE «Luganska TPP» 1 «O», Gagarina Str., Schastie, Luganska Region, Ukraine
Pre-commissioning during reconstruction of Kurskaya NPP	Pre-commissioning	FSUE SPE "VNIIEM Moscow, RF
Pre-commissioning during reconstruction and modernization of Leningradskaya NPP	Pre-commissioning	FSUE SPE "VNIIEM Moscow, RF
NPP «Bushehr», Iran, construction of the 1-st power unit	Electric mounting, I&C and automation means installation	Kurskatomventelectro Ltd. 13, Dzerzhinskaya Str., Dzerzhinsky Town, Moskovskaya Oblast, 140090 tel. (495) 560-03-75
Northern-Western CHP, St. Petersburg, RF. Construction of the 2-nd power unit (PGU 450 MW)	Installation and pre-commissioning in the part of APCS, I&S and automation	Kurskatomventelectro Ltd. 13, Dzerzhinskaya Str., Dzerzhinsky Town, Moskovskaya Oblast, 140090 tel. (495) 560-03-75
Leningradskaya NPP, Sosnovy Bor, Leningradskaya oblast, RF. Construction of burial ground for radioactive wastes	Electric mounting, I&C and automation means installation	Kurskatomventelectro Ltd. 13, Dzerzhinskaya Str., Dzerzhinsky Town, Moskovskaya Oblast, 140090 tel. (495) 560-03-75
Reconstruction of substations 220 kV, 110 kV in Moscow, RF: substations «Angelovo», «Planernaya», «Starbeyevo», «Oktiabrskaya», «Novo-Bratsevo», «Tushino», «Gertsevo»	Installation and pre-commissioning	Kurskatomventelectro Ltd. 13, Dzerzhinskaya Str., Dzerzhinsky Town, Moskovskaya Oblast, 140090 tel. (495) 560-03-75
Manufacturing and supply of sensors carrying stands to Yuzhno-Ukrainska NPP	Design, manufacturing and supply of equipment	SE NNEGC «Energoatom» SD «Atomcomplekt» 26, L. Ukrainky Bulv., Kyiv, Ukraine
Manufacturing and supply of sensors carrying panels with piping made of titanium alloy for NPP «Bushehr» in Iran	Design, manufacturing and supply of equipment	JSC «Atomstroyexport», NPP Construction Directorate in Iran
Manufacturing and supply of sensors carrying stands and machined parts for I&C to Rivnenska NPP and Khmelnitska NPP	Design, manufacturing and supply of equipment	JSC «Radiy» 29, Geroev Stalingrada Str., Kirovograd, Ukraine tel. (0522) 55-15-28
Manufacturing and supply of sensors carrying stands and machined parts for I&C to Rivnenska NPP and Khmelnitska NPP	Design, manufacturing and supply of equipment	JSC «SSPA «Impuls» 2, Pobedy Sq, Severodonetsk, Ukraine tel. (06452) 2-78-95

LICENCES, CERTIFICATES, PERMITS

Registration number	Body that issued the document	Description of the document and kind of activity
АВ № 489708	Ministry of regional development and construction of Ukraine	Construction
АВ № 457231	State Department for fire safety to the MES of Ukraine	Mounting of fire extinguishing installations (water, foam). Fire preventing treatment of cable products
АВ № 472316	State Committee of nuclear regulation of Ukraine	Conduction of activity with usage of ionizing radiation sources
№ 1815.09.30-45.34.2	State Committee of Ukraine for industrial safety, labour protection and mining supervision	Permission to continue execution of hazardous works. Works in live electrical installations (installation)
№ 3257.07.30-45.34.2	State Committee of Ukraine for industrial safety, labour protection and mining supervision	Permission to continue execution of hazardous works. (Pre-commissioning up to 110 kV)
№ 3258.07.30-45.34.2	BUREAU VERITAS	Permission to continue execution of hazardous works. (Pre-commissioning over 110 kV)
UA 226090	Works in live electrical installations (installation)	International certificate ISO 9001:2008
ВБ № 889343	State Committee of Ukraine on issues of technical regulation and consumption policy of the State system of certification UkrSEPRO	Certificate of Approval on stands for accommodating of sensors of pressure, vacuum and pressure difference for nuclear power plants
№ 159 от 10.07.09	Head Branch Attestation Commission on nuclear power projects in Ukraine	Attestation of the welding and control laboratory for performing the following kinds of inspection: inspection of quality by non-destructive methods, and inspection of quality by destructive methods
№ 100-3314/2009	State Committee of Ukraine on issues of technical regulation and consumption policy	Attestation Certificate for accreditation of electrotechnical laboratory

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ЕНЕРГЕТИЧНО
ДОРОЖНЄ
БУДІВНИЦТВО
АСОЦІАЦІЯ УКРГІДРОЕНЕРГО

Товариство з обмеженою відповідальністю

"Енергетично-дорожнє будівництво"

Ліцензія на будівельну діяльність серія АВ № 610634

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www.facebook.com/EDB.ltd

Dear Sirs,

Limited Liability Company «Enerhetychno-dorozhnie budivnytstvo» (Energy and road construction) is a large private enterprise that has been operating in the market of power and transport construction of Ukraine since 2005.

"Enerhetychno-dorozhnie budivnytstvo LLC" has at its disposal technical and personnel potential that allows fulfill works of any complexity level on construction of hydro- technical objects and different kinds of transport infrastructure.

Company and its top management have earned solid reputation both in the Ukravtodor (Ministry of Road Construction) and Ministry of Power and Fuel by successful realization of large-scale infrastructure projects, including road Kyiv-Odessa highway, Tashlyks'ka and Dniester pump-storage power plants, as well as long-term experience in the industry.

Our company is a contractor and is a leader in the development and application of advanced design solutions, new technologies, build structures and special equipment in the energy and transportation construction.

The company provides construction and reconstruction of energy facilities (NPP, PSP), dams, bridges and highways. The company is a member of the All-Ukrainian public organization "Association "UKRHIDROENERGO ".

Maintaining and developing the traditions of the energy and transport construction, Ltd. "Enerhetychno-dorozhnie budivnytstvo LLC" has been active in various regions of the country.

During 2006-2014 years the company has taken an active part in the end of construction Tashlykska PSP Kanivska hydroelectric. Besides continuing the construction of the Dniester PSP and several other objects.

"Enerhetychno-dorozhnie budivnytstvo LLC" guarantees customer satisfaction through quality of design, construction, reliability and durability built structures.

The high professional level of engineering and technical personnel and skilled workers allows the company to large-scale projects - from inception of the idea to its full implementation.

In this basis strategy "Enerhetychno-dorozhnie budivnytstvo LLC" remains unchanged: excellent quality, meeting deadlines under highly productive labor.

Kindest regards,
Director

V.Khmaruk

ТОВ ЕНЕРГЕТИЧНО-ДОРОЖНЄ БУДІВНИЦТВО

ПрАТ КАНІВ-ДНІПРОБУД


ДНІСТРОВСЬКА ГАЕС


МОНТАЖ РОБОЧОГО КОЛЕСА


КАНІВСЬКА ГЕС


ЦІЛОДОБОВЕ ІНТЕНСИВНЕ ВЕДЕННЯ РОБІТ НА ВЕРХНІЙ ВОДОЙМІ


КЛІМОВ Ю.М., ХМАРУК В.І.


КРЕМЕНЧУЦЬКА ГЕС


ДНІПРОДЗЕРЖИНСЬКА ГЕС


ВЕРХНЯ ВОДОЙМА З ВИСОТИ ПТАШИНОГО ПОЛЬОТУ


КРІПЛЕННЯ ВЕРХОВОГО УКОСУ ПІВОБЕРЕЖНОЇ ДАМБИ ВЕРХНЬОЇ ВОДОЙМИ


ДНІПРОРЕС


КАХОВСЬКА ГЕС


БУДІВНИЦТВО АВТОМОБІЛЬНИХ ДОРІГ


МОБІЛЬНИЙ АСФАЛЬТНИЙ ЗАВОД


МОБІЛЬНИЙ БЕТОННИЙ ЗАВОД


ТАШЛИЦЬКА ГАЕС

ЕНЕРГОАТОМ

ЮУ ПЭС

СЕРТИФІКАТ

Учасника пуску 1-го гідроагрегату

Ташлицької ГАЕС

2006

ГРАМОТА

Генеральний підрядник
будівництва Дністровської ГАЕС
ТОВ "Енергопром"

НАГОРОДЖУЄ

колектив ТОВ «Енергетично-дорожнє будівництво»

за сумлінну працю та вагомий внесок

у завершення першого етапу введення в експлуатацію

дослідно-експериментального зворотного гідроагрегату №1

Дністровської ГАЕС

Генеральний директор
С. Б. Лепіченко

"25" грудня 2008 року

№

МІНІСТЕРСТВО ПАЛИВА ТА ЕНЕРГЕТИКИ УКРАЇНИ
НАЦІОНАЛЬНА АТОМНА ЕНЕРГОГЕНЕРУЮЧА КОМПАНІЯ "ЕНЕРГОАТОМ"

ПОЧЕСНА ГРАМОТА

НАГОРОДЖУЄТЬСЯ

ХМАРУК
Володимир Ілліч

генеральний директор
ТОВ «Енергетично-дорожнє будівництво»

За вагомий внесок у розвиток і функціонування енергетики України, високі професійні показники, сумлінну працю та з нагоди введення в експлуатацію пускового комплексу Ташлицької ГАЕС

Президент **Ю.О.Недашковський**

Наказ № 172-к
від «27» вересня 2006 р.

ЕНЕРГОАТОМ

EUROCERT

ТОВ «ЕНЕРГЕТИЧНО-ДОРОЖНЄ БУДІВНИЦТВО»

ISO 9001:2008

Додаток до сертифікату № UA-27.016 від 29 липня 2010

Перелік видів робіт на які поширюється дія сертифікату

СЕРТИФІКАТ

ТОВ
«Енергетично-дорожнє будівництво»

Директор
Хмарук
Володимир Ілліч

є колективним членом
Всеукраїнської громадської організації
«Асоціація «Укрбудексперт»,
що об'єднує громадян України
на основі спільних інтересів
в сфері розвитку підприємництва,
підвищення її ефективності та надійності.

Президент С.І.Вечканов

СВІДОЦТВО
ПРО ДЕРЖАВНУ РЕЄСТРАЦІЮ
ЮРИДИЧНОЇ ОСОБИ

ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ
" ЕНЕРГЕТИЧНО - ДОРОЖНЄ БУДІВНИЦТВО "

33787711

18000, ЧЕРКАСЬКА ОБЛАСТЬ,
М.КАНІВ,ВУЛ.Л.ДОРОШЕНКА, 84

ВИКОНАВЧИЙ КОМІТЕТ
КАНІВСЬКОЇ МІСЬКОЇ РАДИ
ЧЕРКАСЬКОЇ ОБЛАСТІ

17.10.2005 р. 1 023 102 0000 006178

Державний реєстратор І.П. ГРИНЕЦЬ

ГРАМОТА

Генеральний підрядник будівництва
вузлового комплексу Дністровської ГАЕС,
Консорціум «Науково-виробниче об'єднання
«Укргідроенергобуд»
НАГОРОДЖУЄ
Хмарука Володимира Ілліча
генерального директора
ТОВ «Енергетично-дорожнє будівництво»
за високий професіоналізм, значний особистий вклад
у будівництво Дністровської гідроакумулюючої
електростанції та з нагоди Дня енергетика

Генеральний директор
Консорціуму «НВО
«Укргідроенергобуд» В.М. Бондаренко

ЛІЦЕНЗІЯ

МІНІСТЕРСТВО РЕГІОНАЛЬНОГО РОЗВИТКУ ТА БУДІВНИЦТВА УКРАЇНИ
ДЕРЖАВНА АРХІТЕКТУРНО-БУДІВЕЛЬНА ІНСПЕКЦІЯ

Господарська діяльність, пов'язана із створенням об'єктів архітектури

Товариство з обмеженою відповідальністю
"ЕНЕРГЕТИЧНО - ДОРОЖНЄ БУДІВНИЦТВО"

33787711

18000, Черкаська обл.,
м. Канів,
вул. Дорошенка, 84

8 лютого 2011 р. № 3-3

з 8 лютого 2011 р.
по 8 лютого 2016 р.

Начальник Державної
архітектурно-будівельної
інспекції О.М. Бондаренко

8 лютого 2011 р.


AMMANN

Товариство з обмеженою відповідальністю

"Енергетично-дорожнє будівництво"

[illegible]

04074, Україна, м. Київ, вул. Автозаводська, 2, корп. 46, тел.: +380 44 2236381 факс: +380 44 2236329
Поштова адреса: 04210, Київ-210, А/С № 23, E-mail: edb_eds@ukr.net ; [illegible]@ukr.net
Юридична адреса: 19000, Україна, Черкаська обл., м. Канів, вул. Зарубинська, 1/1
Р/р: 26004115728 МФО 380805 банк - ПАТ "Райффайзен Банк Аваль", м. Київ
код 33757711, свідоцтво 32294063, інд. под. номер 337577123065

Technique that is at disposal of
Limited Liability Company «Enerqetuchno-dorozhnye budivnytstvo »

№ п/п	Name	Model year	Ownership	Specifications
1	Excavator COMATSU 265	1998	own	1,6 m3
2	Excavator COBELKO B215	2007	own	1,1 m3
3	Excavator COBELKO B265	2007	own	1,1 m3
4	Excavator O&K	1999	own	1,4 m3
5	Excavator CATERPILLAR 214 (4 units)	1998	own	1,25 m3
6	Excavator CATERPILLAR 320 (2 units)	1998	own	1,35 m3
7	Excavator CATERPILLAR 320 (3 units)	1998	own	1,75 m3
8	Excavator CATERPILLAR 350	1998	own	2,7 m3
9	Bulldozer T-130	1997	own	2,3 m3
10	Bulldozer T-170	1998	own	2,6 m3
11	Bulldozer T-170	2000	lease	2,6 m3
12	Bulldozer T-170	2001	lease	2,6 m3
13	Bulldozer DT-75	1996	lease	1,2 m3
14	Bulldozer LIBHER 741	2001	lease	2,8 m3
15	Bulldozer KOMATSU D65	2007	lease	5,6 m3
16	Bulldozer KOMATSU D61	2008	lease	4,3 m3
17	Bulldozer CATERPILLAR D6	2008	lease	5,6 m3
18	Bulldozer CATERPILLAR D4 (3 units)	1998	own	4,2 m3
19	Bulldozer CATERPILLAR D7 (4 units)	1998	own	7,4 m3
20	Bulldozer CATERPILLAR D9	1998	own	9,4 m3
21	Laying and finishing machine DYNAPAK	1996	own	2,4-5,6 m.
22	Laying and finishing machine TITAN 325	2004	lease	2,4-8,0 m.
23	Laying and finishing machine TITAN 325	2006	lease	2,4-8,0 m.
24	Asphalt mixing plant DS-168	2009	own	168
25	Vibratory roller STA VV 17	2004	own	17 t
26	Vibratory roller STA VV 170	2004	own	14 t
27	Vibratory roller HAMM	2006	lease	13 t
28	Roller HAMM 12 HD	2006	lease	2,4 t
29	Roller HAMM 3520 (unsurfaced)	2008	own	20 t
30	Roller DU-84	2004	own	14 t
31	Roller DU-84	2004	own	14 t
32	Roller DU-96	2004	own	10 t
33	Roller DU-99	2004	own	10 t
34	Roller DU-16	1992	own	25 t
35	Land grader and leveller GS-14.03 (2 units)	2008	own	medium type
36	Roadgrader CAT G-16 (2 units)	1998	own	career
37	Front loader NH W190	2008	own	3,5 m3
38	Front loader VOLVO	2003	lease	3,5 m3
39	Front loader CATERPILLAR 950F (5 units)	1998	lease	3,5 m3
40	Crane truck P&H CNT 280 (6 units)	1998	lease	25 t/ 21 m
41	Crane truck P&H CNT 128 (2 units)	1998	lease	25 t/ 21 m
42	Crane truck P&H CNT 650	1998	lease	45 t/ 31 m
43	Large truck FORD CARGO (20 units)	2007	own	25 t
44	Large truck FORD L-9000 (28 units)	1998	own	17 t
45	Large truck KRAZ (14 units)	-	lease	15 t
46	Large truck KAMAZ 55511 (8 units)	-	lease	20 t
47	Water sprinkler truck ZIL-130	2007	own	5,0 m3
49	Tar paver based on ZIL-130	2007	own	5,0 m3
50	Mobile workshop truck based on ZIL-131	1988	own	-
	Total:	131 unit of technique		

MTD HOLDING GmbH

- 14/32 Getreidemarkt, A-1010 Wien, Österreich, Austria
- Phone: +43 152 658 47 11
- Fax: +43 152 658 47 19
- E-mail: mtdgmbh@gmail.com
- Web: mtdholding.com

THE BUILDING OF HUDROTECHNICAL CONSTRUCTIONS

MTD HOLDING

MTD HOLDING GmbH

PRESENTATION

AUSTRIA

The history of the business

"MTD Holding GmbH" was created in 2007 in Austria and it is under the jurisdiction of Vienna's community. The main direction of the business activity is the realization of the building plans on the defence the population and agricultural territory from the flood, such as:

- *the building the protective dikes on the mountain and flat rivers;*
- *the building the dikes of the hydroelectric power plants;*
- *the strengthening the river's banks.*

Holding carry out its building fctivity by tender purchases in countries: Poland an Ukraine. That is why in October 2007 the "Representation "MTD Holding GmbH" was open in Kiev. The main customers fre the businesses of the state agency the water resources of Ukraine:

- *Joint direction of the building the water-enterprises of the Zakarpatskaya area;*
- *The Lvovskaya's regional direction of the water-enterprise;*
- *The Lvovskaya's regional direction from the antifreshit defence;*
- *Odeskaya's joint direction of the building the water-enterprises objects;*
- *The Dnister-Prutskaye's water-enterprise direction (Chernovcy city).*

Potential of enterprise

The engineers and technicians

There are more than 10 engineer gualifications at the business:

- *The engineer of the railroads;*
- *The Mountain engineer;*
- *The land manager engineer;*
- *The engineer-topographic;*
- *The hydraulic engineer;*
- *The mine surveyor engineer;*
- *The building engineer,*

and also mechanic driver on the motor and track-type cars.

All the specialists have certificates of degree from the high educational institutions length of service and the work experience more than 15 years. The Holding group work as a single mechanism; carry out the work with the guality and by the deadline. Our diligence and professionalism were make special mention by awards and certificates of degree for carrying out and introduction the objects for the protective from the flood in the wastern area of Ukraine.

Facilities and eguipment

There are more the 30 unites of professional technics from world leading companies for building the objects in Holding: dump trucks, trawl, autograders, buldozers, excavators, transportation road rollers, buses for trasportation the workes and flso the welding apparatuses and measuring instruments.

The fulfilment objects

Tashlicksya hydroelectric power plant

Nikolaevskaya area, south Ukraine city.
Earth- moving and concrete construction works with hidroinsulation general volume 2 mln.m3

Dnister's hydroelectric power plant

Chernigivskaya area, Newdnistrovsk city.
Realization the coast protection of the river Dnister more than 20 km lang. Formation and fastening the bottan of reservoir.

Liguidation the natural calamsty on the river Cheremosh in Chernigivskaya area,Viznitsa city.

Construction the dyke (730 m long) with strengthening the bottom and slopes with boxes from the metal wire (gabion) and concrete slabs ПР-10-10x1,5

Perfom the strengthening of left and right banks on the river Seretel in village.

Chudey 490m long with the boxes from the metal wire (gabion) 3x1x0,5

Reconstruction the dyke on Dunay river 21,8 km long.

Construction three sluice-regulators with throyghput capacity 60m3 of water on one second.

Strengthening the bend channel of the river Dunay near Izmail city (Odeskaya area).

On 39-40 and 97km long with use the mould "BONTEX" from syntetic material for cement solution.

MOTOR VEHICLES

Tipper lorries MAN TGA 44.430 30 units (30t)
MAN TGA 44.440 6 units (30t)

Tow trucks MAN 26.440 with trawl 3 unit (60t)

MECHINERY

Excavators KOMATSU

-PC-240 6 NLC -6 units (25t, V of bucket = 1,3 m3)
-PC-290 6 NLC -3 units (30t, V of bucket =1,5 m3)
-PC-340 6 NLC -6 units (35t, V of bucket =2,2 m3)
-PC-450 6 NLC -5 units (45t, V of bucket =3,5 m3)

Excavators DOOSAN SOLAR

-300LC-V- 6 units (30t, V of bucket = 1,5 m3)
-JCB-220 - 3 units (24t, L of shovel boom+dipper = 14 m)
-JCB-225 - 4 units (15t, L of shovel boom+dipper = 16 m)
-NLC180W-V - 3 units (20t, V of bucket = 1 m3, wheel tupe)

MTD HOLDING

MECHINERY

Vibratory rollers:
- HAMM DS-2520 3 unit (18t)
- HAMM DS-3520 4 unit (23t)
- BOMAC 3 unit (16t)

Road graders:
- ДЗ - 298 3 unit (24t)
- BAUKEMA 3 unit (14t)

Bulldozers:
- KOMATSU D155 AX-5 6 units (45 t)
- KOMATSU D65 EX-15 6 units (25 t)
- CATERPILLAR D6T 3 unit (25t)
- T130 9 unit (17t);

Loader
- KOMATSU WA-380-5 3 unit (V=5m3)

MTD HOLDING

«Alliance» LLC

- P.O. box 23, Yuzhnoukrainsk, Mykolaiv region, 55001, Ukraine
- Phone: +38 067-511-37-58
- Fax: +38 094-943-50-63
- E-mail: yualjans@gmail.com
- Web: www.yualjans.com.ua

- Society with limited liability «Alliance» (village of Kostyantynivka, Arbuzynka district, Mykolaiv region) has been on the construction market since 2004. The main activity of the company is implementation of civil works on industrial objects and objects of civil engineering. To ensure the fulfillment of construction work within the framework of the current legislation, the enterprise has the license for conducting construction works and resolution about beginning of work with high-risk.

Серія АВ

ЛІЦЕНЗІЯ

№ 459425

МІНІСТЕРСТВО РЕГІОНАЛЬНОГО РОЗВИТКУ ТА БУДІВНИЦТВА УКРАЇНИ

ДЕРЖАВНА АРХІТЕКТУРНО-БУДІВЕЛЬНА ІНСПЕКЦІЯ
Інспекція державного архітектурно-будівельного контролю у Миколаївській області

Господарська діяльність, пов'язана із створенням об'єктів архітектури
(за переліком робіт згідно з додатком)

Товариство з обмеженою відповідальністю
"АЛЬЯНС"

Ідентифікаційний код юридичної особи: 32741433

Місцезнаходження юридичної особи: 55340, Миколаївська обл., Арбузинський р-н, смт Костянтинівка, вул. Промислова, 8, корп. А

Дата прийняття рішення та номер наказу про видачу ліцензії: 31 березня 2009 р. № 1-Л

Строк дії ліцензії: з 31 березня 2009 р. по 31 березня 2014 р.

Начальник інспекції В.Д.Возчиков

Дата видачі ліцензії: 31 березня 2009 р.

The enterprise is a good payer in the section taxes and other obligatory payments. The enterprise doesn't have the arrears of budget.

The main objects of construction company «Alliance» are:

-construction of fast food «Celentano» in town of Yuzhnoukrainsk;

reconstruction of the shopping and business centre of OJSC «Vozko» in town of Voznesensk;

-construction of a number of shops in towns of Yuzhnoukrainsk and Voznesensk;

Fast food «Celentano»

- work on the construction of separate units (stands) on the Lviv stadium for EURO-2012;

Lviv stadium

- performing of various general and special works on the Dniester PSP (construction of mines generating units, separate constructs of special units of pumping stations, systems of engineering protection, etc.);

Dniester PSP

-performing of construction works at the hydropower object, namely Tashlik PSPP, construction areas of PSPP, working units generators and turbine hall, work in the culvert hydraulic units, strengthening and building of separate constructs;

Tashlik PSPP

-construction of a complex on primary processing and storing of grain in the village of Blagodatne, Mykolaiv region;
-works on construction of separate buildings on the construction of a complex on manufacture of a sulphuric acid of OJSC «Crimea Titan» in the town of Armyansk, the Crimea;

- Storing of grain

- OJSC «Crimea Titan»

In 2013, the works on buildings reconstruction of ventilation cooling towers I-III SB of unit 1 at the South-Ukrainian NPP were performed by our company;

- South-Ukrainian NPP

The enterprise is staffed with employees of engineering and General workers ' occupations. Among whom are highly skilled welders of manual welding, fitters of steel and concrete structures, concrete workers, carpenters. There are top class mechanics locksmiths for maintenance of tools and equipment .

For qualitative and timely execution of the construction works, the company has a number of tools, specialized transport and mechanisms (avtobetononasos, concrete pump, truck mounted, PAT on the basis of MTZ-80, a tool to perform types of constructions from monolithic reinforced concrete, etc.)

The customer is satisfied with the work of the company «Alliance», as evidenced by the testimonial.

ЮТЭМ

Публічне акціонерне товариство
«ПІВДЕНТЕПЛОЕНЕРГОМОНТАЖ»
ЮТЭМ-Інжиніринг

14.03.2012 № СП0256

О Т З Ы В

ООО «Альянс» являлось субподрядчиком ДП «ЮТЭМ-Инжиниринг» ОАО «ЮТЭМ» на строительстве комплекса по производству серной кислоты мощностью 1818,2 тонн/сутки ЧАО «Крымский титан» в г.Армянск АР Крым.

На строительстве вышеуказанного объекта ООО «Альянс» выполняло комплекс работ по возведению монолитного железобетона, сборных железобетонных конструкций, стеновых панелей здания, кирпичной кладки на внутренних зданиях и сооружениях завода (турбинное отделение, объекты химводоочистки, внутризаводские коммуникации), а именно:

- **фундаменты под турбину, монолитные стены и приямки, опоры под трубопроводы;**
- **устройство кирпичных конструкций, железобетонных стеновых панелей, полов, установка дверей;**
- **устройство железобетонных резервуаров градирен;**
- **монтаж колонн, балок, плит перекрытия и покрытия каркасных зданий;**
- **устройство рулонных кровель;**
- **устройство монолитных железобетонных фундаментов под каркас зданий и эстакады технологических трубопроводов.**

По законченным объемам работ ООО «Альянс» справилось со взятыми на себя обязательствами качественно и в срок. В процессе работы фирма придерживается стандартов техники безопасности и качества, с применением современных технологий, оборудования и высококвалифицированных кадров.

За время совместного сотрудничества ООО «Альянс» зарекомендовало себя как надежный партнер в достижении поставленных задач.

Руководитель ГУП «Титан» Ю.В.Масленников

Исполнитель: Дидуненко М.Ю.
0669722879

08292, Україна, Київська область, м. Буча, а/с 1082 Тел.: (+38 044) 4996555 Факс: (+38 044) 4996557 E-mail: office@utem.kiev.ua http:// www.utem-group.com

We passed the evaluation of a service provider of SE NNEGC «Energoatom» for further cooperation with the South-Ukrainian NPP.

ЕНЕРГОАТОМ

УТВЕРЖДАЮ
Первый вице-президент –
Технический директор
А.В. Шаплаков
2013

РЕШЕНИЕ ОБ УТВЕРЖДЕНИИ ПОСТАВЩИКА № РШ-П 0.23.092-13

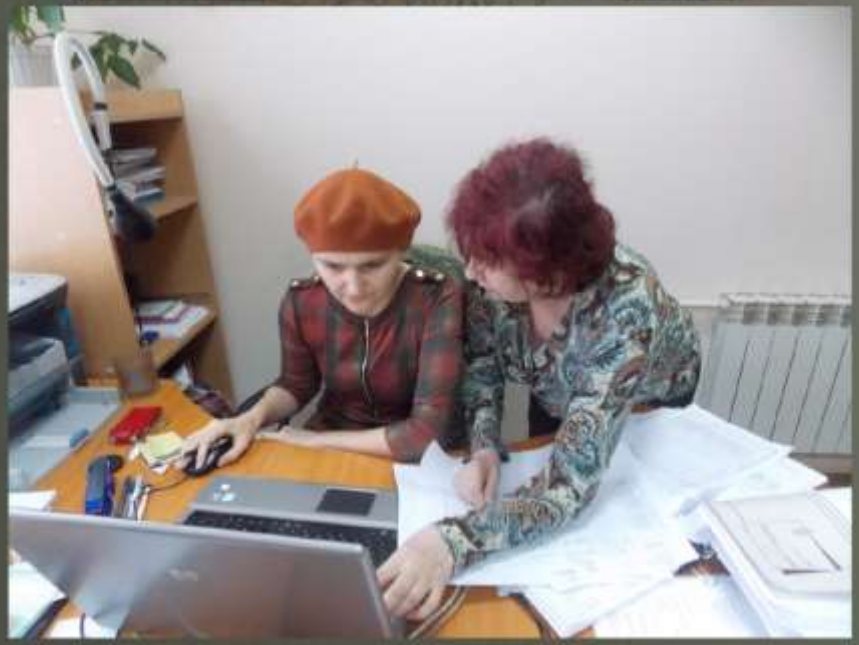
На основании результатов оценки ООО «Альянс», расположенного по адресу: 55340, Николаевская обл., Арбузинский р-он, пгт. Константиновка, ул. Промышленная, 8а,

РЕШИЛИ:

1. **Утвердить** ООО «Альянс» в качестве поставщика ГП НАЭК «Энергоатом» и, при условии его выбора в установленном порядке, предоставить ему право выполнения для ОП ЮУАЭС на системах и элементах, не влияющих на безопасность, строительно-монтажных работ.
2. **Объем поставок** - без ограничений.
3. **Срок действия решения**: до 18.09.2015 г.
4. **Представительства поставщика, имеющие право поставлять его продукцию**: отсутствуют.
5. **Основание для принятия решения**:
   - оценка поставщика, выполненная комиссией ОП ЮУАЭС 12-15 марта и 28 августа 2013 г. методом документальной проверки;
   - отчет по оценке поставщика № 0Ч-П.23.0005.005-13, утвержденный И.о. генерального директора ОП ЮУАЭС 20.09.2013г;
6. **Дополнительные условия и ограничения:**
   - поставщик должен своевременно информировать ГП НАЭК «Энергоатом» о существенных изменениях, влияющих на качество его продукции и/или оказываемых услуг (об изменении формы собственности, смене руководства предприятия, об освоении новых видов продукции, получении новых лицензий и сертификатов);
   - поставщик должен в 30-дневный срок после получения данного Решения разработать план-график устранения несоответствий, приведенных в отчете, и направить его в ОП ЮУАЭС.

СОГЛАСОВАНО:

Исполнительный директор
по качеству и управлению
С.А. Пинов
«15» 09 2013




11.02.2014

«Partner - rempromstroy» LLC

- 18, Nezalezhnosty avenue, office 197, Yuzhnoukrainsk, Mykolaiv region, 55002, Ukraine
- Phone: +38 05136 5-86-08
- Fax: +38 05136 5-86-08
- E-mail: tsvt1@mail.ru
- Web: www. partner-rps.com.ua

Presentation

Limited Liability Company

“Partner- rempromstroy”

2016

Awards

About the company

Enterprise "Partner – rempromstroy" was founded in 2004, and has been operating and developing dynamically up to the present moment.

"Partner – rps" is specialized in general and special work on the construction of buildings, industrial complexes of any complexity, including a complete list of works on the construction of buildings "from scratch":

- Mechanized soil excavation
- Rock excavation performed by hand, jackhammers
- Manufacture and installation of reinforcement grids, cages, metal constructions, concrete inserts
- Installation of precast concrete, reinforced concrete, metal constructions, crane runways
- Placing of cast-in-place concrete, reinforced concrete
- Repair work of concrete surfaces
- Tail-void grouting
- Sand-water treatment of surfaces
- Cutting of concrete surfaces by electric grinders, drilling holes in concrete, granite surfaces by electric and pneumatic drills
- Finishing works
- Performing of expansion and control shrinkage joints
- Installation of internal and external engineering networks
- Cement concrete coating of grounds and driveways etc.

«Partner - rps " has experience in general and special works for electric-power, mining, food and other brunches of industry in different regions of Ukraine.

Over the years the enterprise "Partner – rps" that provided construction services gained considerable experience in general and special types of work, participated in the construction (reconstruction) of a number of regional and national facilities, such as:

- Tashlyk Pumped Storage Power Plant;
- Dniester Pumped Storage Power Plant;
- Reconstruction of SUNPP power unit 1;
- Research and experimental plant of manganese ore enrichment in Marganets;
- Sand-water cleaning of large diameter steel pipes. Poltava ore mining and processing plant, Komsomolsk.
- Linear granary "NIBULON" in Kherson region
- Highway, bypassing Tashlyk reservoir, with connection to the road Nikolayev – Krivoye Ozero.

Also the company performed construction, major repairs and reconstruction of other objects of local significance.

"Partner – rps" has a highly qualified personnel, who regularly attend skills upgrading training in specialized centers.

Construction Company has necessary material and technical facilities (production base, construction machinery, equipment, tools and instruments).

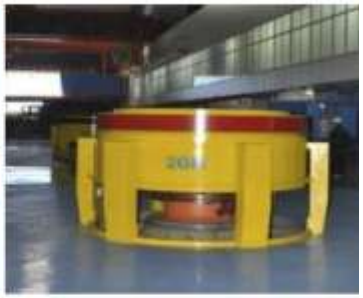
The enterprise has well-functioning system of organization of production and control of performed work and manufactured products.

The company is ready to perform construction and special works of any complexity in the shortest possible time and of high quality.

Sites where we have provided construction service

Tashlyk Pumped Storage Plant

• Construction and installation works at Tashlyk PSP, 2004-2012



Dniester Pumped Storage Plant

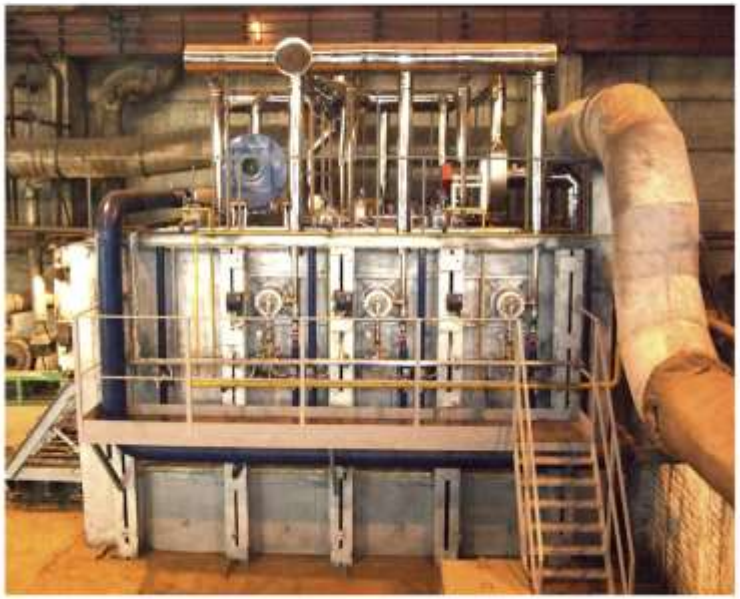
• Construction and installation work at Dniester PSP, 2006-2010

Research and experimental plant of manganese ore enrichment, Marganets

• Construction and installation work on the construction of the manganese ore enrichment plant in Marganets, 2010

Poltava ore mining and processing plant, Komsomolsk

• Construction and installation works on reconstruction of waterway at Poltava ore mining and processing plant facility, 2010



Reloading Terminal of "NIBULON" in Kozatskoye, Kherson

• Construction and installation work at "NIBULON", 2012

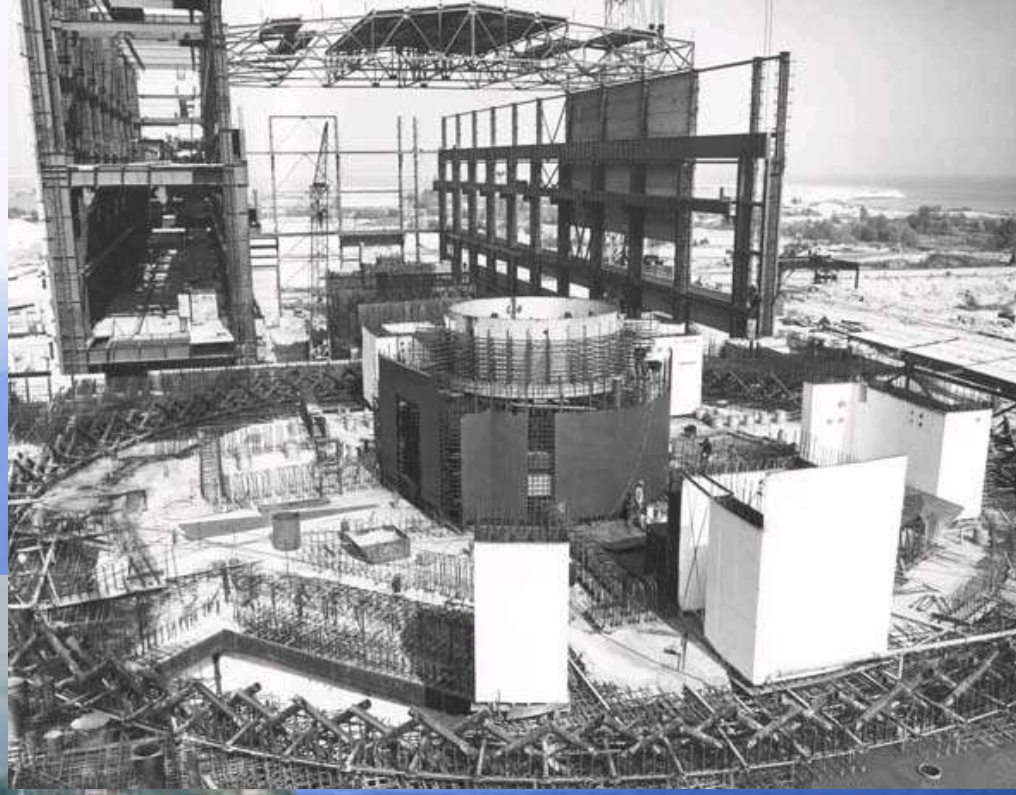
SE NAEK "Energoatom"
Separate Subdivision South-Ukraine NPP

• Construction and installation works at South-Ukraine power unit 1, January 2013


SOME OF OUR PROJECTS

Zaporizhzhia

Nuclear Power Plant



Located - Zaporizhzhia region, Ukraine

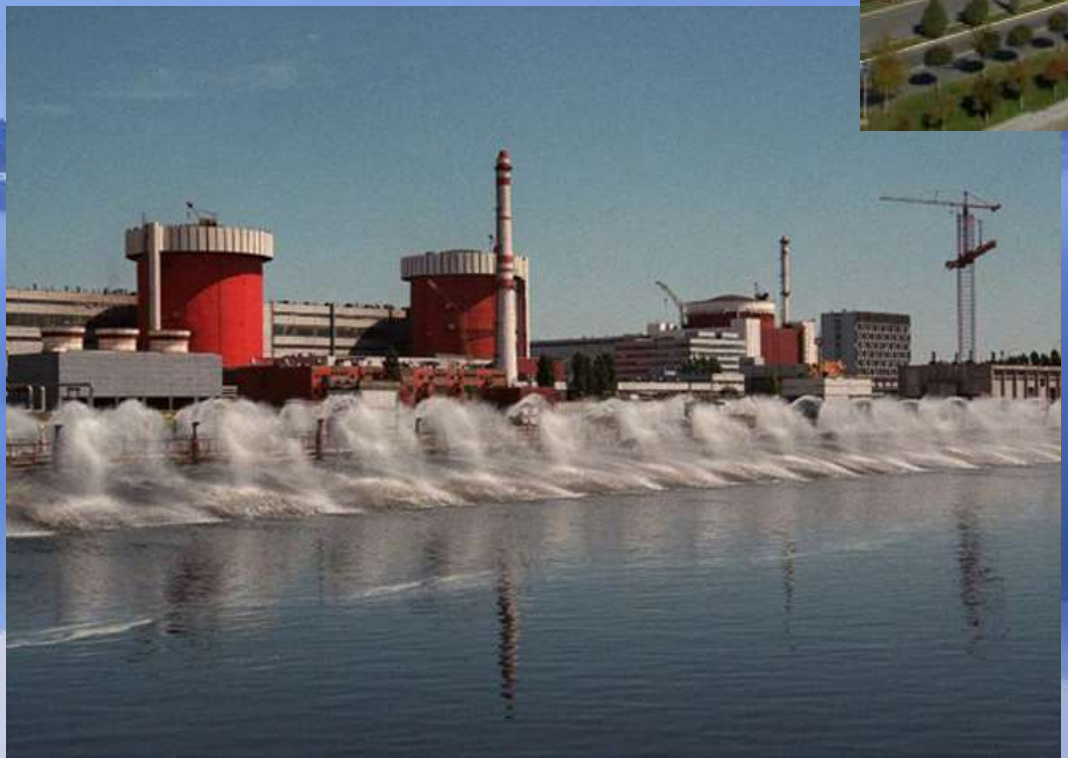
Capacity - 6000 MW

Number of units – 6:

- 6 - 1000 MW

Yuzhnoukrayinsk

Nuclear Power Plant



Located - Nikolaev region, Ukraine

Capacity – 3000 MW

Number of units – 3:

- 3 – 1000 MW.

Located - Rivne region, Ukraine

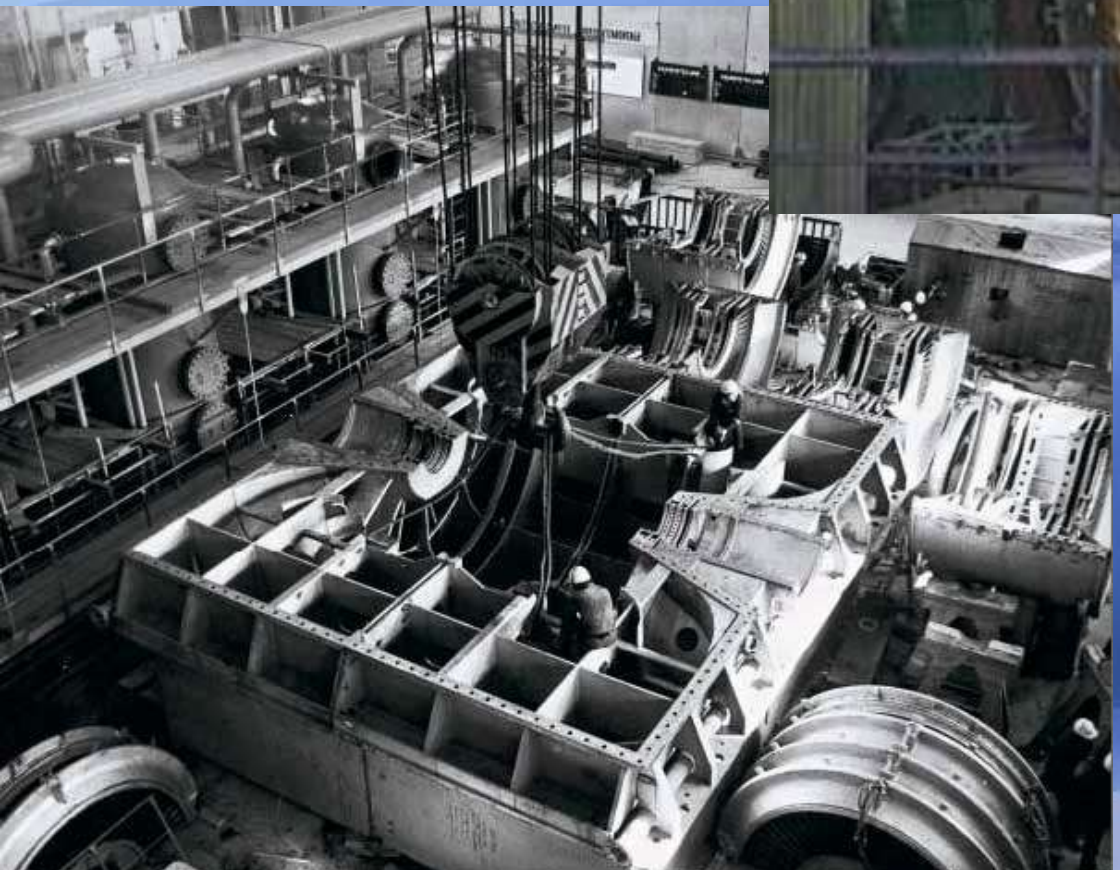
Capacity – 2835 MW

Number of units – 4:

- 4 – 440 MW;

- 2 -1000 MW.

Khmelnitsky
Nuclear Power Plant



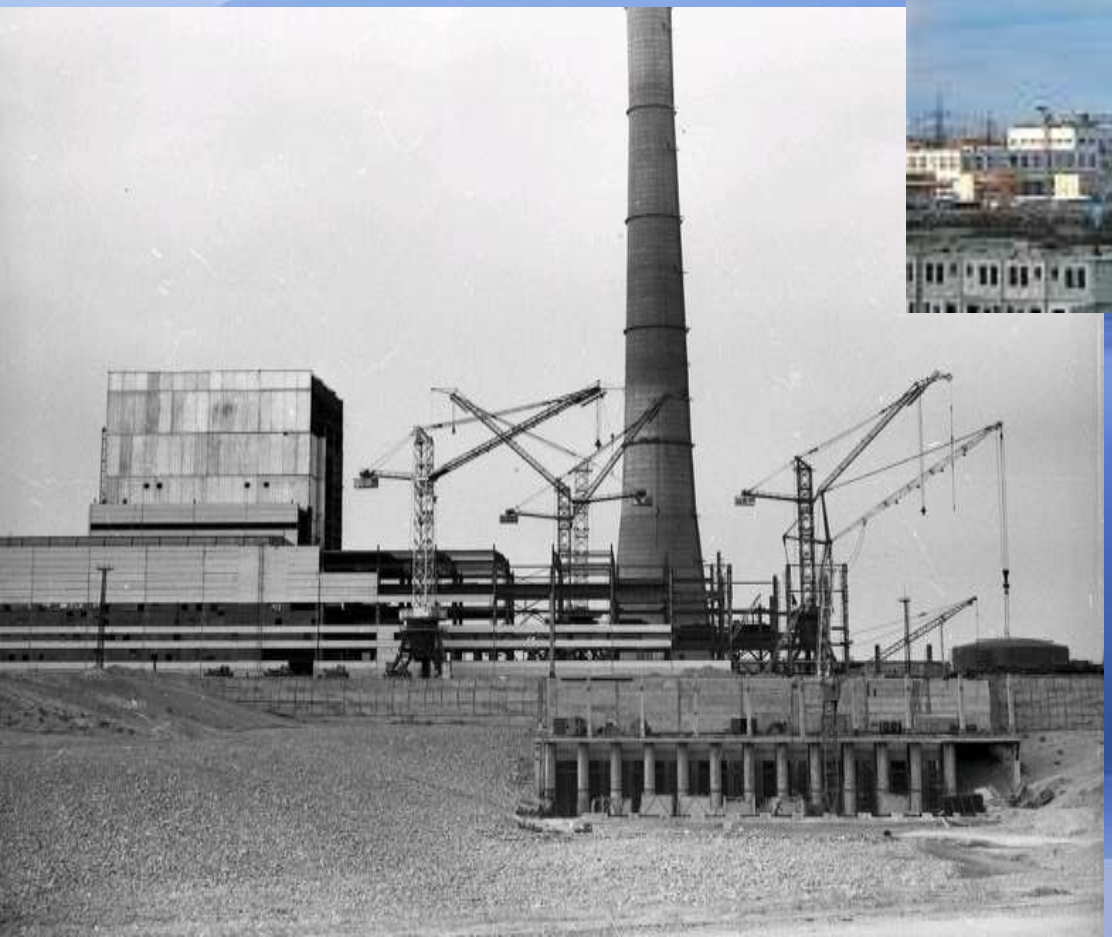
Located - Khmelnitsky region, Ukraine

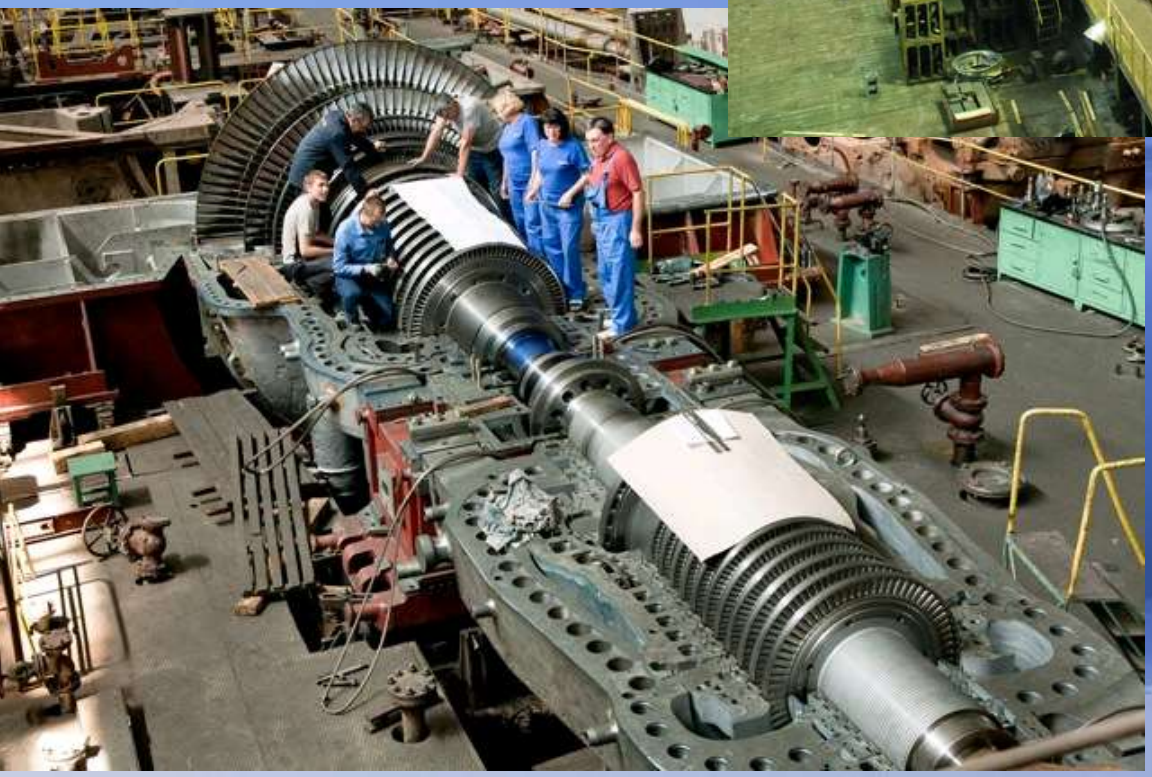
Capacity – 2000 MW

Number of units – 2:

- 2 -1000 MW.

Zaporizhzhia
Thermal Power Plant





Located - Zaporizhzhia region, Ukraine

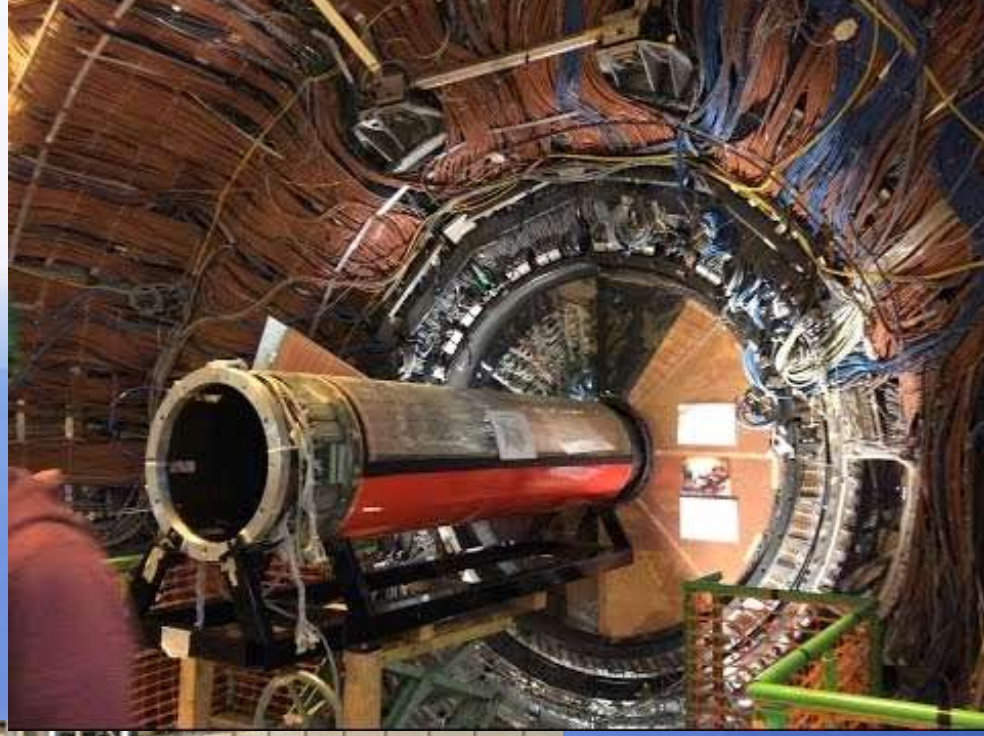
Capacity - 3625 MW

Number of units – 7:

- 4 - 300 MW

- 3 – 800 MW.

Starobeshev
Thermal Power Plant



Located - Donetsk region, Ukraine

Capacity - 2300 MW

Number of units – 13:

- 3 - 100 MW

- 10 – 200 MW.

Uglegorsk
Thermal Power Plant

Located - Donetsk region, Ukraine

Capacity - 3600 MW

Number of units – 7:

- 4 - 300 MW

- 3 – 800 MW.

Slavayansk
Thermal Power Plant

Located - Donetsk region, Ukraine

Capacity - 1680 MW

Number of units – 4:

- 2 – 80 MW

- 1 - 720 MW

- 1 – 800 MW.

Zmyiv

Thermal Power Plant

Located - Kharkiv region, Ukraine

Capacity - 2200 MW

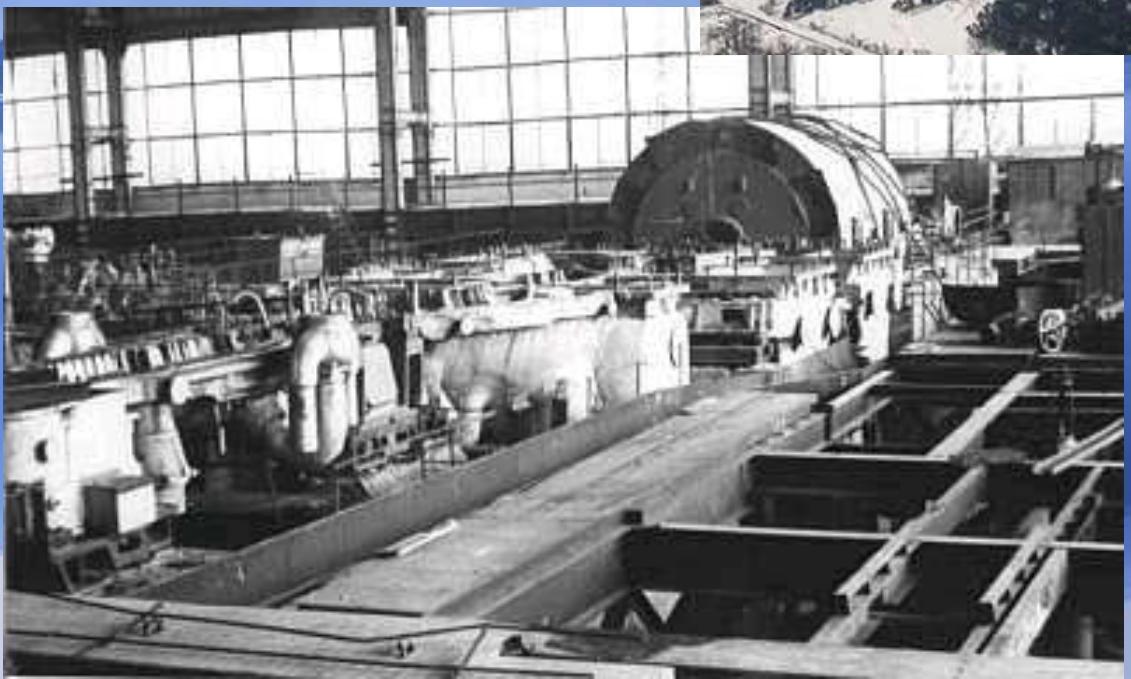
Number of units – 10:

- 6 - 175 MW

- 3 – 275 MW

- 1- 325 MW

Kharkiv - 5
Central Thermal Power Plant



Located - Kharkiv region, Ukraine

Capacity - 540 MW

Number of units – 3:

- 2 – 120 MW

- 1 – 300 MW

Yousifiyah

Thermal Power Plant

Located - Bagdad region, Iraq

Capacity - 1200 MW

Number of units – 6:

- 6 – 200 MW

Under construction

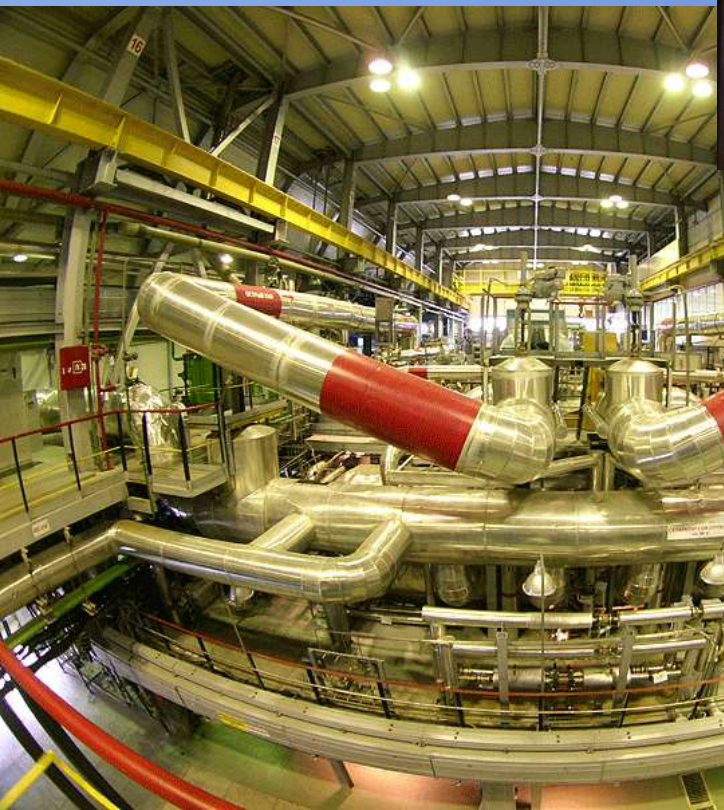
Ramin

Thermal Power Plant

Located - Ahvaz region, Iran
Capacity - 630 MW
Number of units – 5 & 6:

Mutnovsk

Geothermal Power Plant



Located - Kamchatka Territory
Russian Federation
Capacity - 50 MW
Number of units – 2:
-2 – 25 MW

Aleksandrovka

Hydro Power Plan

Located - Nikolayev region Ukraine

Capacity - 12 MW

Number of units – 2:

-2 – 6 MW.

TASHLYK

Hydro Pumped Storage Power Plan

Located - Nikolayev region Ukraine

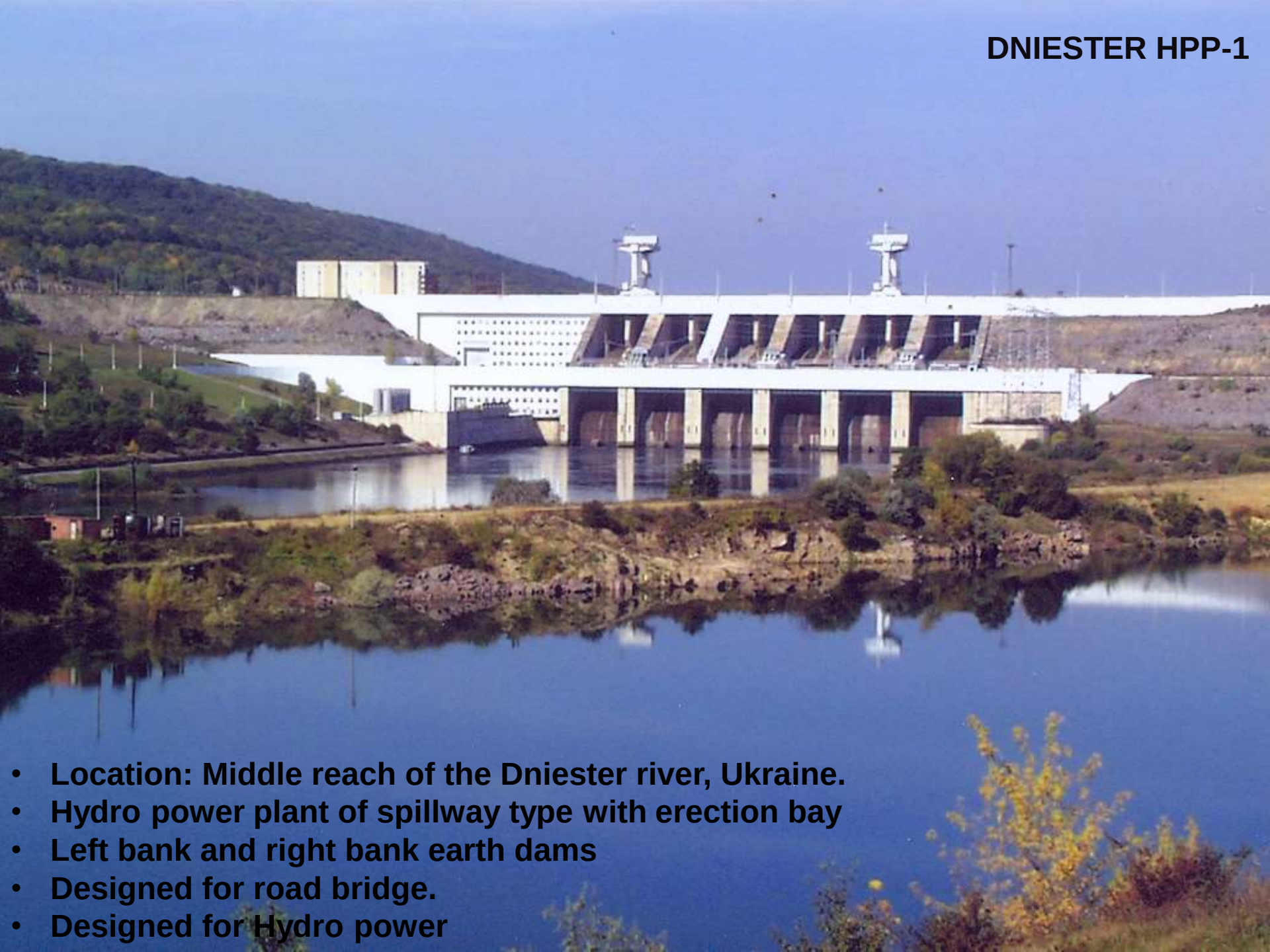
Capacity - 906 MW

Number of units – 6:

-2 – 151 MW

- 4 - Under construction

DNIESTER HPP-1



- Location: Middle reach of the Dniester river, Ukraine.
- Hydro power plant of spillway type with erection bay
- Left bank and right bank earth dams
- Designed for road bridge.
- Designed for Hydro power

DNIESTER

DNIESTER

- Located: Middle reach of the Dniester river, Ukraine
- Status: Under construction
- Designed for power generation for Ukraine integrated power network.
- 2No Turbines Completed, 5No Turbines under construction.

DNIESTER HPSPP

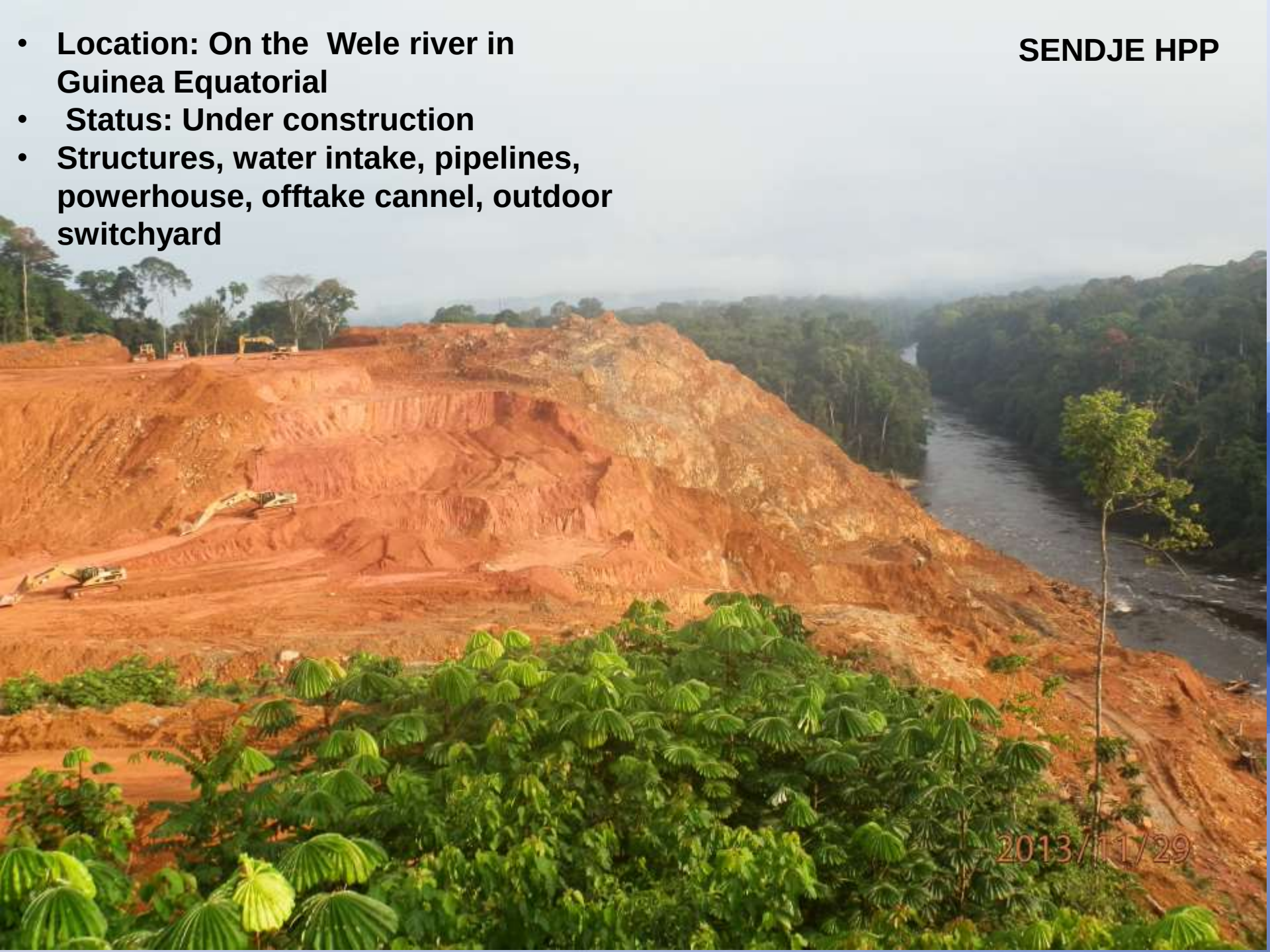
- Total reservoir storage 38,8 mln m3
- Max static head 147,5 m
- Installed capacity of 2 268 MW
- Capacity 2 947 MW in the pumping mode


DNIESTER HPSPP

DNIESTER HPSPP

SENDJE HPP

- **Location: On the Wele river in Guinea Equatorial**
- **Status: Under construction**
- **Structures, water intake, pipelines, powerhouse, offtake cannel, outdoor switchyard**




SENDJE HPP

SENDJE HPP

- Total reservoir storage of 317 mln m3
- Maximum discharge through the structures 450 m3/s
- Maximum static head of 69,0 m
- HPP installed capacity 200 MW
- Average annual output of 1150 mln kW


THANK YOU