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Dear Colleagues,

Let me pay the obeisance and present to you a Non-Profit Organization: “Russian Oil and Gas Equipment Manufacturers Association”, that I am proud to be in charge of.

It is not a secret to anyone that the oil and gas sector is the major consumer of a wide range of industrial products and services; and the development of entire regions and sometimes even economies — depends on development of efficient interaction between all the involved market players: equipment manufacturers, oil and gas producing companies, service providers, government authorities...

The Association was established in 1998 and currently unites more than 50 leading Russian oil and gas equipment manufactures. It’s been 20 years, since the Association has been actively protecting common interests and promoting products of its members to the local and international markets.

One of the major functions and missions of the Association is to act as an interlink between manufacturers, consumers and government bodies. For that end, the Association carries out the methodical effort to improve the level of communication of its members with government authorities and key consumers:

• In 2015, Denis Manturov, The Minister of Industry and Trade of the Russian Federation assumed position of the Chairman of Association’s Supervisory Board
• Supervisory Board of the Association also consists of the heads of governmental agencies, oil and gas producing companies, key industry associations and state corporations;
• The Association, on a regular basis, organizes inter-industry events that contribute to a wider cooperation with government agencies and potential customers;
• The Association is a member of the Scientific and Technical Council and an active member of the Inter-Industry Group on Import Substitution in oil and gas sector of Russian Federation;
• The Association successfully interacts with the majority of industry government and non-government organizations, actively participates in operation of the majority of consulting and expert work groups.

In such a way, the work of the Association as an industry “interlink”, “information
provider”, “technological expert” and “one window service” does not only significantly contribute to the business of its members, but as well helps to save federal resources and enhance the quality of analytical data required by government authorities to make important political decisions.

The Association carries out much effort to improve on the information support for its members, advertising and promoting their products and services. The well-established links with mass media, specialized advertising agencies, as well as participation in all major industry and exhibition events in Russia and internationally helps Association to succeed in promotion of Russian equipment and technologies to a worldwide oil & gas market.

The new “strategic partnership” program developed by the Association will not only allow international companies to become a part of our Association and use all the benefits to better promote their products and services to the Russian market but also help our members to get real financial support in form of significant discounts for all major types of business: from purchasing of raw materials, financial instruments, advertising, logistics to manufacturing process optimization and more.

Finally, I would like to notice that the aggregate financial, manufacturing and technological potential of Russian industrial enterprises still remains at the significant level. But in order to preserve and enhance it we should consolidate our resources and strive for coordinated action of all market players.

We should unite, have a pro-active attitude and protect our interests together!

President of the Oil and Gas Equipment Manufacturers Association

K. Radinsky
Supreme governing body

General Meeting of Association Members

The President of the Association is the supreme executive body
President of Association — Radinsky K. O.

Board of the Association

Board of the Association is lead-managed by the Board Chairman
Chairman of the Board — Rogov A. B.

Strategic partners of the Association

Cooperation is regulated by specific legal documents

Commercial partners of the Association

This category is provided with the same privileges, rights, and obligations as the Association Members excluding the right to vote in the General Meeting

Companies and organizations interested in mutually profitable business relationship with the Association

Organizations and associations addressing strategic and political concerns of the Association

Governing body functioning between proceedings of the General Meeting

Advisory and collegiate body managing the cooperation of the Association with federal authorities, users, financial institutions, and industry associations

Supervisory Board of the Association

Minister of industry and trade of the Russian Federation — Manturov D. V.
Supervisory Board and Strategic partners

- Ministry of Industry and Trade of the Russian Federation
- Ministry of Energy of the Russian Federation
- Ministry of Finance of the Russian Federation
- Ministry of Natural Resources and Environment of the Russian Federation
- Minister of Economic Development of the Russian Federation
- Federal Agency on Technical Regulating and Metrology (ROSSTANDART)
- Federal Agency on Mineral Resources (ROSNEDRA)
- Federal Environmental, Industrial and Nuclear Supervision Service of Russia (Rostehnadzor)
- Autonomous Non-Commercial Organization “Agency of Technological Development”
- Russian Export Center JSC (REC)
- Industrial Development Fund
- Chamber of Commerce and Industry of the Russian Federation
- Russian Union of Industrialists and Entrepreneurs (RSPP)
- Union of Oil & Gas Producers of Russia
- Russian Engineering Union

- “Management Company of Russian Direct Investment Fund”, JSC
- “ROSGEO”, JSC
- Gubkin Russian State University of Oil and Gas (National Research University)
- Rosneft, PJSC
- Gazprom Neft, PJSC
- “Transneft”, PJSC
- LUKOIL, PJSC
- TATNEFT, PJSC
- NOVATEK, PJSC
- SIBUR Holding, PJSC
- Gazprom, PJSC
- “Gazprom Burenie”, LLC
- “Surgutneftegas”, PJSC
- SLAVNEFT, PJSC
- Siberian Service Company (SSK), JSC
- Burovaya Kompaniya Eurasia, LLC
- Integra Management, LLC
- GAZPROM FLOT, LLC
- “Gazprombank”, JSC
- Sberbank, PJSC
- “ALFA-BANK”, AO
- VTB Bank, PJSC
- Bashneft, PJSC
- Zarubezhneft, JSC
Company Description

The history of the Association of Companies “AKSIOS” (Greek ἀξιός — “worthy”) started with a small enterprise that began to use innovative equipment to produce turned gaskets.

And already for a quarter of the century the Association of Companies “Aksios” has been producing turned gaskets. With the most up-to-date equipment in its high-technology production facilities, using high-quality original raw materials and thanks to the flexibility of the production process (with computer-based matching and calculation of profiles) we can produce lots of gaskets from 1 pcs., gaskets with dimensions for repair works.

Company “Aksios” can on-the-spot deal with the issues where there is a wide assortment of gaskets, where non-standard solutions are required, and where standard materials do not fit.

We produce and supply gaskets for about 700 companies of oil and gas producing industry, iron and steel industry, pipe rolling industry, machine-building, chemical, consumer, food-processing industry, as well as agriculture, power energy enterprises, water power plant and other industrial sectors in Russia and the CIS.

During the period of cooperation with our company, many clients have appreciated real economic efficiency and quality of our gaskets, that has been proved by numerous production test reports.

Association of Companies “Aksios” is a member of the Oil and Gas Equipment Manufacturers Association and member of the Advisory Council at the Fuel and Gas Industry Committee of the State Duma of the Russian Federation.

Our products are applied in such sectors as:
- Oil and gas pipe fitting;
- hydraulics and pneumatics;
- pumping and pressure equipment
- imported equipment with non-standard gasket sizes;
- mining, road-making machines and other mechanisms.

Quality is the basis of our products!

We are with those who count the time and money, we are with those who preserve the resources and care of the environment
Rod gaskets
“Aksios” Company manufactures a wide assortment of rod gaskets for hydraulics of various applications, that to the maximum protect cylinders from external pollutants. The rod gaskets represented by different types of profiles are manufactured with the use of high-quality Russian and imported materials with high-wearing feature that can be used for a wide range of temperatures.

Piston gaskets
Application of piston gaskets is the basis of long-term operation of piston mechanisms in any sector of the industry. Depending on the construction and designation of the piston assembly different types of piston gaskets are applied. The systems of piston gaskets with two-component rings allow to provide perfect gliding, high packing degree and achieve high wear resistance. This type of piston gasket may be used under the pressure up to 400 atmospheres. If the gasket was manufactured of pure polyurethane with more rigid fixation in the bearding, then it will be able to resist higher temperatures.

Rotor gaskets
Rotor gaskets — the gaskets with a wide range of application in all sectors of the industry. Their task is to prevent the inlet of oil, water, dust, mechanical particles into bearings, rotary joints and various mounting pockets. This type of gaskets is distinguished with the outstanding chemical and mechanical resistance.

Guide rings
The major task of guide rings for hydraulic cylinders is to guide the rod and piston in the hydraulic cylinder, that prevent piston displacement in the cylinder and protect the mechanism from unwanted lateral load and retain from early wear.

Scrapers, wipers
Wipers are a required component of hydraulic system that is designed to prevent the inlet and deletion of mechanical particles, mud from piston rod while it is pulled into the cylinder. Wipers prevent the pollution of the driving fluid and protect guide rings, gaskets and other elements of cylinder from breaking.

Carrier rings
The task of carrier rings of hydraulic cylinders is to absorb the lateral load and prevent the contact between the outer part of the cylinder body with the rod, that helps to prevent the metal-to-metal contact during backward and forward action.

Major Customers

- LUKOIL
- Rosneft
- Gazprom
- PJSC “Mechel”
- JSC “Chelyabinsk Pipe Plant”
- United Metallurgical Company (OMK)
- JSC “Pipe Metals Company”
Foreign Trade Company ALLWE

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www.allwe.com

Company Description

Since 1992, Foreign Trade Company ALLWE has been one of the leaders on the export market of Russian high-tech equipment. The major task of the Company’s business is to assist the realization of foreign trade potential of the Russian Federation through diversification of Russian export regarding the supplies of the foreign customers with high-technology, non-raw products manufactured in Russia.

Representing its country on the international market, ALLWE plays an important role of an integrator and provides assistance to Russian industrial enterprises in order to enhance their export capabilities. We attract financing under the guarantees of national export credit agencies (NECA) to organize uninterrupted imports of high-technology products for the needs of Russian companies. There are more than a hundred Russian enterprises among our partners, as well as certain number of foreign companies around the world.

Foreign Trade Company ALLWE offers to its customers complex solutions and latest developments in the oil and gas industry, aviation sector, power engineering, automobile and railway transports, shipbuilding and medical equipment. Special attention is paid to socially significant projects such as construction of waste-water treatment facilities and recycling plants for domestic and industrial waste.

Over the past years, company ALLWE has substantially extended the range of the exported products and its commercial geography. The company supplies the equipment manufactured in Russia to more than forty countries all around the world, including among others Cuba, Venezuela, Chile, Ecuador, Peru, Nicaragua, India, Bangladesh, Myanmar, Vietnam, Malaysia, Indonesia, Iran, United Arab Emirates, Egypt, Kazakhstan, etc.

The regional representative office of ALLWE operates in the Republic of Cuba in order to enhance the quality and foster cooperation with the countries of Latin America.

Our company actively participates in promotion of Russian products using preferential export lending, provided by various banks under the cover of Export Insurance Agency of Russia (EXIAR), and cooperates with leading Russian and international banks, such as Roseximbank, International Investment Bank, Sberbank, VTB and others. This provides optimal solutions for financing transactions in the form of preferential export credits:
• Export credit of a foreign bank on preferential terms;
• Export letter of credit with insurance of foreign guarantee and insurance companies;
• Export letter of with the guarantee of the European Bank for Reconstruction and Development;
• Leasing-based financing;
• Export credit lines of foreign banks to the equipment suppliers or the customers’ banks;
• Export buyer credit of a foreign bank provided to the ordering customer of the imported equipment.

Promoting the products manufactured by Russian companies, our company is a permanent member of numerous intergovernmental commissions, business councils, as well as a member of many international and Russian organizations:
• Oil and Gas Equipment Manufacturers Association;
• Association of Arctic Projects Contractors “Murmanshelf”;
• Chamber of Commerce and Industry of the Russian Federation;
• Lima Chamber of Commerce (LCC);
• National Committee for Promotion of Economic Cooperation with Latin America (NK CEPLA);
• International Congress of Industrialists and Entrepreneurs (ICIE).

Export capacities and competitive advantages of companies engaged in the Hi-Tech sector will expand the leadership of Russian Federation on the international market year by year.

Products and Services

Export of machinery and technical equipment for chemical and oil refinery enterprises to different countries around the world.

**Equipment for oil and gas production, transportation, storage and refining**

Equipment for oil and gas production; Equipment for shelf drilling and exploring; Industrial equipment, components and tool for maintenance of drilling rig systems; Equipment for oil and gas refining; Equipment for transportation and storage of oil, gas and oil products; Equipment for fuel filling stations; Analytical, measuring and laboratory equipment for gas, oil and oil products.

**Wellhead equipment**

| Conventional casing heads | Angle globe valves |
| Time saving casing heads | Chokes |
| Conventional casing hangers | Ball valve choke |
| Annular seals | Switch type choke |
| Water supply wellheads | Flow control valve |
| Tubing heads | Non-freezing check valves |
| Tubing head with wrap-around tubing hanger | Axial-type flow control valve |
| Tubing head with mandrel hanger | Stuffing boxes |
| ESP tubing head | Blowout preventer (BOP) for polished rod |
| Tubing head with suspension in adapter | Rod rotator |
| X-mas trees | Media separator |
| Horizontal (compact) X-mas trees | Steel needle valves (samplers) |
| Gate valves | Ball valve for pressure gauge |
Hammer (wing) unions
Tools and accessories for well completion and maintenance work
Emergency protection systems

Manifolds
Modular gas well manifolds
Valving and piping units (manifolds)
Choke manifolds

Tanks
Steel tank units, cylindrical, for gaseous and liquid hydrocarbon fluids
Underground horizontal drain tanks of EP and EPP type

Pipeline equipment
Pipeline gate valves
Pipeline wedge gate valves
Ball valves

Fire-fighting equipment
Angle fire-fighting valve
Connection heads

Spring pressure relief valve with manual override
Pressure relief valves switching device
Pressure relief valve unit with switching devices

Water distribution for water injection (Wl) systems
Hook-up manifolds for X-mas trees

Horizontal tanks for liquid oil products
Receivers

Check valves
Swing check valves

Non-freezing fire hydrant
Shut-off valves

Major Customers

| VNIIBT-Drilling Tools Ltd. | “Volgogradneftemash”JSC | Volgograd D.E.P. |
| Dimitrovgradhim mash | Energoneftemash | “Kontex“ |
| JSC “Zelenodolsk Plant named after A.M. Gorky“ | Korvet JSC | RPC “Metallurg“ |
| JSC “Murom Industrial Valves Plant” | Uralhimmash | URALTRAK |

Hammer (wing) unions
Tools and accessories for well completion and maintenance work
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| Dimitrovgradhim mash | Energoneftemash | “Kontex“ |
| JSC “Zelenodolsk Plant named after A.M. Gorky“ | Korvet JSC | RPC “Metallurg“ |
| JSC “Murom Industrial Valves Plant” | Uralhimmash | URALTRAK |
“PTF “Areopag” LLC, Dosing Equipment Plant

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www.areopag-spb.ru

Company Description

“PTF “Areopag” LLC, Dosing Equipment Plant is a leading equipment manufacturer in the market of the Russian Federation, member of the Russian Association of Pump Producers that is included into Europump European Association. Moreover, “Areopag” is a member of the Oil and Gas Equipment Manufacturers Association.

Since 1992 our Company has been designing, manufacturing and selling to all regions of Russia and foreign markets dosing pumps ND, NDR and NDM of various sizes and modifications, as well as modular pump units.

Basing on many years of experience in equipment supply, solving numerous design tasks while developing dosing units, the Company has created new samples of pumping assemblies (diaphragm dosing pumps, leak-proof plunger pumps, peristaltic (hose) pumps), and launched the production of protection safety relief valves.

We offer our clients to use the existing cutting-edge perspective developments. Their application will enable the creation of high-efficient, precise and moderately-priced systems. Our products can be purchased on favorable prices and can be used in different sectors of business and industry (oil, chemical and food industry, water treatment, power engineering and other sectors). In accordance to intensive quality control and acceptance tests, our Company received positive feedback from our customers on ND type pumps and other equipment.

Major goal of our company is introduce innovative technologies that provide to balanced and efficient supply of new solutions into Russian industry. Specialists of LLC “ZDT “Areopag” Dosing Equipment Plant” constantly improve the existing technologies and develop innovative projects. We are ready to develop technical proposals according to your tasks on a pay-free basis.

Benefits of our Company:

• Perfect reputation. We clearly fulfill all contract obligations, requirements, regulations and legislation.
• Complex approach. The projects are manage at all implementation stages.
• Professional approach. Highly experienced staff of our Company uses modern equipment and software.
• Management. Professional support at all stages of project implementation. PTF “Areopag” LLC, Dosing Equipment Plant has all the required certificates and approvals to manufacture dosing pumps. Integrated management system of PTF “Areopag” LLC, Dosing Equipment Plant meets the requirements of international standards ISO 14001:2004 (environment), ISO 9001:2008 (quality), OHSAS 18001:2007 (professional safety and health). The stated equipment is energy efficient, is named in the List approved by the Resolution No. 308 of 16.04.2012 of the Government of the Russian Federation. The Company (asset holder) that uses equipment and devices with high energy efficiency, may get the following tax privileges: — item 1 Article 259.3, a taxpayer has the right to apply redemption to the basic depreciation standard and a special index not exceeding 2, regarding the depreciating assets, pertaining the objects with high energy efficiency, thus reducing the tax base for income tax during the period of depreciation of the stated products.

Manufacturing of equipment for oil and gas sector

**Dosing Pumps ND and NDR**
Dosing pumps ND and NDR are designed for volume discharge dosing of neutral and subversive liquids, emulsions, suspensions. The application domain of ND and NDR pumps is determined by material endurance of the flow tube in the dosed environment and implementation of the associated electric hardware. ND and NDR dosing pumps are manufactured according to specifications TU 3632-003-46919837-2007.

**M10 series non-valved plunger pumps**
M10 series non-valved plunger electric dosing pump units are designed for volume discharge dosing of neutral and subversive liquids, emulsions, suspensions.

**M8 type leak-proof plunger pumps**
leak-proof plunger pump, modification 8 (M8 index) manufactured by PTF “Areopag” LLC, Dosing Equipment Plant is a new product according the quality level and the technological effectiveness. The pumps have conceptually individual distinctive features and are designed on the basis of special developments and innovations of our Company.

**Diaphragm dosing pumps**
New generation diaphragm dosing pumps ensure leak resistance of the controlled fluid and the driving fluid. The construction features of the diaphragm dosing pump ensure no leaks of the controlled fluids into the environment. НДМ type diaphragm dosing pump units fully correspond to specifications TU 3632-003-46919837-2007.

**Low-pressure diaphragm dosing pumps**
PTF “Areopag” LLC, Dosing Equipment Plant offers new diaphragm pumps — type NDM 1 (with mechanic diaphragm loading). The working feeding range of this type of pumps is from 30 to 1250 l/hour; pressure capability — 16 kgf/cm², the liquid end can me made of metal and plastic (polypropylene, PVC, PVDF, F-4). NDM type diaphragm dosing pump units fully correspond to TU 3632-003-46919837-2007.

**Modular dosing pump units**
The main different of modular units is the ability to build a unit with a horizontal and vertical arrangement of drive shaft of arbitrary layout up to 10 pcs.
Peristaltic (hose) pumps, NP type
- Fully hermetic design, no valves and gaskets;
- Repumping of viscous fluids, abrasive fluids, shear-sensitive fluids, impure fluids;
- Dry operation, repumping of liquid-gas mixtures;
- Self-suction up to 9 meters;
- Option of reverse operation.

Dosing pump driven by conventional pumping unit
For pumping the high-viscosity oil it is required to apply special technologies to reduce the viscosity of the pumped products. For this purpose there may be applied a special installation, that includes a dosing pump driven by a conventional pumping unit.

Dosing plunger differential electric pumping units
Original design of the dosing plunger differential electric pumping unit helps to solve the problem of reducing the volume flow rate loping.

Block equipment

Dosing pump blocks, BNDR type
Block BNDR — specifications TU 3632-001-46919837-2009 — a block for continuous dosing of different liquids may be assembled on the basis of electric plunger pump units or diaphragm units, as well as supplementary equipment according to the Customer’s technical specifications.

Dosing blocks for liquid reagent, type UDE, UBPR, SUDR, BNDR, UND
Specifications TU 3632-001-46919837-2009 — Dosing blocks are designed for feeding of chemical liquid reagent into oil-and-gas well and oil collection and transportation pipelines to protect the oil equipment against corrosive action, hardness deposition, deposits of asphalts, resins, and paraffins, etc.

Dosing block for liquid reagent (MINI BRH)
Specifications TU 3632-001-46919837-2009 — Light and mobile design of the block enables it to be used without a baseplate and move it according to the production requirements.

Blocks for metal corrosion inhibitors injections — UDH, BR
Specifications TU 3632-001-46919837-2009

Chemical injection packages (BRH, UDH, BR)
Specifications TU 3632-001-46919837-2009 — Blocks for continuous dosing of liquid reagent in heated shed blocks are designed for automated input of chemical liquid reagents into pipelines of field oil collection, transportation and preparation systems.

Mobile chemical injection package — MBRH
Specifications TU 3632-001-46919837-2009 MBRH — Block is designed for preparation, transportation and dosed pumping of neutral, toxic and inflammable liquid chemical agents into hole clearance of oil and gas wells, as well as into pipelines.
Methanol, MEG, DEG supply blocks, type BNDR
Specifications TU 3632-001-46919837-2009 — Blocks are designed for supply of methanol and ethylene glycol into gas output wells, gas collection and transportation pipelines in order to prevent hydrate deposits and formations, as well as to supply MEG, DEG, TEG for gas dehydration and recovery of used-up ethylene glycol.

Filter block
Specifications TU 3632-001-46919837-2009 — The block is designed for filtering liquid reagents from mechanical impurities and prevention of contamination and breaks of pumping units or any equipment sensitive to contamination of the pumped fluid.

Gas odorizing block
Gas odorizing block is designed for dosed supply and metering of the odorant supplied into the natural gas flow. Dosing on offshore drilling platforms.

Dosing on offshore drilling platforms
There is works on drilling and well operations on the platform at the same time. The peculiarity of these objects is an automatic work without people's participation and a minimum amount of equipment, which can be controlled remotely.

Safety protecting valves
Pulsation dampers, check valve, safety relief valves, Filters.

Control devices
Control systems,
Control units,
Motion sensors (Proximity switches),
Smart decentralized gear.

Major Customers

| PJSC “Gazprom” | PJSC “LUKOIL” | PJSC “NC “Rosneft” | OJSC “Surgutneftegaz” |
| The State Corporation “Rosatom” | OJSC “Orenburgneft” | PJSC “Tatneft” |
| JSC “NC “KazMunaiGaz” | JSC “United Chemical Company “URALCHEM” |
| JSC “NC “KazMunaiGaz” | LLC “SK “RUSVIETPETRO” |
| Group “Siberian Generating Company” | Salym Petroleum Development |
| “Uraltehnostroy” Corporation | Baker Hughes | Schlumberger |
Company Description

Since 1996, LLC “BITTEKNIKA” has been successfully developing and manufacturing equipment for sidetracking, well-workover operations and coil-tubing technologies. All products are manufactured using the Company’s own resources at a high professional level, and meet the international standards and requirements. The products are used both by Russian and foreign service companies. Moreover, LLC “BITTEKNIKA” renders services of engineering and technological administering of application of the supplied oilfield equipment. The experienced engineering and technological staff helps to select the most appropriate assembly option to resolve the specified task.

Products and Services

Sidetracking Instrument

**Mechanical inclinator whipstock KOM**
Mechanical unsupported inclinator whipstock KOM is designed to provide the required deviation of cutters or millreamers from the main hole axis white cutting of a “window” in the production string, as well as to incline the cutting and drilling equipment while drilling an additional well hole through a production string and subsequent tail lowering.

**Inclinator whipstock КОП-СФ**
Inclinator whipstock КОП-СФ is designed to provide the required deviation of cutters or millreamers from the main hole axis white cutting of a “window” in the production string, as well as to incline the cutting and drilling equipment while drilling an additional well hole. The design of the inclinator whipstock requires a backwall support.
Hydro mechanical inclinator whipstock КОГМ
Hydro mechanical unsupported inclinator whipstock КОГМ is designed to provide the required deviation of cutters or mill-reamers from the main hole axis while cutting a “window” in the production string, as well as to incline the cutting and drilling equipment while drilling an additional well hole through a production string and subsequent tail lowering.

Hydro mechanical removable inclinator whipstock КОГМ-И
Hydro mechanical removable inclinator whipstock КОГМ-И is designed to provide the required deviation of cutters or mill-reamers from the main hole axis while cutting a “window” in the production string, as well as to incline the cutting and drilling equipment while drilling an additional well hole through a production string and subsequent tail lowering.

Cemented inclinator whipstock КОЦ
Cemented inclinator whipstock КОЦ is designed to provide the required deviation of rock-destruction tool from the main hole axis during kickoff and drilling of the side hole from the open hole in order to pass around the emergency sections.

Inclinator whipstock КОИ-МФ
Inclinator whipstock КОИ-МФ is designed to provide the required deviation of cutters or mill-reamers from the main hole axis while cutting a “window” in the production string, as well as to incline the cutting and drilling equipment while drilling an additional well hole through a production string and subsequent tail lowering. The design of the inclinator whipstock requires a backwall support.

Kickoff window cutter
Kickoff window cutter ФСО is designed for lowering and installation of the inclinator whipstock to the backwall and cutting of a “window” in the production string at a single run.

Kickoff window cutter ФСО-Т with combined cutting structure
Kickoff window cutter ФСО-Т with combined cutting structure is designed for lowering and installation of the inclinator whipstock to the backwall and cutting of a “window” in the production string at a single run.

Kickoff window hydraulic hard-alloy cutter ФСО-ГТ
Kickoff window hydraulic hard-alloy cutter is designed for lowering and installation through the high-pressure line (hydraulic line) of the hydraulic-mechanical inclinator whipstock КОГМ, КОГМ-И and cutting of a “window” in the production string at a single run.

Window cutter ФО
Window cutter ФО is designed cutting of a “window” in the production string.

Window cutter ФО-Т with combined cutting structure
Window cutter ФО-Т with combined cutting structure is designed cutting of a “window” in the production string.

Universal lowering device УСУ
Universal lowering device УСУ is designed for lowering and installation of inclinator whipstocks in the cased hole.

Accident Elimination Instrument

Outward trip spears
Outward trip spears are designed to capture at the outward cylindrical surface and extract the pipe column elements during fishing operations.
Inward trip spears
Inward trip spears are designed to extract tubing strings during repair and emergency recovery operations in holes.

Fishing sockets
Fishing sockets are designed to capture at the outward surface and extract the pipe column elements during fishing operations.

Fishing tap
Fishing taps are designed to capture at the inner surface and extract tubular column elements during fishing operations.

Universal catcher
Universal catcher (type УЛ) is designed to capture at the outward cylindrical surface and extract the pipe column elements (primarily, pump rods) during repair and emergency recovery operations in holes.

Bottom hole cleaning devices
Bottom hole cleaning devices are designed to extract from the hole various debris, drilling bit rolling cutters, bearings, broken jaws, cable fragments, different hand tools, fractions and pieces of ragged drill pipes (in case of winding-up), millings, etc.

Tubing cutters
Tubing cutters are designed to cut parts of pipe columns for their subsequent extraction to the surface for repair and emergency recovery operations during underground and maintenance overhaul of drilling holes.

Equipment for coil-tubing installations
Outward releasing trip spears
Inward non-releasing trip spears
Magnetic extractor
Seals
Cable and wire extraction devices
Punchers
Inward hydraulic tubing cutters
Cutters
Hydraulic tubing anchor
Hole milling device
Milling connector

Auxiliary Instrument
Column cleaning and correcting devices
Templates
Articulate adapters and tubing
Roller-bit reamer
Hydraulic monitor Jet nozzle valve
Pressurizing tubular adapter
Drill bit hoisting device
Stabilizers and reamers
Roller centralizers and rotary adapters
Services

Pointing of inclinator whipstocks
Pointing of inclinator whipstocks during engineering-technological services operation with “window” cutting in the production string or before installation of whipstocks in the drill hole.

Engineering-technological administration during “window” cutting in the production string (including through 2 strings)
Providing the engineering-technological service itself:
Control during well bore preparation (drifting, slushing, measure fix-up, etc.);
Instruction of the Customer’s engineers and other technical workers and drilling shift;
Assembly of inclinator whipstocks;
Assembly of a cutting arrangement with a wedge;
Wedge installation in a drill hole;
Cutting and reaming of a “window” in a drill hole

Engineering-technological administration for sidetracking in the open hole
Providing the engineering-technological service, that includes the following operations:
Control during preparation of a well bore, if required;
Instruction of the Customer’s engineers and other technical workers and drilling shift;
Assembly of a cemented inclinator whipstock;
Assembly of an arrangement with a wedge and a running tool;
Wedge unloading at the backwall with the installed cement bath;
Assembly of an arrangement for sidetracking (rotary or turbine sidetracking using the Customer’s rock cutting instruments);
Cement bridge sub-drilling and sidetracking with reaming of this interval.

Consultation services for selection of the necessary equipment for sidetracking and accident elimination during the workover
Major stages:
1. Collection of all the required information about the well;
2. Analyzing the collected information and taking account of the Customer’s wishes, the specialists of LLC “BITTECHNIKA” will select the required complex of equipment specifying the schemes, arrangement options, their geometric dimensions, simultaneously consulting the Customer regarding specific features of the equipment operation.

Repairs and restoration of fishing and cutting equipment
During repairs of the equipment we provide thorough control and screening of components and assembly units. The products undergo mechanical processing in order to eliminate impairments and restore the tread parameters. Non-destructive inspection is performed at the same stages like during manufacturing of new products.

Non-destructive testing of products
The non-destructive testing laboratory performs detecting works using the ultrasound, magnetic and capillary control methods. The laboratory got accreditation of ZUAC “Nerkont-Plus”. All the equipment used in the non-destructive testing laboratory undergoes compulsory periodic verification. Specialists of the laboratory undergo regular reclassification, and are winners of all-Russia contests among the non-destructive testing specialists.

Development and manufacturing of non-standard equipment
While performing works on sidetracking, well workover or prom coil-tubing installations, the Customer often face the situations that can only be resolved with the use of non-standard and specific equipment. Having the rich experience, LLC “BITTECHNIKA” can manufacture such equipment.
**Mechanical metal working services**

“BITTECHNIKA” Company has a unique set of modern machine-tool equipment and offers the mechanical metal working services.

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**Major Customers**

| Shlumberge | Rosneft | PA “Belorusneft” |
“BURINTEKH”, Ltd

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www.burintekh.ru
www.burintekh.com

Company Description

“BURINTEKH”, Ltd is a hi-tech oil service company the business domain of which includes development, manufacturing, service and supply of tools and equipment, reagents for drilling and well workover operations. The Company was founded in 1999. In 2001 the Company designed and successfully launched the production of 214,3mm bits for drilling of lower section intervals of the production string in Western Siberia.

The year 2003 was marked by design of the bit for top well intervals. Starting from this the whole well could be driven using “BURINTEKH” PDC bits. Moreover, during this period the Company successfully passed tests of the first core barrel CK-178/100 at field in Bashkortostan and Western Siberia.

In 2005 there was created drilling muds Department and Laboratory. The first developed drill mud is still successfully used in different conditions.

In 2007 “BURINTEKH” manufactured a new bit for hard rocks, and in 2008 was established the first foreign representative office – in Kazakhstan.

After a year Company launched the production of matrix bits, that previously could only be imported into the country. In 2011 there was established a Joint Venture “BURINTEKH-COMPASS TELEMETRIC SYSTEMS” and a well-casing laboratory.

In 2012 Company launched roller-cone production workshop with full cycle. Next year “BURINTEKH” made preparations to launch the new-type production of downhole motors and other products.


In 2017 at the Conference held by “NK “ROSNEFT”, “BURINTEKH”, Ltd was noted and awarded as the best company providing bit run engineering support in 2016-2017 for its achievements in oil services.

In 2018 “BURINTEKH” one more time was awarded with a diploma of the republican contest “Best Products of Bashkortostan”. This time, “BURINTEKH” participated in the contest with its filter cake removal fluid “BURINTEKH”. “BURINTEKH” is the first domestic company that has developed and successfully implemented such system.
**Products and Services**

**Rock destruction tools**
- PDC bits
- Rotary-steerable systems bits
- Roller-cone bits
- Special bits
- Bicentric bits
- Impregnated bits
- Expandable reamers
- Blade reamers

**Core recovery tools**
- Core heads
- Core barrels

**Sidetracking and workover tools**
- Casing exit systems
- Casing section milling tools
- Open hole sidetracking systems
- Pipe cutters
- Mills
- Reamers
- Punchers

**BHA elements**
- Calibrators and centralizers
- Bit protectors
- Supply correctors-dampers
- String reciprocators

**Jars**
- Torsional jars “SHOCK TURN”
- Axial jars

**Chemical agents**
- Clay and slates inhibitors
- Anti balling and anti-sticking additives
- Polymers
- Multifunctional reagents
- Plugging material
- Rock hardness reducers
- Lubricants
- Reagents for effective cuttings transportation
- Isolated core recovery fluids

**Casing accessories “BITART”**
- Shoes with float valve and eccentric free rotating plastic guide
- Cement plugs fit for drilling out with PDC bits and ability of installation retention mechanism Safe Lock

**Services**
- Drilling
- Bit service
- PDM running
- Core recovery
- Hole opening
- Directional drilling
- MWD support
- Drilling muds and process fluids service

**Sidetracking**
- Casing exits
- Casing section milling

**Remedial cementing**
**Laboratory researches**
- Muds and components research
- Core and formation fluids research
- Plugging materials, slurries and cement stone research
- Jars and BHA elements rent
- Muds test laboratory

**Drilling reagents development laboratory**
- Well casing laboratory
- Technical diagnostics, destructive and nondestructive examination laboratory

**Major Customers**

At the present time “BURINTEKH”, Ltd customers are major Russian and international upstream and oil services companies.
JSC “Volgogradneftemash”

Russia, 400011, Volgograd, Electrolesovskaya Street, 45
Telephone: +7 (8442) 40-72-09
E-mail: office@vnm.ru
www.vnm.ru

Company Description

JSC “Volgogradneftemash” is one of the biggest Russian manufacturers of process equipment for chemical, oil and gas industries.

Joint-stock Company has a branch office — Kotelnikovo Valve Plant (Kotelnikovo, Volgograd Region).

The key feature of “Volgogradneftemash” is capability to supply large-size and heavy equipment in ready-to-operate conditions. This eliminates the need for further assembly of the equipment on site allowing to significantly speeding up its commissioning

The capacity of the Company allows to perform the whole complex of works on the manufacture of high-quality and reliable equipment.

Almost all gas producing, gas transmission and oil and gas processing plants of Russia and the CIS countries are equipped with equipment of JSC “Volgogradneftemash”.

“Volgogradneftemash” Joint Stock Company has implemented a quality management system in compliance with international standards, which determines the quality assurance procedure for different company departments and their scope of authority, rights and responsibilities in quality system, using standards developed for each category of industrial activity. The experts of the Association for Certification “Russian Register” issued on the basis of a certification audit following certificates:

- ASME Stamps U and U2 Certificates of Authorization for manufacture of pressure vessels.
Products and Services

Process equipment for chemical, oil and gas industries

Reactors
Types: Reforming vertical vessels, hydrotreating reactors with stationary catalyst bed.

Towers
Types: Fractionating columns, absorbers, desorbers, adsorbers, stabilizers, evaporators etc.

Heat Exchangers
JSC “Volgogradneftemash” manufactures shell and tube heat exchangers of two types: vertical and.

Separators
Types: Separators for gaseous mediums of ГС-type, oil-and-gas НГС.

Dust Arresters
According to TU 3683-020-00220575-2005 Cyclone and centrifugal dust arresters and their units operating under pressure not more than 16 MPa, without pressure and at wall temperature not less than minus 60°C may be produced.

Filters
They are designed for operation under pressure not more than 16 MPa and at wall temperature not less than minus 70°C.

Coke Drums

Filter Separator Units

Vessel Equipment
Vessels can be supplied to the customer in single and in modular packaged execution. The scope of supply for the vessel equipment includes: frame; operating platforms; control valves; instrumentation; other equipment supplied upon request.

Heaters
Wellhead heater unit “NATCO”-type.
Heater unit П-301.

Petroleum Pumps
Petroleum Centrifugal Pumps are used for transfer of oils, liquefied petroleum gases, oil products with density of no more than 1800 kg/m³.

Block-Type Pig Launchers and Receivers
At present JSC “Volgogradneftemash” manufactures pig launchers and receivers with bayonet catch according to the TU TU3689-037-00217610-2010.

Ball Valves
Ball valves DN 150, 200, 300, 700, 1000, 1200, 1400 mm, PN 8, 10, 12.5, 16 MPa.
Ball valves DN 100, 80, 80/50, 50 mm, PN 8, 10, 16 MPa.
Petroleum ball valve.
Ball valves DN50-DN1400 PN8, 0-16, 0 MPa for rich in methanol production environment.
Ball valves DN 50- DN 1400 PN8, 0-16, 0 MPa for high- temperature production environment.
Shut-Off Valve
Manufacture and supply is in accordance with TU 51-0303-10-96.

Check Valves
Manufacture and supply is in accordance with TU 3742-031-00217610-2008.

Control Valve
Manufacture and supply is in accordance with TU 3665-003-11733071-96.

Valves, Regulators, Elevators
Check valves in accordance with TU3742-14-05749211-2014.
Shut-off valves in accordance with TU3742-11-05749211-2014.
Pressure regulators in accordance with TU3742-14-05749211-2014.
Safety valves in accordance with TU26-07-1489-89.
Water-jet elevators in accordance with TU26-07-1255-82.
Filter strainers in accordance with TU3742-16- 05749211-2014.

Major Customers

| Gazprom | Rosneft | Lukoil | Rosneft | Tatneft | Slavneft Surgutneftegaz |
| Novatek and companies from near-abroad countries | such as Belneftekhim (Belarus) | Uzbekneftegaz (Uzbekistan) | KazMunaiGaz (Kazakhstan) |
JSC “Gazstroydetal”

JSC “Gazstroydetal” is one of the largest machine-building plants that specialize in designing, production and supply of equipment for oil and gas industry, enterprises representing chemical and petrochemical sectors.

All products have the required approvals and authorizations and is certified to meet the requirements of the Technical Regulations of the Customs Union.

Major types of the manufactured products include:
- block-modular equipment for treatment, reduction and distribution of gas with maximum operational compatibility: cable blocks, gas control unit, gas treatment units, automatic gas-distributing station;
- gas purification equipment (filters, separators, gas purification blocks);
- capacitor equipment (up to 80 tons, volume — up to 200 cubic meters);
- gas heaters (with the capacity from 5 000 to 100 000 cubic meters);
- pipeline fittings and pipe spools;
- pipeline wells, pig receivers;
- other specialized products.

Engineering and technological capabilities of JSC “Gazstroydetal” enable to manufacture the products and equipment designed for high-pressure operation, of carbon, low-alloyed and austenic steel, and to provide complete technological production cycle: from development of design documents based on the technical specifications to assembly and testing of end products at the Customer’s facilities.

JSC “Gazstroydetal” is ready to become a reliable strategic partner, adhere to the import substitution program and invest its funds into modernization of the production process and development of new products. Production localization substantially helps to reduce risks, costs and terms for object construction.

Staff and production capacities of JSC “Gazstroydetal” enable to organize development and production of the new non-standard production types. JSC “Gazstroydetal” is ready for information exchange via secure links and signing of confidentiality agreements.
Development and production of machine building products for oil and gas sector

Engineering
Types: reforming vertical vessels, hydrotreater units with fixed-bed catalyst.
Development of heat and material balances.
Process design of machines.
Strength design of machines, process piping, bearing frame, block-boxes taking into account the technological and external loading, thermal expansions and earthquake activity of the construction area.
We issue a complete set of project and design documents.

Block equipment
“Arsenal “automated gas distribution stations
Fuel gas treatment blocks
Gas control units
Gas treatment units

Instruments for oil and gas industry
Filtering and separation instruments
Blocks of filtering and separation instruments
Gas separator blocks
Spark gas separator blocks
Gaging gas separator blocks
Degasifier block
Mixed fluid segregation block
Multi-cycle dust catcher
Multi-cycle gas purification blocks
Vortex gas separators
Separator gas purification blocks
Filtering mud baffles
Gas filters
Filter drains
Viscous fluid dust catchers
Oil catchers
Freeze-out devices
Gas heaters
Heat exchange devices

Equipment for pipeline cleaning and diagnostics
Pig traps
Make-and-break end gates
Basements for vault installation
Sockets of stabilization devices

Containers, tanks, vessels
Condensate collection vessels
Methanol vessels
Vessels for odor components
Double-walled vessels
Mobile vessels for liquefied hydrocarbon gases
Air caps
Air vessels
Pulsed gas collector
Reservoirs

**Wells for oil-trunk pipelines**
Wells for pipelines (KT)
Wells for underground shelter vent (КВГ, КГВПП, ОВПП)

**Connector elements**
Built-up offsets
Built-up T-joints
Concentric welded joint
Forged and built-up concentric joints
Forged bottoms and blind plugs
Erecting joints
Cross-over rings
Welded steel sockets for pipeline repairs
Manways for pipelines

**Major Customers**

- Gazprom
- Transneft
- Tatneft
- NOVATEK
- LUKOIL
- Rosneft
- etc.
JSC “HMS Group”

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www.grouphms.ru

Company Description

HMS Group is a vertically-integrated holding with a modern system of a corporate management, where the function of manufacturing companies’ shares holding and the function of business administration are traditionally separated. Parent holding company is HMS HYDRAULIC MACHINES & SYSTEMS GROUP PLC (the Republic of Cyprus) that issued securities in the form of global depositary receipts (GDR) at the London Stock Exchange in 2011. HMS HYDRAULIC MACHINES & SYSTEMS GROUP PLC is the holder of shares of HMS Group plc, HYDROMASHSERVICE Ltd and owner of shares of HMS Finance and HMS Capital. HMS Group plc and HYDROMASHSERVICE Ltd are the holders of the controlling interest in the manufacturing companies in the Russian Federation, Ukraine, and Belarus ownership: Structure of HMS Group.

HMS Group is one of the major pump, compressor equipment producers for oil & gas, power generation, utilities and water supply in Russia and CIS countries, one of the leading manufacturers of skid mounted modular oilfield equipment and a dynamically developing engineering company with successful practice in design, installation and construction, commissioning of integrated oil & gas production and water facilities.

The HMS Group’s business is represented in form of three specialized divisions that consolidate enterprises and structural subdivisions performing design and constructor documents development, equipment production and sales, installation and construction and commissioning works, following service maintenance and spare parts support.

The Industrial Pumps Division designs, manufactures and supplies pumping equipment used in:
- Oil extraction process, oil & products transportation and processing;
- Thermal & nuclear power generation;
- Water supply, utilities and environment;
- Chemical processing, Steel & Mining, Pulp & Paper, Food, etc.

The HMS Compressor Business Unit designs, manufactures and supplies compressor equipment used in various industries:
- compressors for a wide range of process gases;
- compressor systems;
- complete compressor stations;
- refrigerating machines and units.

The Oil & Gas Equipment and Solutions Business Unit develops, produces and delivers a wide range of equipment and services for oil & gas such as:

- **Customized skid mounted modular equipment including**
  - Water Injection stations for oil formation and formation pressure maintenance;
  - Oil & gas pumping and processing stations; automated group measuring plants;
- Chemical dosing units, measuring and vessel equipment. The divisions of HMS Group provide complex service of this equipment including maintenance and overhaul.

**Specific oilfield equipment used for**
- Oil exploration intensification and efficiency;
- For current and work over repairs, isolation works and fracturing.

The Business Unit provides a full range of engineering and construction services for oil, gas and gas condensate fields development as well as production and infrastructural facilities erection in oil & gas and water industry.

### Products and Services

#### Pumps and Systems

The pumping equipment design and manufacturing is carried out by the HMS Group affiliates: Apollo Goessnitz (Germany), Bobruisk Machine Building Plant (Belarus), HMS Livgidromash (Russia), Dimitrovgradhimmash (Russia), — the proven suppliers for the oil & gas industry.

**HMS Group Pumps Application:**
- **Upstream:** production and primary treatment processes of oil, gas and condensate
- **Midstream:** transportation of liquid hydrocarbons via pipelines and other ways of transport
- **Downstream:** refineries, gas & condensate processing, petroleum & gas chemistry applications

#### Research & Development

Contemporary R&D base is represented by own engineering centers in Russia, CIS and Europe with centralized management and application of the latest 3D design software based on SolidWorks, ANSYS CFX and other CAD and CAM platforms. While designing the pumps and pumping systems the HMS Group specialists are focused on high energy efficiency of proposed solutions.

#### Manufacturing

The cast pump elements are made at the own large foundry shops provided with the newest molding lines and induction furnaces. A full-cycle pumps production including its critical components (casings, impellers, etc.) is arranged by the HMS Group companies equipped with up-to-date CNC machine tools and processing centers from the leading manufacturers of Germany, Great Britain, and South Korea.

#### Testing

HMS Group companies have the unique equipment for in-situ testing of pumps and pumping systems in accordance with international standard ISO 9906:2012 Grade 2B or by special, customer-approved methods, within the following range of the main operating parameters:
- Capacity: up to 16,000 m³/h
- Head: up to 4,200 m
- Drive power: up to 14,000 kW

#### Service

The HMS Group customers are provided with a full range of related services for pumps & systems including installation & commissioning supervision, routine maintenance, repair and overhaul, supply of original spare parts, integrated retrofit, extended engineering and technical support.
Standards & Quality
The pumps are designed and manufactured in compliance with API 610 standard of 11th edition, API 685, API 675 and other international and national industry standards as ISO, DIN, ANSI, ASME. The integrated Quality Management System at production facilities of the HMS Group companies is compliant with ISO 9001 standard requirements.

Compressors and Systems
Engineering and manufacturing of compressors, gas compression systems, and complete compressor stations is performed by the integrated scientific and compressor production complex of HMS Group. The product line includes a wide range of compressor equipment for almost all industrial gases including toxic, explosive, and corrosive ones.

Research & Development
Engineering of compressors and compressor-based process systems is carried out by NII turbokompressor (a part of HMS Group) — the leading in Russia and CIS research & development institute of compressor equipment engineering, situated in Kazan (Russia). The Institute experts have designed over 420 different types of compressors supplied to various industrial facilities in Russia and over 60 countries worldwide.

Design Features Advantages
- The newest gas dynamics calculation methods
- Systematic approach to design through parts unification and building-block concept
- Up-to-date technical solutions (dry gas seals, magnetic suspension of rotors, etc.)

Manufacturing and Testing
Compressors and compressor systems are produced at Kazancompressormash (a part of HMS Group) — one of the leading compressor manufacturing enterprises in Russia and CIS, situated in Kazan (Russia). The production facilities are equipped with all necessary machinery for manufacturing of up-to-date and reliable compressor equipment:
- Total production area: 420,000 square meters
- Modern manufacturing equipment including machine tools and processing centers from Germany, Great Britain, Italy, Canada
- Europe’s largest facility of 35 stands for complete systems testing which provides 100% control of the technical parameters during the factory test and their confirmation on operation site

Service
Own service centers provide integrated after-sales servicing of the compressor equipment:
- Installation supervision and commissioning; routine maintenance
- Design supervision
- Delivery of spare parts and accessories
- Retrofit of compressor systems
- Audit of equipment technical conditions

Quality

Modular & Skid Mounted Equipment
HMS Group integrates the leading Russian companies manufacturing a wide range of the process oil and gas equipment: HMS Neftemash, Sibneftemash, Dimitrovgradkhimmash, and Sibnefteavtomatika.
Application

- The manufactured equipment is widely used by the oil and gas companies in Russia and CIS in production, transportation and processing of hydrocarbons:
  - Drilling, operation and maintenance of wells
  - Increasing production of hydrocarbons
  - Measurement of well production and commercial accounting of hydrocarbons
  - Treatment of oil, gas and water
  - Collection, transportation, storage and delivery of hydrocarbons
  - Separation, treatment and processing of gas-liquid mixtures
  - Processes of oil and gas refining facilities

Research & Development

The HMS Group companies, having their own engineering centers on designing the new oil and gas equipment, actively cooperate with specialists from the leading Russian institutes of the oil and gas industry to offer contemporary solutions in design and manufacture of up-to-date and high-efficient process systems for oil & gas field facilities.

Manufacturing

A park of industrial machinery includes numerical control machine tools, new laboratory, metal cutting, welding, heat-treatment, painting, control, and measuring equipment. The up-to-date manufacturing capabilities allow production of oil & gas equipment in stationary, modular and mobile versions. The oil & gas process systems are tested at the factory in accordance with requirements of the customer. Fabrication of equipment with long production cycle is possible in parallel with the project engineering that provides significant saving of commissioning time and total project costs (up to 25%).

Service

Service divisions of HSM Group provide installation supervision and commissioning of supplied equipment and process systems, guarantee and post-guarantee service, running maintenance and overhaul, customer’s personnel training.

Quality

The quality management system of the HMS Group divisions meets the requirements of ISO 9001:2008. The range of manufactured equipment is approved by all necessary permissions from the state authorities for application at oil & gas industry facilities claimed as hazardous objects.

Oilfield Facilities Project Engineering and Design

The specialists of Giprotyumenneftegaz — one of the largest in Russia and CIS project and R&D institutes of the oil & gas industry perform integrated project engineering of the oil, gas, and condensate field facilities.

Considerable experience has been gained in implementation of a complete scope of works: feasibility study, FEED, basic engineering, detailed engineering, construction survey and supervision, scientific support of projects.

The up-to-date software platforms are applied for design and engineering survey — MicroStation, AutoPipe (Bentley Systems), Hysys, FlReNet, Flow-3D; in the project management — Primavera. The uniform data are used at the all design stages.

The smart 3D engineering technologies make possible involvement of the designers into all stages of the object’s life cycle: design, construction, operation, reconstruction.

Objects of Engineering

Hydrocarbons Extraction/Production

- Development of productive and exploration wells clusters
- Block cluster pumping stations
Hydrocarbons Processing & Treatment
- Oil and water treatment facilities
- Comprehensive gas treatment facilities
- Free water knockout systems
- Booster compressor and pumping stations
- Central collection points
- Oil transfer stations
- Petroleum products storages
- Flare systems

Hydrocarbons Transportation
- Infield and trunk pipelines for oil, gas, and condensate
- Objects and facilities for the trunk pipelines operation

Oil & Gas Field Infrastructure
- Gas turbine and gas piston electric power stations
- Water intakes, water treatment units, sewage disposal systems, process systems, and other facilities

Giprotyumenneftegaz has designed in Russia more than 300 oil, gas, and condensate fields at territories of the Western and Eastern Siberia, Sakhalin, the Krasnodar region and in the Komi Republic.

Major Customers

- Rosneft
- Gazprom
- Gazprom Neft
- Transneft
- LUKOIL
- Surgutneftegaz
- NOVATEK
- SIBUR
- UZBEKNEFTEGAZ
- ROSATOM
- Atomstroyexport
- Uzbekenergo
- Inter RAO
- Norilsk Nickel
- Severstal
- Mechel
- Rosvodokanal
- Mosvodokanal
- Vodokanal of St. Petersburg
- Ministry of Water Resources of Turkmenistan
- Ministry of Agriculture and Water Resources of Uzbekistan
- and others
Company Description

GEA in Russia offers a full range of services in the market of power and oil-and-gas industry equipment: production, supply, and maintenance of booster compressor stations, gas treatment and refrigeration units for oil and gas recovery, transport and processing facilities. The company has its own production site in the city of Klimovsk (Moscow Region, Russia).

Major Areas of Business:

- **Engineering.** In cooperation with GEA technology centers in Germany and Italy, GEA engineering department designs the process solutions, electric power supply, and automation of units.
- **Production.** Production challenges are addressed by several European plants of the Group: screw compressor, compressor unit, and refrigeration equipment manufacturing plant in Berlin (Germany), plant manufacturing booster pump stations and refrigeration units for petrochemical production in Bologna (Italy). A plant assembling booster compressor stations as well as refrigeration and separation units has been commissioned in 2015 in Klimovsk (Russia).
- **Installation supervision, start-up and commissioning.** GEA installation supervision, start-up, and commissioning team is made up of highly qualified engineers specialized in compressor and refrigeration equipment, electrical engineering, and automation.
- **Maintenance.** GEA maintenance experts perform the inspection and scheduled maintenance of facilities, supply of spare parts for the equipment in operation, routine repairs and overhaul of the equipment, energy audit and modification of units.

Products and Services

**GEA Compressor Units**

GEA screw compressor units provide a high level of component integration what makes them highly reliable, efficient, and easy to maintain.
Technical benefits:

- Capacity of 231 to 11,457 m³/h;
- Maximum discharge pressure of 52 bar*;
- Smooth capacity adjustment from 10 to 100% using an integral controller (slide valve) or a frequency converter;
- Automatic adjustment of the internal compression ratio that ensures maximum efficiency in case of the inlet or outlet pressure change;
- Compressor units are fitted out both with an electric motor and a gas piston actuator;
- High-efficiency oil separation system ensures losses of ≤0.5 ppm

Screw Compressors

GEA screw compressors are used to increase the pressure of gases (e.g. methane, propane, ethane, propylene, ethylene, butane, CO₂, natural and associated petroleum gases, and diverse refrigerants).

Unique design of screws manufactured based on patented technologies ensures a highly-efficient operation, reliability, and easy maintenance of the compressor.

Over the course of its 60-years history, GEA screw compressors have proved suitable for challenging operation conditions at plants of the chemical and oil and gas industry, navy and food industry.

The product line of GEA screw compressors includes three series: SMALL, MEDIUM, and LARGE including 24 schedule sizes with capacity range of 231-11,457 m³/h at maximum discharge pressure of up to 52 bar. For special applications, the company produces compressors ensuring the maximum discharge pressure of up to 130 bar.

GEA screw compressors are provided with a smooth capacity adjustment and an automatic system controlling the geometric compression ratio, exhibit high efficiency, minimum noise and vibration, and compactness.

Specially for the oil-and-gas and power industry, GEA has developed screw compressors meeting the requirements of API-619 what ensures an excellent reliability and accessibility for maintenance in challenging service conditions typical for the oil and gas industry.

Refrigeration Units

Refrigeration units are designed for operation in oil and gas industry, the processes of which always involve refrigeration, separation, and condensation. If necessary, these can be intended for different refrigerants (hydrocarbons, freons, and ammonia). Maximum refrigeration capacity may reach up to 14,000 kW.

As required by the customer, refrigeration units are made as modular systems mountable within an open site or inside a heated facility (shelter).

The unit safety is confirmed by international and Russian certificates, and its reliability is ensured by a multistage inspection and factory testing system.

Booster Compressor Stations

GEA in Russia designs, produces, and supplies GEA Sirius modular booster compressor stations including gas treatment units for the following applications:

- Low-pressure gas recovery
- Associated petroleum gas gathering and transportation
- Fuel gas treatment
- Gas processing
- Other applications for oil and gas recovery and processing industry, petrochemical and power industry

The plant of the company located in Klimovsk (Moscow Region, Russia) is fitted out with modern equipment and ensures the production of compressor packages ready for installation on a customer’s site. The screw compressor is the main part being imported. Thus, a standard design of the BCS (booster compressor stations) is made of local components up to 75%.

For example, the BCS contains the following components made in Russia: shut-off and regulating valves, lubrication and fine gas cleaning system filters, gas and oil coolers, ACU (air cooler units) and cooling liquid pumps, ventilation, heating and fire-extinguishing systems. The scope of home-made components is planned to be increased in the nearest time so that the screw compressor and PLC (as a part of the control system) would be the only imported parts.

* some models with maximum pressure of 63 bar are available upon request.
Russian GEA design department deals with complex tasks of our customers in order to ensure a reliable and long operation of BCS in severe conditions and remote areas of the North.

Maintenance team of the company carries out lifetime maintenance, overhauls, and scheduled repairs of BCS. Spare parts stock in Moscow being continuously replenished allows delivering necessary parts of the equipment within 2-3 days to anywhere in Russia and other CIS countries.

**Gas Treatment Unit**

Fuel gas treatment units by GEA are designed specifically for gas pre-treatment, volume metering, and quality control directly before feeding to the booster compressor station or another compatible equipment.

GTU (gas treatment unit) equipment is intended to be installed both inside a sound-proof shelter and on an open site and can be used with different gaseous media including natural, associated petroleum or biogenic gas.

Fuel gas treatment units allow to significantly extend the lifetime of associated compressor and other equipment and reduce its service costs.

Technical benefits:

- Diverse versions: open frame or modular unit for outdoor installation
- Energy-saving gas cooling systems based on GEA refrigeration equipment
- High-efficiency filters and separation systems
- Automatic control system
- Safety system
- Life support system
- Liquid fraction recovery system
- Unit fully factory-assembled upon delivery
- Customized outfitting of BCS possible

BCS by GEA are designed for a specific application and fitted out with relevant units and components in order to increase efficiency and improve compatibility with off-site utilities. Modular gas treatment units are equipped with automatic control system, integrated safety sensors, unique filters, and gas dehydration units. Such measures allow to reduce service and maintenance costs, extend the equipment lifetime, and streamline the system operation.

**Centrifuge Equipment**

GEA separators are designed for liquid-based applications. They use centrifugal force for separating suspensions consisting of two and more phases of different densities, i.e. they can be used for liquid-liquid separation, for liquid-liquid-solid separation or for liquid-solid separation. They are equally as effective at separating liquid mixtures as removing solids.
LLC “Gusevo Valve Plant Gusar”

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Company Description

LLC “Gusar” was founded in 2002 in the city of Gus-Khrustalny (Vladimir Region).
Major Area of Business: production and engineering of shut-off and control valves and oil and gas equipment.
The plant resources, machinery, and technical facilities ensure the production compliant both with Russian and international standards.
The process involves use of exclusively Russian materials provided with all the necessary documents certifying their reliability and quality.

Production capacities of the company include:
• Engineering department.
• Foundry operations.
• Machining operations.
• Deposition and welding station.
• Test station.
• Central laboratory of the plant.
• Painting and anti-corrosion coating station.
Production and engineering of shut-off and control valves and oil and gas equipment

Cast steel wedge valves with rising stem DN 50–1000, PN 1.6 MPa.
Steel gate valves DN 100–800, PN 1.6–8.0 MPa.
Forged steel gates (FSG) DN 15–40, PN 1.6–16.0 MPa.
Oil-pipeline ball valves DN 300–1200, PN 1.6–10.0 MPa.
Ball valves DN 50–1200, PN 1.6–16.0 MPa.
Shut-off control ball valves DN 50–800, PN 1.6–12.5 MPa.
Swing check valves DN 50–1000, PN 1.6–8.0 MPa.
Control butterfly valve DN 350–700, PN 1.6–8.0 MPa.
Safety valves with pneumatic control system DN 100–400, PN 4.0–8.0 MPa.
Oil-filled steel gate valves Dy 50–150, Pp 14.0 MPa (2000 PSI), Dy 50–150, Pp 21.0 MPa (3000 PSI), Dy 50–150, Pp 35.0 MPa (5000 PSI).
Wellhead X-mas and injection (gas lift) trees Dy 50–150, Pp 14.0 MPa (2000 PSI), Dy 50–150, Pp 21.0 MPa (3000 PSI), Dy 50–150, Pp 35.0 MPa (5000 PSI).
Single-seat shut-off control valves DN 15–125, PN 1.6 MPa.
Single-seat control valves DN 15–125, PN 1.6 MPa.
Double-seat control valves DN 25–80, PN 1.6 MPa. Main safety valve (MSV).
Steel flanges of various modifications.
Offshore exploration drilling equipment — mudline suspension system combined with landing head.

Services
Machining services.
Delivery of products to anywhere in Russia.

Major Customers

- Transneft
- Gazprom
- LUKOIL
- Rosneft
- SIBUR Holding
- Gazprom Neft
- Severstal
- LLC “Irkutsk Oil Company”
Company Description

“Zenit-Khimmash” plant is one of the biggest and most fast-paced engineering companies in Russia. LLC “Zenit-Khimmash” comprises three major areas of operations: production of petrochemical equipment; production of tools; production of mortised hardware. The company and all its divisions are certified according to quality management standards based on GOST R ISO 9001-2008.

Major products of the company:

- vessel, heat-exchange, and column equipment for the Russian oil and gas industry, tanks and other steelworks;
- dies, jigs, and molds for items made of rubber, glass or plastic, for permanent mold casting and for non-ferrous pressure-die casting, custom equipment of any complexity;
- mortised hardware;
- engineering products for nuclear power plants.

The latest technologies are being applied for the development of control programs for CNC machines and mathematical models using the software offered by international developing companies (SOLIDWOKS, POWER-DELKAM, Ascon-KOMPAS, KOMPAS-3D, KOMPAS-Graphic, “PASSAT” CAE system). This ensures high performance and quality of the products.

Focused mainly on oil and gas recovery and on fine petrochemical industry, the company produces numerous complex items for these branches. Moreover, it manufactures various equipment for civil and industrial construction, for consumer market and food industry companies. Having its own engineering department involving highly-qualified specialists in the above branches as well as cooperation with the leading R&D institutes and universities of the country make it possible for the company’s team to design and manufacture products regardless of the percentage of engineering documentation completion. The process can be initiated almost from scratch, i.e. from a specification.

Logistics Network

Logistics network of the LLC “Zenit-Khimmash” consists of a railway branch, in-house car and truck fleet, storage facilities, and a package-producing carpenter and machining shop. Dimitrovgrad is conveniently located in terms of transport infrastructure — in the center of the Middle Volga region — near Ulyanovsk, Kazan, Samara, Tolyatti, Penza, Nizhniy Novgorod, and other big cities of industry. The city is crossed by a new federal highway Moscow — Urals — Siberia — Far East and by a railway line of the same direction; only 40 km away, there is the largest Ulyanovsk airfreight hub in Russia, and the river harbors nearby (80 km away) along the Volga River with river-sea vessels.
**Products and Services**

**Petrochemical Equipment**

**Air Cooling Units**
- Gas air recirculation coolers
- Air recirculation cooler unit БАВО-К
- Air cooler unit БАВГ-МЭА
- Modular air coolers АВО-БМ
- Small-flow air coolers АВМ
- Air coolers 2АВГ-75С, 2АВГ-100С
- Double-fan zigzag air coolers 2АВЗ-Д
- Zigzag air coolers АВЗ
- High-viscosity product air coolers 1АВГ-В
- Horizontal air coolers 1АВГ, 2АВГ
- Horizontal air coolers АВГ

**Heads**
LLC “Zenit-Khimmash” produces heads based on hot and cold forming techniques using:
- carbon, alloyed, two-ply, and stainless steels;
- with a wall thickness of 4 to 120 mm;
- with a diameter of 800 to 6500 mm.

**Vessel Equipment**

**Column Equipment**

**Settling Tanks**
- Horizontal-flow moisture-repellent water settling tanks
- Horizontal-flow crude oil baffled settling tanks
- Settling tanks ОВ-50; ОВ-100
- Settling tanks ОВ-200
- Settling tanks ОГ
- Settling tanks ОГЖФ

**Separators**
- Oil and gas separators I, I-II, II, II-II
- Water-drainage oil and gas separators
Separators are designed to separate oil, gas, and water used in oil field product gathering and processing units from the well stream

**Vessels**

**Heat-Exchange Equipment**
- Special-purpose shell and tube heat exchangers
- Thermosyphon evaporators ИНТ, ИКТ
- Special-purpose shell and tube heat exchangers
- Refrigerant condensers КХ
- Special-purpose shell and tube heat exchangers.
- Refrigerant evaporators and condensers ИХ-1, ИХ-2
- Double-pipe heat exchangers ТТМ
- Double-pipe heat exchangers ТТОП
- Double-pipe heat exchangers ТТОН
JSC “Zavodoukovsky Machine Building Plant” has been present in the Russian market for over 70 years. It was October 1941 when aircraft plant No. 499 was evacuated from the city of Voronezh to workers settlement Zavodoukovsky. Later on, this plant made up the basis of the future plant manufacturing gliders — “silent” aviation.

Aleksandr Moskalev was appointed as a Chief Designer and Director of the plant. It was before the war when Moskalev developed a design of the landing cockpit for heavy bombers ТБ-3. It was the production of those cockpits with which the plant had started its operations. Shortly afterwards, the plant proceeded with manufacture of gliders A-7 and AM-14. Few are aware that, during the war, this aircraft plant was the first in Russia to have designed all-arms series of jet aircrafts as assigned by the Defence Committee: fighter-interceptor РМ-1 (“Moskalev jet fighter”) and several types of fighters БИ-1, БИ-2, БИ-2М. Apart from the battlefield products, the plant had been manufacturing trainer gliders А-2 for aviation schools since 1942. One of such schools was functioning in Zavodokoukovsk. It trained such spacemen as V. Komarov and L. Demin. The school was based on the plant-owned airfield including towing airplanes and trainer aircraft Po-2. The aviation plant was re-evacuated in the late April 1945 to Leningrad due to destroyed state of Voronezh. Remaining workshops formed the basis of a new production. Novo-Zaimsky Mechanical Plant was renamed Tyumen Agricultural Machinery Plant (“Tyumenselmarsh”) on the 3rd of June 1958 under the Decree of the Tyumen Council of People’s Commissars. The major area of operations of the plant within the period of 1958-1973 included manufacture of mobile workshops and spare parts for agricultural machines, tractor dump trailers, two-stage harvesting mounted reapers ЖН-4.0Б, automotive grain cleaners ОВВ-20, peat stockpiling tractors, KCA-3 (mineral fertilizer spreader). Number of employees had reached 1,840 by 1973. The land plot area of the plant amounted to 29.3 ha. The housing stock of 72 buildings occupying the area of 14.15 ths. sq. meters belonged to the plant. Until 1992, the company was producing around 15 various modifications of van bodies to be mounted on the vehicle chassis as well as trailer chassis at a rate of 200 items per month for the needs of the Defence Ministry. As per Order of the Ministry of Chemical and Petroleum Engineering No. 320, the plant was renamed “Zavodoukovsky Machine Building Plant” on the 1st of December 1989. The product range had been expanded by that time.

The number of van bodies produced including those for KAMAZ 4310 truck chassis had reached 1.5 ths. items per year, the number of soil fertilizer applicators МХА-7 — up to 900 items; also, the plant produced over 60 various spare parts for the repairs of agricultural machinery, spare parts for VAZ vehicles, and more.

The company has its own access railways that facilitates and reduces the time of product delivery to customers.

Since September 1992, focusing on the needs of companies operating in the Extreme North conditions, the plant started producing a new type of product based on a military article 2603B: mobile homes “Kedr” not only as good as foreign counterparts, but also outclassing them in terms of strength performance. First, the production included only...
2-3 modifications, however now, AO “Zavodoukovsky Machine Building Plant” manufactures over 500 “Kedr” modifications. The volume of output has increased from 20 items per month in 1992 up to 200 items per month in 2002. The total amount of all “Kedr” mobile housing units produced equals 20,000 items.

**Production of Van Bodies of Various Modifications**

**“KEDR” Mobile Housing Units**

“KEDR” mobile housing unit consists of a housing unit mounted on tracks and represents a framed metal structure comprised of a three-dimensional shell filled with a polystyrene foam insulant (based on technology preventing the wall freezing) made of foam boards (the insulant thickness amounts to 100 to 120 mm), inner and outer lining, and water-vapor barriers. The shell is welded to the unit frame and serves as a load-carrying structure. The unit is fitted out with a compressed-air braking system, parking brake, and lifting jacks for the fixation on platforms during the service. The unit is completed with a boarding pad with supports, stairs, and barriers. Mobile units can also be mounted on skids and on a framework.

**“KEDR-BK” Container-Type Mobile Housing Units**

Overall dimensions — metal shell dimensions: 3.0×3.0 m; 3.0×6.0 m; 3.0×9.0 m; corridor-type unit dimensions: 2.0×9.0 m; 2.0×6.0 m. Shell height: 2.81 m. Floor-to-floor height: 2.45 m. Weight of one 6.0×3.0 m module based on configuration and interior and exterior finishing equals approx. 3.8 tons.

**Polystyrene Foam**

JSC “Zavodoukovsky Machine Building Plant” produces modular self-extinguishing polystyrene foam (foamed plastic) of various grades (ПСБ-С 15,25,35) using a high-precision automated line by STYROPEX (Poland) and imported raw materials. It ensures high level of product quality, stress-strain performance, and thermophysical properties. Use of oscillation in the cutting technique allows producing boards with minimum tolerance on dimensions what makes their precise mating possible.

- Polystyrene foam boards by JSC “Zavodoukovsky Machine Building Plant” excel the other heat insulants in their properties and are highly competitive with foreign counterparts.
- The products of JSC “Zavodoukovsky Machine Building Plant” meet requirements of GOST-15588-86, are fully tested and certified.

**Aerator**

Aerator НО — 1537.00.00.00 is intended for oxygen saturation of waters covered with ice in winter.

**“KEDR” Trailer-Type Fire Extinguishing Unit**

Unit ПЦ-2,8 “KEDR” is designated for extinguishing fires on the territory of national economic assets by supplying water (from one or two nozzles) to the seat of fire both from an on-site tank and from other containers, wells, and water bodies.

**Water Storage Tank**

Insulated skid container ЦТС-5 is designed for storage of drinking water in winter and summer. The container can be used in macroclimatic areas at an ambient temperature of +40 to -60 °C.
Piles
Bored pile is designed as a pipe with a welded-on blade of a specific profile. Bored piles were developed by military officers to be used in soft and frozen soils as a bridge footing and HV power line support.

High load-bearing capacity of the bored pile can be easily explained: the soil in a turn-to-turn space does not become loose when the pile is turned in, on the contrary, it is compacted and the bored pile is driven into the ground like a screw.

Piles are produced in accordance with relevant requirements and made of high-quality GOST-compliant materials designed both for compression and pulling loads of up to 7 tons each.

Based on a cost estimate, a foundation on bored piles costs 35-40 % less than any strip foundation, even a shallow one.

Trail Groomer
Trail groomer is intended to groom a ski track trail both for classical and free style.

Services
JSC “Zavodoukovsky Machine Building Plant” renders services of integrated metal finishing, manufacture, assembling, and supply of steelworks and custom equipment as well as provides full range of services related to design engineering, production, and repairs of dies, jigs and fixtures, molds, and parts based on customer’s drawings and specimens developed by our engineers (in the view of our capacities).

Major Customers
Number of major users of "Kedr" mobile homes includes oil and gas companies, building companies, and oil transportation companies including:

| LUKOIL | Surgutneftegas | Transneft |
| Gazprom Neft | TNK | Rosneft | "NGK "Slavneft" |

etc., and companies from CIS countries: Kazakhstan, Turkmenistan, Belarus, Ukraine etc.
JSC “Zelenodolsk Plant named after A.M. Gorky”

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Fax: (84371) 5-78-00
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Company Description

JSC “Zelenodolsk Plant named after A.M. Gorky” (part of the AO “Holding Company “Ak Bars”) is one of the biggest and strategically vital companies in Russia that celebrated its 120th anniversary of industrial activity in 2015. Throughout its history, the plant has built over 1,500 sea and river ships and vessels of various classes and applications. Location in the center of Russia on the bank of the Volga River enables the JSC “Zelenodolsk Plant named after A.M. Gorky” to deliver ships and vessels to any region of the Black Sea, the Caspian Sea, and the North Sea basins using inland waterways. Production and technical facilities of the company comprise a complex of shops covering all types of modern shipbuilding which makes it possible to construct various ships and vessels of small and middle size.

JSC “Zelenodolsk Plant named after A.M. Gorky” has developed machine-building facilities including foundry, forging, heat-treatment, electroplating, welding and machining workshops. It enables the company to produce a wide range of products for ship machine building and diversified equipment for oil and gas industry. Titanium foundry shop of the plant is one of the largest in the world in terms of production of complex shaped titanium castings made of any titanium alloys compliant with Russian and international standards.

Future Development and Machine Building Strategy:
Local market for ship machine building forms ship-building and ship-repairing production in Russia. The plant cooperates with Russian ship-repairing companies and plans to expand sales markets and increase the sales volume of anchors, capstans, shafts, propellers, and other equipment designated both for the military acceptance and for the acceptance of River and Maritime Registries.

The products of petrochemical engineering (PCE) are planned to be promoted in the Russian market globally in several ways:
1) Direct interaction with end users (oil companies, drilling companies).
2) Development of PCE products distribution network.
3) Cooperation with PJSC “Tatneft”.
4) Product portfolio policy (mastering new products, expansion of product line).
Drilling Equipment
Double-line drilling links
Casing elevators КМ (Technical Specifications TU 26-02-933-89, ЭК (TU 26-02-945-82))
Khalatyan dual-link elevators ЭХЛ 60-15, ЭХЛ 73-25, ЭХЛ 89-35 (TU 3668-004-00220302-96)
Spare parts and components for drilling systems БУ-75, БУ-75Э, БУ-1600, БУ-2500.

Spare Parts and Components for Valves and Pumps
Spare parts and components for drilling systems БУ-75, БУ-75Э, БУ-1600, БУ-2500
Spare parts for gate valves 3МШ, 3ВЭ, 3ВР and for valves КО
Spare parts for pumps ЦНС

Discharge Fittings for Water Injection into Oil Beds
Discharge fittings АНК1-65×21; АН-40×21 and АН-65×21

Casing Heads
Casing head, technical requirements as per GOST R 51365 (quality level УТТ1, УТР1), GOST 30196. Shut-off valves — manual direct-flow slide gate valves. Leakage class “A” as per GOST 9544. Certificate of Conformity No. РОСС RU.AB28.802687

Gas Well Head Equipment
Gas well head equipment. Units and components

Equipment for Offshore Oil and Gas Platforms
Check (non-return) valves
The range of valves is quite broad and includes: check valves, swing check valves, knockless check valves, non-return valves.
Certificate of Conformity No. РОСС RU.АВ28.В01964

Reducers for Chain Drives
Special cylindrical three-speed reducer РЦТ-280, 355

Pipe Fittings
Sliding shutters КО-100×21С, КО-150×21С, КО-100×21, КО-150×21,
Sliding shutter for max. pressure of 105 MPa
КО-100×21Ф, КО-150×21Ф
Quick-closing flap valve К3 300; К3 400
Swing check valves КОП-50×10, КОП-200×4, КОП-250×10, КОП-250×4, Gate valves 3МШ-40×21, 3МШ-65×21М КОП-300×10, КОП-300×4, КОП-400×10, КОП-400×4
Check valves КО-100×21Б, КО-150×21Б, Ball valve with retrievable chokes КШ

Well Work-Over Jigs
Hydraulically-driven repair installation УРГ-32
Cable installation КУПРС-5 for underground well repairs

X-mas Tree
X-mas tree
X-mas equipment made of titanium alloys АФ 6-100/80-70 К3

Ship Machine Building
Dumb staple trolley
Screw propellers with a load capacity of 125 t
High holding power anchor (ННР)
Mooring and anchoring capstan ЯШ2
Hall's anchor
Mooring capstan
Matrosov's anchor
Izhorskiye Zavody JSC

Company Description

Izhorskiye Zavody JSC was founded in 1722 under the Decree of Peter the Great. Nowadays, Izhorskiye Zavody is a modern machine building enterprise with its own innovative production and technical facilities meeting all requirements for work environment and industrial safety. The company manufactures equipment for the key economic sectors: nuclear power industry and oil and gas industry.

One of the priorities in Izhorskiye Zavody operations is given to production of equipment for oil and gas facilities under new construction or upgrade.

Izhorskiye Zavody JSC is a leader in the Russian market of oil and gas equipment successfully competing with other leading global manufacturers and producing high-tech equipment in strict compliance with requirements of the biggest international licensors.

The company is specialized in engineering and manufacture equipment for oil and gas industry with diameter of up to 9 meters, length of up to 90 meters, and weight of up to 2000 tons.

Proprietary well-proven technologies offer Izhorskiye Zavody JSC significant competitive advantages and enable the company to fulfill orders of any complexity and with maximum quality.

Izhorskiye Zavody JSC is an integrated full-scale manufacturing facility including a stock of modern blanking, machining, welding & assembling, heat treatment and test & measurement equipment.

Production of vessels involves carbon steels, silicon-manganese steels, low-alloyed chrome-molybdenum and chrome-molybdenum-vanadium steels, corrosion-resistant and high-alloyed steels. The company is experienced in producing vessels using double-layer plates.

Machining equipment enables machining of items with a max. diameter of 12 meters, max. height of 7 meters, and max. weight of 400 tons. Modern welding equipment and advanced techniques allow performing any types of welding operations including heavy-gauge narrow gap welding, welding-in of pipe branches, and weld deposition of internal anticorrosion coatings, in particular, on small-diameter pipe branches. Vessel components are heat-treated in a fixed gas- or electric-heating furnace as well as using a local heat treatment unit. Mature technology of local heat treatment of weld joints makes it possible to make products of almost any length.

Broad range of test & measurement equipment of Izhorskiye Zavody JSC allows carrying out any non-destructive testing (radiographic and ultrasonic inspections, magnetic particle testing, TOFD-testing etc.), hydrostatic testing, analyses of composition, structure, and properties of products directly in the premises of the company.

The equipment is manufactured based on projects of such leading global licensors as Chevron Lummus Global, Shell Global Solutions, ExxonMobil, UOP, and others.

The company has been successfully audited by some holders of license, EPC contractors, and direct customers, such as Shell, Haldor Topsoe, Linde, EIL, Technip, Rominserv, and others.
Izhorskiye Zavody JSC is operating as a member of OMZ Group. United Heavy Machinery Plants (Uralmash-Izhora Group) Joint-Stock Company, or OMZ Group is one of the leading heavy machine building companies specialized in engineering, manufacture, and maintenance of equipment for nuclear power industry, for petrochemical and oil & gas industries, and for mining industry as well as in production of special steels and rendering industry-specific services. Production sites of OMZ Group are located in Russia and in the Czech Republic. Joins-Stock Company Gazprombank is the major shareholder and financial partner of the OMZ Group.

Products and Services

Equipment for Oil-Refining, Petrochemical, Oil & Gas and Chemical Industries
High-pressure vessels for oil-refining, petrochemical, oil & gas and chemical industries are one of the examples showing the flexibility of Izhorskiye Zavody JSC when solving the issues of product diversification.

Accumulated experience and well-proven technologies of producing nuclear-power industry vessels and pipes operating under high pressure and temperature, under high seismic loads and in corrosive environment have been put to good use in engineering and manufacture of wide range of pressure vessels of various applications, weights, and sizes.

- Reactor equipment: hydrocracking reactors, hydrofining reactors, reforming reactors, deparaffination reactors etc.
- Column equipment: columns, absorbers, adsorbers, desorbers, scrubbers etc.
- Tank and drum equipment: tanks and drums, separators, mercury eliminators etc.

Maintenance Services
Upgrading and repairs of petrochemical equipment; Production and supply of mounting kits; Delivery of products to installation site; Top assembly of products on equipment installation site; Placing equipment in permanent location; Manufacture and installation of fixed maintenance platforms and ladders;

Assembly and installation of vessel internals (VI); Supervised placement of equipment in permanent location and installation of VI on customer site; Overhaul of vessel internals including replacement; Process (project) management with the help of other specialized contractors including work quality liability insurance.

Major Customers

| Rosneft | Tatneft | Gazprom Neft | etc. |
LLC “Integra Management”

Company Description

Integra Group is one of the leading companies in the oilfield services sector in Russia. The Group employs nearly 9,000 people. Integra is strongly present all over the country having its headquarters in Moscow and affiliates and production sites in all oil & gas producing areas of Russia. Apart from the Russian market, its operational experience extends to CIS countries, Middle East, and South America as well.

Integra targets mainly the quality of services, occupational (OS) and industrial safety (IS), and environment protection (EP). The company management is based on global principles of corporate governance, financial accounting, and operational transparency.

Experience in delivering projects of any complexity, capacities, and broad geographical reach allow to offer customers an optimum range of services on beneficial terms ensuring efficient processes and compliance with safety and environment protection regulations.

Integra Group offers a package of products, services, and solutions for all stages of the oil field life cycle, in particular: estimate of reserves, field development planning; on- and offshore well construction designing; well construction; well completion and repairs; well surveying: geophysical well logging and pressure transient testing; oil and gas extraction services, oil recovery enhancement, well abandonment.

Integra Group includes the following business units: LLC Integra Management, Moscow — sole executive body for business units. OJSC “NPO “Burovaya Technika”, Moscow — offers a wide range of onshore and offshore well design and construction planning services as well as carries out development of design and technology solutions. LLC “VNIIBT-Drilling Tools”, Perm — offers the following services: SIAM Company, Tomsk — holding of companies providing well testing and field development services. LLC “Geophysservis”, Nyagan — provides geophysical well logging services. LLC “Integra-Services”, Moscow — renders well-related services. LLC “Orenburgtechservis”, Buzuluk — repairs and diagnostics of oil and gas equipment. LLC “Smith Siberian Services”, Moscow — provides directional drilling services. LLC “VNIIBT-Drilling Tools”, Kotovo — offers drilling equipment manufacturing services. LLC “Integra-Drilling”, Nizhnevartovsk — renders drilling services and carries out rigging-up operations and well workover.
Products and Services

Oil Field Equipment

Mud Motors
LLC “VNIIBT-Drilling Tools” (Integra Group) is Russia’s oldest and largest manufacturer of positive displacement motors (PDM) and turbodrills, including reduction gear turbodrills. Our product line incorporates over 120 types of downhole motor and over 30 turbodrills, including models for high-temperature wells. Integra plants hold 47 Russian patents. Its distribution network includes Russia and CIS, Asia and North America.

Pumping Units
LLC “VNIIBT-Drilling Tools” (Integra Group) manufactures multiphase pumping units and progressive cavity pumps (PCP). All the pumping equipment is tested using an in-house PCP testing facility. All products are certified in the Oilfield Equipment Certification System GOST R and in the Fuel & Power Sector Certification System. The company holds over 20 patents of the Russian Federation.

Well Completion Tools
“VNIIBT-Drilling Tools”, Kotovo Branch (Integra Group) manufactures a wide range of well completion equipment: cementers; casing shoes; casing running tools; packers and other equipment.

Well Testing Equipment
Wellhead pressure gauges УМТ-01
Downhole pressure gauges САМТ-02
Level gauges, СУДОС series
Dynamographs, СИДДОС series
Truck-mounted well testing packages
Slickline units

Downhole Tools
Casing and drill string components;
Hydraulic impact tools;
Stabilizers, centralizers;
Cushion subs;
Jars;
Cutting tools;
Fishing tools and other downhole tools.

Services

Oil and Gas Equipment Rental Services and Servicing
Integra Group provides for rent the following drilling tools and equipment used for well drilling and workover:
Positive displacement downhole motors;
Reduction gear turbodrills;
Turbodrills;
Coring tools;
Cushion subs;
Jars;
Failure remedy tools;
BHA components.

Equipment Servicing:
Mud motor repairs at Service Centers in Perm, Sorochinsk, Nizhnevartovsk, Nefteyugansk, and Surgut
Mud motor upgrading services Multiphase pumping unit servicing
**Drilling Oil and Gas Wells of Various Design, Purpose, and Complexity**

Exploration and appraisal wells; Ultradeep wells;
Directional wells; Extended-reach wells;
Horizontal wells Sidetracks.
Low-angle wells;

**Bit Services**
The company offers the following range of bit services:
bite selection;
supply of bits of various sizes;
servicing of supplied bits.

**Integrated Project Management in:**
Field prospectivity assessment;
Geological and geophysical logging, reserves estimate and approval;
Engineering and procurement of approvals;
Exploration and development drilling, well completion and testing;
Field construction, infrastructure development;
Production and transportation facilities construction and operation;
Production maintenance and enhancement.

**Well Testing:**
Pressure transient testing
Downhole logging
Geophysical well logging (GWL)
Well production disposal via burning
Bottom hole treatment

**Fishing Services**
Performing a full range of downhole failure remedy services: from design development and tools selection to carrying out fishing operations supervised by a fishing specialist.
Decreasing costs for tool servicing, recovery, repairs, NDT and certification personnel. Ensuring timely order, manufacture, and delivery of fishing equipment to any area.
Performing a full range of downhole failure remedy services: from design development and tools selection to carrying out fishing operations supervised by a fishing specialist.

**Directional Drilling Services:**
Well and BHA design;
Provision with the lower part of BHA:
drilling bits, mud motors, non-magnetic drill collars, jars, stabilizers, centralizers, check and excess flow valves, subs;
Selection of PDM with optimum power performance;
Drilling practice optimization based on geological factor and available drilling tools;
Provision of mud pulse and electromagnetic telemetry systems of the following configurations:
MWD;
MWD+Gamma;
MWD+LWD+resistivity tool;
Logging while drilling;
Geomechanics analysis;
Well path optimization based on reservoir physical properties;
Equipment and technologies integration;
Engineering support of the entire well construction cycle;
24-hours real-time monitoring of field crews operation from one center;
Well construction management.

**Coring**
Provision of coring tools and core heads.
Provision of (fiberglass) inner core tubes.
Coring management.

**Field Development Planning, Monitoring, and Optimization**
Field development review
Field development optimization
Field development planning

**Onshore and Offshore Well Engineering**
Development of:
- oil and gas well construction design documentation;
- drilling programs; specifications;
- front-end engineering and design.
Designer’s follow-up supervision of the compliance of well construction with the approved Well Design and Drilling Program. 
Expert review of:
- design documentation for hazardous oilfield facility engineering, construction, expansion, reconstruction, update, suspension and abandonment;
- hardware;
- industrial safety declarations;
- cause investigation of accidents at hazardous facilities.

**Drilling Rig Repairs and Upgrade**
Canrig and Tesco top drive systems servicing;
drilling rig start-up;
electrical power supply equipment installation;
solids control system servicing;
rubber goods manufacturing;
repairs of electrical equipment (incl. motors up to 100 kW);
drilling rig structure anti-corrosion treatment;
- oil and gas well drilling failure remedy;
drilling equipment overhaul and current repairs;
NDT, thermal imaging, and vibration diagnostics of equipment, materials, and weld joints;
drilling rig upgrading (fitting out with top drive system, upgrade to pad mounted rig);
steam and water supply for drilling rigs;
procurement (incl. fuel and lubricants).

**Well Workover and Servicing**
Remedial cementing
Production casing leak elimination
Fishing operations
Recompletion
Commingling
Bottom hole treatment
Well shifting
Well suspension and re-entry
Well abandonment
Pre-sidetrack works
Well kickoff after drilling and sidetracking

**Coiled Tubing Services**
Well cleaning and kick-off with nitrogen after fracture stimulation
Hydrate and paraffin deposits cleaning and hot oiling
Bottom hole circulation and cleaning without well killing
Sealing cross flows behind casing in horizontal wells and sidetracks
Cement plug setting and well abandonment, specific perforated intervals plugging and abandonment
Cement drilling out in a cased hole and well deepening with open hole completion
Through-tubing and through-casing fishing Logging in horizontal wells and sidetracks
Bottom hole zone chemical treatment (acids, solvents, alkali) Selective stimulation of formation
Foam kick-off Kick-off using nitrogen produced on-site by membrane nitrogen generators.
Nitrogen can be used for pipeline testing Hydrosand-blast perforation

**Well Cementing**
Casing cementing
Liner cementing
Remedial cementing
Cement grout lab testing according to GOST, ISO, API procedures
Pumping services
Cementing engineering services
Supply of chemicals for well cementing

**Construction Management**
*Project management:*
planning;
quality assurance measures (review and development);
selected suppliers list review (technical audits);
design documentation review.
*Construction supervision (technical surveillance):*
incoming inspection;
construction on-site inspections;
commissioning.
*Technical inspections:*
technical in-process inspection (pipes, pressure equipment, machinery and drilling equipment etc.);
scheduling and expediting services;
inspection schedule planning as required by the project.
*Check of compliance with HSE requirements*
JSC “Korvet”

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Company Description

The company has been holding the licenses of the American Petroleum Institute (API) for the manufacture of wellhead equipment as per API Spec 6A since 1997, for the manufacture of pipe fittings as per API Spec 6D since 2003, and for the manufacture of hose and pump equipment as per API Spec 11B since 2006.


Products and Services

**Oil and Gas Transportation Equipment**

**Wellhead Equipment**
- Standard casing connections
- Casing connections Accessories and components for completion and full-depth drilling support services
- Standard casing hangers
- Standard tubing-casing annular seals

**Water wellhead connections**
- Tubing heads
- X-mas trees
- Compact horizontal X-mas trees
- Wellhead slide gate valves
- Angle valves
Chokes
Ball valves with changeable choke
Digital choke restrictor
Control valves
Anti-freeze check valves
Axial control valves
Casing head stuffing box
Blowout preventers
Rod rotators
Media separators

Steel straight-through valves (samplers)
Ball valve for pressure gauge
Quick-release connections
Accessories and components for completion and support services
Safety systems
Spring-loaded pressure relief valves with manual override
Switching devices
Pressure relief valve assemblies

Modular Equipment
Modular gas wellhead connections
Valve manifolds
Choke manifolds
Water distribution units
X-mas tree annulus and discharge line connections

Tanks
Steel cylindrical tanks for gas and liquid hydrocarbon media
Underground drainage tanks, series ЕП and ЕПП
Horizontal tanks for hydrocarbon oils
Receivers

Pipe Fittings and Valves
Slide gate valves
Wedge gate valves
Ball valves
Shut-off valves
Check valves
Swing check valves

Fire-Fighting Equipment
Angle fire flaps
Coupling heads
Frost-proof hydrants

Services
JSC “Korvet” renders services of supervised installation and aftersales maintenance of its products. When it comes to complex equipment, the company provides training programs for operators.

Major Customers

| Rosneft | Gazprom |
Company Description

Scientific Production Enterprise of Geophysical Equipment “Looch” is one of the leading companies in Russia dealing with design and production of geophysical equipment since 1992. Every year, the company increases the output constantly financing the innovations and investing in brand new projects in the field of geophysical logging.

The SPE “Looch” performs a full range of operations: from design to production and sale of end products. The company puts a priority on adoption of innovations in its processes.

It has been designing and producing geophysical equipment for the oil and gas well surveying for over 25 years. At present, the company holds around 15% of the Russian market of unique geophysical equipment.

High-frequency induction logging isoparametric sounding system also known as VIKIZ found the biggest recognition amongst geophysicists.

During this time, the company has developed and put into batch production 8 modifications of high-frequency induction logging wireline tooling under the trademark “ВИКИЗ™” (VIKIZ). High quality, reliability, and easy maintenance of the equipment as well as well-proven methods of well data interpretation and processing have made VIKIZ technique stand out among other methods of electromagnetic gas well surveying.

Now, over 500 VIKIZ systems are being actively used in the fields of the Russian Federation: from Sakhalin to Kaliningrad. Several units were also supplied to Kazakhstan, Uzbekistan, Turkmenistan, and China. Due to unique technical properties, VIKIZ wireline tools and their independent version VEMKZ have proved suitable for the use in high-salinity muds. VIKIZ tools designated for high pressure and temperature (175 °C/140 MPa) are continuously produced batchwise.

A hardware-software complex Almaz-2T was developed and produced in series for surveying horizontal wells and side-tracks. Apart from 9 VIKIZ induction logging tools assembly, the complex includes inclinometer module, radioactivity logging module (CNNL+GRL), thermometer, and resistivity meter. Lately, it was replaced with a complex СКЛ-102А including all the methods of geophysical surveying of production wells, in particular, lateral logging and lateral logging sounding.

A new geological and engineering survey station “KAMA”, the scope of survey of which completely complies with the one specified in GOST R 53375-2016, has been developed and is being successfully used.

Operational procedures of the company are fully compliant with the quality standard ISO 9001-2001. In terms of occupational health, safety, and environment protection, the SPE “Looch” adheres to requirements of the Russian laws and regulations referred to social, economic, and environmental liability incurred in the course of its operations, ensuring safety for its employees and customers.
Design and Production of Hardware-Software Complexes for Geophysical Surveying of Open Boreholes of Oil and Gas Wells

ЛУЧ-М-2014 is a hardware-software logging-while-drilling complex (LWD telemetry system). Its range includes 3 sizes — 102/121/172 mm. The complex consists of: integrated gamma-ray logging module, directional orientation tool, gamma-ray density logging, compensated neutron-neutron logging module, lateral logging module, HF induction logging module (Resistivity), acoustic borehole geometry and caliper logging tool. Data is transferred to the surface over the hydraulic channel via positive pulses.

ВИКИЗ (VIKIZ) is a wireline tool designated for high-frequency induction logging isoparametric sounding.

СКЛ-А-102 is an independent hardware-software drill pipe logging complex. It is intended for geophysical surveying of open boreholes of horizontal and directional oil and gas wells with a diameter of 120–245 mm within a round trip.

СКЛ-А-160 is an independent hardware-software drill pipe logging complex. It is intended for geophysical surveying of open boreholes of directional and horizontal-sidetrack oil and gas wells filled with water-based mud with minimum resistivity of 0.02 Ω.m within a round trip. It is also possible to use drilling tools СБТ-127, ЛБТ-129Ю or ЛБТ-147 with an internal diameter of 90–110 mm.

СКЛ-76 is a hardware-software wireline complex intended for geophysical surveying of open boreholes of vertical and directional oil and gas wells with a diameter of 120–245 mm within a round trip. It is also possible to use drilling tools СБТ-127, ЛБТ-129Ю or ЛБТ-147 with an internal diameter of 90–110 mm.

Calibration device is a set of impedance standards ИМ-1 used as working standards for calibration of VIKIZ HF induction logging isoparametric sounding equipment, VEMKZ equipment, and their versions by metrology services of geophysical survey companies.

Design and Production of Safety Devices (Safe Load Indicators) for Overhead Travel, Gantry, and Portal Cranes, Foil-Type Resistive Strain Gauges — Force Sensors

МПБ-310М is a multi-function safety device for overhead-type cranes МПБ-310М. It is to be mounted on electric lifting overhead cranes to limit the load in case of emergency or prevent accidents and meets requirements of: safety regulations PB 10-382-00, regulatory documents RD 10-118-96 and RD 10-399-01, and 399-5 ITT.

МПБ-310П is a multi-function safety device of portal cranes МПБ-310П. It is to be mounted on electric portal cranes to limit the load in case of emergency or prevent accidents and meets requirements of: safety regulations PB 10-382-00 and regulatory document RD 10-399-01.

КВС-ЛУЧ is a crane weighing system to be mounted on overhead casting cranes and intended for static weighing of ladles containing liquid metals at open-hearth, converter or steelmaking shops.

Non-Seismic Exploration Activity Services

The range of mineral exploration methods comprises three groups of electric exploration and additional detailed geochemical survey methods.

The electric exploration method group consists of: magnetotelluric sounding method (MTS), near-field transient electromagnetic sounding method (NTES), vertical electric sounding method (VES), and fast induced polarization method (FIP).

Geochemical survey method group includes chromatography, gamma-spectrometry, ionometry, and magnetic susceptibility measurements.

In terms of oil and gas exploration, the electric explorations methods address the structure-related and mapping issues, whereas the geochemical methods are used to detect hydrocarbon contamination of soil and secondary alterations over the oil and gas accumulations. In case of integrated interpretation, it allows not only to detect positive structures, but also to forecast the presence of hydrocarbon fluid inside them.

Seismic Exploration Activity Services

Geophysical expedition of the SPE “Looch” carries out 2D seismic river shooting. Seismic source points are used as a source of seismic signals. Pulse sources can be used as well. The signals are recorded by autonomous seismic recorders.
Benefits of the approach:
- High efficiency,
- Environment friendliness (no need of wood cutting),
- No significant changes in topography,
- High quality and economic feasibility. The folding of recording may reach 400 with no need of cost increase
- Access to hard-to-reach areas using developed river system.

Seismic hydrofrac monitoring is another area of operations being developed by the SPE “Looch”. Groups of autonomous seismic recorders spread over the system record seismic events arising due to formation fractures resulted from proppant injection. Data processing results in information on orientation and geometry of fractures.

**Geological and Engineering Surveys**

The SPE “Looch” offers services in monitoring of the oil and gas well construction.

Field crews are provided with the most powerful and advanced computer-aided geological and engineering survey and mud logging stations AMT-121, KAMA that have been designed together with AMT Group (Saint-Petersburg).

Contemporary geological and engineering survey station KAMA enables carrying out full range of necessary surveys combining both standard (conventional) survey methods and innovative methods not applied in any modern foreign counterparts.

One of such methods — electric logging parameter retrieval — allows solving the following problems:
- Operative lithology differentiation of a well log, rock sample geological analyzer;
- Identification of marker beds and reservoir beds including definition of petrophysical parameters, in particular, drilling porosity, permeability, and density of the rock;
- Definition of porosity and permeability properties and evaluation of reservoir quality;
- Assessment of abnormally high formation pressure (AHFP; abnormally high pore pressure (AHPP));
- Downhole drilling motor operation monitoring;
- Borehole condition and sludge balance monitoring;
- Selection of optimum drilling techniques.

Availability of an extended geological module within the station enables performing any geological surveys directly on the well.

All the following issues are solved using applications software of the station:
- target set-up;
- drilling process monitoring;
- identification and assessment of AHFP zones;
- data pre-processing;
- feasibility study report;
- geologist’s work station etc.
Major Customers

PJSC “Tupolev” | PJSC “Sukhoi Company” | PJSC “Kazan Helicopters” |
JSC “Ulan-Ude Aviation Plant” | Schlumberger Limited |
Russian Helicopters Holding Company/ Mil Moscow Helicopter Plant |
695, 189 Military Representative Office of the Russian Ministry of Defence |
State Atomic Energy Corporation ROSATOM | JSC “ROS GEO” | Rosneft |
PJSC “Varyeganneftegaz” | PJSC “Boguchanskaya GES” | PJSC “SNGEO” |
PJSC “Asha Metallurgical Plant” | JSC “Kamov” |
FSUE “All-Russia Research Institute of Automatics named after N.L. Dukhov” |
PJSC “Surgutneftegaz” | JSC “Samaraneftegaz” | JSC “Geologiya” |
JSC “Arcticgas” | JSC “Siberian Service Company” | LLC “Gazpromneft-Angara” |
LLC “ORION Consulting & Services Ltd” | LLC “Yuganskneftegazgeofizika” |
LLC “Gazprom Georesurs” | LLC “Surgut Geophysical Company” |
LLC “RN-Purneftegaz” | LLC “Geokontrol” | LLC “RN-Yuganskneftegaz” |
LLC “REMZ” | LLC Research and Production Enterprise “Burintekh” | LLC “CPL HI” |
CJSC “SMM” | LLP “Batys geofizika” | etc.
Company Description

Open Joint-Stock Company “MASHPROM” is one of the leading companies in Russia manufacturing and supplying broad range of blowout prevention equipment, for the production of which the company has three key components:

1. Highly-qualified personnel involved in management, in research & engineering, and in production operations and settling practical issues of the production of both standard and innovative BP equipment.
2. Rational governance structure based on modern management principles and requiring minimum bureaucracy costs.
3. Advanced equipment enabling both batchwise and single-piece manufacture of unlimited lines of high-quality products.

OJSC “MASHPROM” keeps in constant contact with leading scientific & engineering and design institutes, offering customers unique innovative technologies for the production of blowout prevention equipment.

Continuous monitoring of the oil & gas equipment market and cooperation with foreign manufacturers allow the OJSC “MASHPROM” team to provide customers with a variety of engineering solutions based on any blowout prevention equipment made by global manufacturers.

Products have compliance certificates and are approved for the use based on expert review of the industrial safety.

Blowout prevention equipment is designed and manufactured in necessary configuration and in accordance with specific requirements of the customers and service conditions.

Company’s policy aims, first of all, at meeting the needs of our customers and building long-lasting win-win relationship with them. Low prices, high quality of the equipment, and strict compliance with deadline are distinctive features of the company.

OJSC “MASHPROM” develops and produces blowout prevention equipment for oil and gas industry up to the world standards.

Low price and high quality have enabled the company to build partnership with oil companies of Russia, countries within and outside CIS, in particular: JSC “Rosneft”, JSC “Slavneft”, LLC “Eurasia Drilling Company” and others.
Design and Manufacture of Blowout Prevention Equipment for Oil and Gas Industry

Blowout Prevention Equipment
Adapter spool
Annular hydraulic blowout preventer
Ram blowout preventer
Wellhead cross
Hydraulic gate valve
Manifold
Hydraulically-operated station
Manual gate valve
Adjustable choke
Gas separator ГС-1
Blowout preventer protective frame

Mobile Drilling Rig МБУ-160
The rig is designated for the well overwork, drilling operations including running well sidetrack kickoff and other operations in areas with mild climate — “У”, category 1 as per GOST 15150-69 (-45 °C… +45 °C) in the fields with a hydrogen sulphide content below 6%. It is intended for operation off the hard-surface roads and within haul roads.

Drilling Platform БО-140
Drilling platform (or platform) is to be used as a part of the mobile drilling rig produced by JSC “MASHPROM”. It is intended for the installation of motor-driven rotary table РУП-560 and for the vertical pipe mounting (drill pipe stands) as well as it serves as a working platform for the drill crew. It is mounted on respective oil and gas wells — well pads.

Power-Driven V-Door Ramp
The V-door ramp is used for the reception and feeding of tubes and bottomhole pumping rods during well servicing and overwork under conditions of macroclimatic areas I-II as per GOST 16350-80.

Drilling Rig Recirculation System Equipment МЦС-80
Mobile recirculation system is designed for drilling mud mixing, storage, and recirculation during well drilling, for its scavenging, and for its chemical treatment.

Drilling Mud Storing Unit БХР-40
Drilling mud storing unit БХР-40 (or DMSU) is used for temporary storage of drilling muds in macroclimatic areas with mild or cold climate under ambient air temperature of –45°C to +40°C.

Well Servicing Units МПА-80
Unit МПА-80 is intended for:
- servicing, drilling, and stimulation of oil and gas wells during workover with a conditional depth of 4000 m (tubing 14 kg/m), during drilling of 2000 m wells (tubing drilling 24 kg/m);
- drilling out of cement plugs in 146-168 mm diameter pipes (5-6”) and for related operations (drill pipe landing and running, well washing etc.);
- tubing landing and running;
- installation of production equipment over the wellhead;
- servicing and failure remedy operations;
- drilling operations.
Thriplex Pump MP-5
Pump MP-5 by Weatherford is a single-acting triplex pump having rated capacity of 500 HP in continuous operation mode.

Major Customers

| Rosneft | SLAVNEFT | LLC “Eurasia Drilling Company” | и др. |
LLC “ULK-MASHSERVICE”

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www.mpmservice.ru

Company Description

LLC “ULK-MASHSERVICE” is a part of group of companies “Metallurg”. The company offers services of integrated technical diagnostics, non-destructive testing, and safety expert review of designs and equipment in operation.

Expert review of safety is performed by highly-qualified safety specialists and experts. The company employs 12 experts licensed for life prediction, the two of whom have top qualifications. Safety expert review services are carried out using approved procedures based on licenses granted by the Federal Environmental, Industrial and Nuclear Supervision Service of Russia.

ULK-MASHSERVICE has a certified quality management system in terms of services of technical diagnostics, NDT, and safety expert review of design and other documents and technical devices at facilities and production sites of machine building, metal mining, coal mining, oil and gas industries.

Products and Services

Integrated Technical Diagnostics, NDT, and Safety Expert Review of:

Oil & gas industry facilities
Drilling equipment — fixed, pad-mounted, mobile drilling rigs, well servicing units, coiled tubing units, preventers, and drill tools.
Oilfield equipment — X-mas trees, wellhead fittings, shut-off valves, gauging gas separators, pumping and compressor equipment, field and trunk pipelines, tanks.
Exploratory drilling rigs.
Mining equipment
mine excavators, walking excavators, bucket-wheel excavators; drilling rigs, dump trucks, breakers, mills, feeders, tractors etc.

Boiler and Pressure Vessel Inspection facilities
pressure vessels, boilers, steam pipelines

Chemical and petrochemical industry facilities
vessels and units, pipelines, tanks, pump and compressor equipment

Lifting machinery
cranes, masts, manipulators

Scientific and technical evaluations in the course of accident investigation
forensic engineering examinations

Major Customers

RPC “Metallurg” was founded on June 28, 1990 and since then, opposite to other Russian medium-sized companies, it has not changed its name, area of business or CEO. The main factors ensuring such a long-lasting success of the company are stepwise development strategy and a team of top-qualification professionals.

Nowadays, Metallurg has turned into a group of companies complementing one another: LLC RPC “Metallurg” is specialized in development of engineering solutions and design documents; LLC “ULK-MASHERVICE” performs safety expert review for designs and equipment in operation; TMZ (Tyulgan Machine Building Plant) is a production facility of the company allowing to produce and assemble equipment using modern technologies in compliance with international quality standards.

Being part of the group of companies, Metallurg experts provide drilling men with turn-key solutions — from safety expert review, development of drill rig upgrade design, and preparation of detailed design for machining items and steelworks to manufacture of necessary components and accessories, supervised installation of equipment, and drilling support services. Moreover, the company offers engineering solutions fully suitable for the arctic conditions of the Western Siberia and highly competitive with counterparts made by heavy engineering leaders. The company holds the certificates of the quality management system compliance with requirements of GOST R ISO 9001-2011 (МСО 9001:2008) with respect to design engineering, technical diagnostics, NDT, scientific and technical evaluation in the course of accident investigation, and safety expert review of technical devices, design and other documents of the equipment for machine building, mining, coal mining and oil & gas industries.
Drilling Equipment

Drilling rig БК200Э-БМ-ЦК
Drilling rig is a cluster-type rig equipped with variable-frequency electric drive and supplied as a modular system. Moreover, this drilling rig is fitted out with a cementing system and with a top drive system. It can be used in macroclimatic areas with mild climate — “У”, category 1 as per GOST 15150-69 (–45 °C to +40 °C) in the fields with a hydrogen sulphide content below 6.

Derrick-and-winches unit ВЛБ-320
Modular derrick-and-winches unit for drilling rig (DWU) provided with variable-frequency electric drives can be supplied as a part of the complete drilling rig or separately for the upgrade of available rigs in order to increase load capacity. DWU can be used in macroclimatic areas with mild climate — “У”, category 1 as per GOST 15150-69 (–45 °C to +40 °C) in the fields with a hydrogen sulphide content below 6%.

Upgraded drilling rig 3Д-76 (86)

Upgraded drilling rig IRI IDECO-270

Upgrading of the drilling equipment
Drilling rigs and components are upgraded in order to bring rigs in operation into accordance with oil & gas industry safety regulations PB 08-624-03, increase the maximum lifetime, enhance their performances, and improve work conditions of the drilling crew.

Size Reduction Equipment
Production and sale of units and parts for the size reduction equipment is one of the main areas of operations of the group of companies including the RPC “Metallurg”, “ULK-MASHSERVICE”, and “TMZ”. Equipment is delivered mainly from the stocks in Yekaterinburg and Krasnoyarsk as well as upon orders.

- Apron feeders
- Breakers
- Mills

Mine and Walking Excavators
Supply of spare parts for mine and walking excavators remains one of the key areas of business of the company. The company produces numerous spare parts at its own production facilities of the Tyulgan Machine Building Plant. For this purpose, the Tyulgan Machine Building Plant is provided with necessary equipment stock.

Engineering Development
Engineering department of the LLC RPC “Metallurg” carries out full range of engineering works related to production of new drilling rigs and upgrade of existing ones produced locally and imported.
Safety Expert Review
Being a member of the RPC “Metallurg”, the LLC “ULK-MASHSERVICE” performs integral technical diagnostics, NDT, and safety expert review of: oil and gas industry facilities
- mining equipment
- boiler and pressure vessel inspection facilities
- chemical and petrochemical industry facilities
- lifting machinery

Major Customers
- LLC “Eurasia Drilling Company”
- LLC “National Oil and Gas Institute”
- SGK Burenie
- CJSC “Udmurtneft-Burenie”
- Siberian Service Company
- etc.
Company Description

OZNA Company is a multi-profile production and engineering holding company. Steady local oil & gas market strength as well as stable development of OZNA Company is ensured due to powerful production capacities, broad expertise in completion of projects of various complexity that has been accumulated for over 60 years, and development of its own innovations.

The company offers a complex of solutions for the oil and gas industry: design engineering, manufacture, and maintenance of oil and gas equipment; engineering in the field of oil, gas, and water transportation and treatment; creation of computed-aided manufacturing and remote control systems; metrological support of oil and gas industry facilities; and EPC project management.

In-house production facilities and integrated production cycle compliant with the latest global quality standards enable the company to complete projects in the shortest time possible and with minimum risks for the customer as well as to offer solutions at a more favorable price.

Being one of the branch leaders, OZNA takes part in all big projects of the oil and gas sector within Russia and CIS, each time dealing with more complicated issues.

Developing partner appeal

The OZNA Company has wide and successful experience in partnership with such leading technology-developing corporations in the world as Schlumberger, Emerson, Sulzer, ABB, Siemens, General Electric, and others. Nowadays, it allows providing the customers with the best global technologies in the oil & gas industry and makes OZNA always open for new cooperation.

- Being our partner provides the following benefits:
  - Access to the market of oilfield equipment and services in Russia and CIS; Active innovation development and availability of innovating division;
  - Readiness to test new technologies and co-invest in pioneering projects;
  - Opportunity of a joint market promotion;
  - Availability of project engineering support and in-house trial production facility;
  - Possibility of support of field trials, start-up, and maintenance on the territory of Russia and CIS;
  - Broad expertise in the field of oil & gas production and oil and well production measurements;
  - Knowledge of industry-specific and state standards in the sphere of oil and gas industry, assistance at the stage of solution certification in Russia;
  - Participation in legislative proceedings and understanding of trends in the field of governmental regulation of oil-producing companies' businesses.
**Design and Manufacture of Oil and Gas Equipment**

**Oil, Gas, and Water Treatment Technologies**
Engineering services in the sphere of oil, gas, and water treatment are one of the most important areas of OZNA’s operations. The company is capable of constructing oilfield facilities from scratch on a turn-key basis as well as of re-building and re-equipping existing facilities.

**Solutions Portfolio:**
- Integrated oil treatment plants (OTP);
- Integrated gas treatment plants (GTP);
- Preliminary water discharge units (PWDU);
- Modular advanced water treatment units (MAWTU);
- Crude oil treatment systems based on modular well completion units (MWCU);
- Independent well cluster development systems based on oil pre-dehydration units (OPDU).

**Innovations:**
- Hydrogen sulphide stripping;
- Leasing version of crude oil treatment systems;
- Inlet separator unit for products with high gas content.

**Media Pumping Technologies**
OZNA has been successfully developing a business area of pump equipment production since the beginning of 70s. The product line includes formation pressure maintenance systems and various media transport equipment. Compressor and multiphase pumping stations are one of the innovative products of the company. OZNA has developed its own pumping station control system.

**Solutions Portfolio:**
- Modular water injection pumping stations;
- Transfer pumping stations;
- Compressor stations;
- Vapor recovery units

**Innovations:**
- Multiphase pumping stations;
- Delivery-control pumping stations (БКНС-44).

**Chemical Injection and Heat Generation Technologies**
For the last 30 years, the OZNA Company has been successfully completing chemical injection-related projects: demulsification, hydrating prevention, mercaptan content minimization, and protection of equipment and piping metals against corrosion, salts, and carbonate and paraffin deposits.

**Solutions Portfolio:**
- **Chemical Injection:**
  - Chemical dosing unit ОЗНА-Дозатор (OZNA-Dosator);
  - Downhole chemical dosing unit ОЗНА-БДР.С;
  - Mobile chemical preparation and dosing package БДР-М;
  - Inhibitor injection package.
- **Heat Generation:**
  - Modular boiler plants operating on various fuels (gas, fuel oil, oil);
  - Double-pressure boilers.
Innovations:
Methanol feeding unit;
Automated intermediate heat carrier line heaters.

Oil and Gas Well Production Measurements
OZNA remains the leading company in Russia in the field of well production rate and multiphase flow metering technologies. The OZNA Company aims at optimal measurement of the well production rate at all stages of the field life. Multi-purpose well production rate test separator ОЗНА-МАССОМЕР is applicable for the most of the fields being developed.

Innovations:
Gas condensate metering skid;
Automated metering skid Vx Spectra;
Lease version of stationary metering skid;
Oil metering unit for multiphase transport systems (crude oil quantity & quality measuring system or COQQMS).

Metering Systems:
Automated metering skid ОЗНА-МАССОМЕР
Automated metering skid ОЗНА-Импульс
Upgrade kit for СПУТНИК-ОЗНА-ВМ1 for automated metering skid
Measurement and data processing unit БИОЙ
Automated metering skid ОЗНА-Спутник
Metering skid БИУС 40-50 Pipe prover ОЗНА-ПРУВЕР С-0,05
Metering skid ОЗНА-Vx
Spare parts for gauging gas separator

Metrological Support
The OZNA Company offers turn-key services of development of crude oil quantity and quality measuring systems (COQQMS), gas quantity and quality measuring systems (GQQMS), and water metering units (WMU) including design engineering, manufacture, supply, supervised installation, and start-up. These services may also include commissioning, metrological support, and warranty and post-warranty servicing.

Solutions Portfolio:
- Crude oil quantity and quality measuring systems (COQQMS);
- Gas quantity and quality measuring systems (GQQMS);
- Water metering units (WMU).

Innovations:
Chemical analysis laboratory;
Quick-release cover oil and product refining filters;
Flow meter calibration benches.
Oil quantity and quality measuring systems (oil metering skids) or OQQMS are intended for automated (operative or fiscal) measurement when transferring oil from supplier to buyer or when preparing internal cost records.
It consists of the following components (or units):
- Meter run unit (MRU) Crude oil quality measuring unit (COQMU)
- Sampling device (slot or tube sampler) (SD)

Gas Industry Solutions
OZNA’s profile is focused on development of associated and natural gas use solutions.

Solutions Portfolio:
- Compact thermostatic unit (CTU);
- Chemical dosing unit;
Nitrogen and air recovery unit; 
Compressor stations.

Innovations: 
Automated new-gen gas distribution station (АГРС-НП 10/50); 
Associated petroleum gas compressor station with fractionating interstage cooling units; 
Natural and associated gas heatless regenerating adsorption dryer; 
Low-temperature separation system with fractioning interstage separation unit; 
Gas condensate metering unit; 
Gas metering station (GMS).

Computer-Aided Manufacturing
Process automation is considered as one of the most promising and fast-growing areas of OZNA’s operations. Applying its innovation expertise and following the tendency of digital oil field adoption, the OZNA Company actively develops MES systems.

Solutions Portfolio: 
Automated dispatch control system (ADCS) Discovery; 
Electric power technical metering system; 
Telemechanics system.

Innovations: 
MES; 
Automated electric power technical metering system.

Offshore Field Facilities Construction
Taking into account the prospects of offshore field development in Russia, the OZNA Company decided in 2012 to develop products and services in this sphere.

Solutions Portfolio: 
Integration of platform-mounted computer-aided manufacturing and automated electric power accounting systems (supervised installation and start-up); 
Design engineering of topside facilities equipment; 
Integrated modular platform-mounted chemical injection system (multi-chemical system); 
Chemical dosing unit (for methanol, paraffin deposit inhibitor); 
Offshore well production test separator unit for fixed and floating offshore platforms; 
Offshore oil and gas quantity and quality measuring system (OGQQMS); 
Multiphase pump package; 
Sea and formation water treatment and injection system; 
Engineering and integrated supply of oil, gas, and water treatment lines for producing platforms; 
Well production manifold assemblies and water distribution units; 
Pig trap station (PTS).

Spare Parts for Drilling Pumps
Production of spare parts for drilling pumps plays important role in the company’s profile. For the last few years, its experts have been successfully expanding the range of spare parts for the home-made and imported drilling pumps — valves, liners, and rods. Its experience and competencies as well as compliance with the latest market requirements make the OZNA Company a leader of this segment in Russia.
Solutions Portfolio:
Spare parts for drilling oil equipment (drilling pump pistons, liners, valves, and rods);
Equipment for drill strings;
Pipeline connection pieces.

Innovations:
Bimetal liners.

Innovative Solutions
Analysing the needs and studying the latest world innovations and prospects related to oil & gas production technology changes, the company creates and provides the market with modern innovative solutions.

Separator-free (multiphase) well production metering systems.
BENEFITS: reliable measurements under any complex conditions.
Automated electric power technical metering system (АЕРТМС).
BENEFITS: power consumption reduction and energy saving.
Automated new-gen gas distribution station (АГРС-НП 10/50).
BENEFITS: high energy efficiency and reliability.
Inlet separator unit for products with high gas content.
BENEFITS: maximum performance regardless of compact size.
Mobile chemical preparation and dosing package (БДР-М)
Inhibitor injection package (БПИ)
Bimetal cylinder liner of the drilling pump
Quick-release cover filters

Major Customers
Gazprom Neft | LUKOIL | Transneft |
PJSC ANK “Bashneft” | OJSC "PECHORANEFT" | Zhaikmunai LLP
LLC “Omsk Factory of Tube Fittings”

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Company Description

LLC “Omsk Factory of Tube Fittings”, is a Russian manufacturer of oil and gas industry equipment. Major areas of the company’s operations include production and supply of pipe fittings and valves, pipeline parts, and accessories for pipe fittings. Production facilities of the company ensure the production compliant both with Russian and international standards. Company’s quality system complies with requirements of the international standard ISO 9001:2011 (ISO 9001-2008).

Products and Services

Oil and Gas Equipment

In-House Products
Conical reducers, series “B” (“V”), “Г” (“G”) for pipe fitting control
Steel flanges compliant with GOST 12820-80, GOST 12821-80, and GOST 12822-80;
Steel vessel and tank flanges compliant with GOST 28759.2 (3, 4 )-90;
Flanges compliant with ANSI, ASME, DIN standards;
Customized flanges for pressure of up to 25 MPa (250 kgf/cm²);
Steel blank flanges compliant with ATK 24.200.02-90; GOST 22815-83;
Spectacle blinds compliant with ATK-26-18-5-93, TMM-25-2000;
Customized blinds;
Tees, reducers made of alloyed and highly-alloyed steels (steel grades: 3, 20, 09Г2C, 10Г2, 15X5M, 12X18H10T, 10X17H13M2T, 13ХФА and other steels upon customers' request);
Oval and octagonal gaskets (Armco O-rings).

Packaged Supply of Pipe Fittings
Steel, cast iron and stainless steel gate valves;
Valves, ball valves.
Pipe fittings can be equipped with in-house reducers as well as with electric drives by LLC “GZ-Elektroprivod”.

Services
Plasma arc cutting services
Machining services

Major Customers

| JSC "PrivolzhskNIPlnefte" | Production company DELF |
Company Description

United Heavy Machinery Plants (Uralmash-Izhora Group) is an integral and multi-profile engineering, scientific and production holding company engaged in heavy machine building and being continuously present in the following markets:

- Nuclear power industry equipment
- Petrochemical industry equipment
- Special and conventional steel products
- Metallurgical equipment
- Cryogenic engineering
- Pipeline valves
- Engineering, integrated solutions, and servicing

Modern production facilities, well-proven technologies, many years’ experience in engineering, references, and qualifications of the team obtained in the course of nuclear power equipment production define the unique capacities of OMZ Group companies in terms of engineering and manufacture of various pressure vessels of different applications, weights, and sizes for the petrochemical industry.

This business area is represented by the following companies:

**Izhorskiye Zavody JSC** is one of the oldest industrial companies in Russia founded in 1722 under the Decree of Peter the Great. Nowadays, Izhorskiye Zavody is a modern machine building enterprise designing and producing equipment for nuclear power facilities, heavy machinery, and petrochemical equipment.

**OMZ–Special Steels LLC** is the largest Russian manufacturer of semifinished metallurgical products for various industry branches. The number of steel grades exceeds 300 items.

**JSC “Cryogenmash”** is the biggest company in Russia producing air separation techniques and equipment, supplying industrial gas, and developing integrated solutions for associated, natural and liquefied natural gas (LNG) processing. Cryogenmash equipment produces approximately 80% of the annual industrial gas output in Russia.
**Skoda JS a.s.** is one of the largest engineering and production companies experienced in construction and servicing of nuclear power plants used all over the world. Throughout its existence, the company has been providing engineering services, equipment, and maintenance for the nuclear power plants, research reactor facilities, and spent fuel storage facilities in the Central and Eastern Europe, Scandinavian countries, France, Germany, the USA, and the Far East.

**JSC “Uralhimmash”** is one of the leading Russian manufacturers of gas processing, oil, chemical, petrochemical and other equipment. Its product line includes: spherical tanks, reactor equipment, column heat-exchange equipment, vessel equipment, liquefied hydrocarbon gas transport tanks, electrolysis plants, vacuum filters, vessels.

**LLC “Ural Metallurgical Plant”** is the manufacturer of semifinished metallurgical products for various industry branches. Nowadays, the company uses advanced technologies ensuring customized and low-scale production of forgings.

**JSC “Giprokislorod”** is a modern engineering company keeping up the traditions of complex facilities engineering. Throughout its history, the company’s designs have been used to build all the oxygen supply facilities for metallurgical companies as well as nitrogen and oxygen facilities for oil processing plants in the CIS, India, Bulgaria, Egypt, Poland, and China.

**LLC “Glazovsky Zavod Himmash”** is a company specializing in manufacture of equipment for chemical, oil & gas processing and other industries, in particular: vessel equipment, reactor equipment, column equipment, heat-exchange equipment, tank equipment, and NPP equipment.

**JSC “NPF “CKBA”** is a full-service engineering company founded in 1945. It specializes in design engineering, standardization, and production of pipeline valves for diverse industry branches, in particular, for nuclear power industry, ship building, oil & gas industry, and chemical industry. Izhora TC LLC

**Izhora TC LLC** is a primary materials-engineering, test and research center of OMZ Group. All laboratories of the company performing trials and quality check of metal products hold all the necessary permits required for that (licenses, certificate of accreditation, certificates of recognition etc.)

**“Izhora Welding Materials“ LTD** is one of the oldest manufacturers of welding consumables in Russia. The scope of supply comprises welding electrodes, welding and metallurgical flux, welding wires and tapes, testing of welding consumables for compliance with customer’s regulations.

**JSC Production Association “Uralenergomontazh”** is one of the oldest Russian installation companies founded in 1925 for the purposes of implementation of the GOELRO (national economic recovery and development) plan. The present-day JSC PA “Uralenergomontazh” is a modern company performing construction and installation works in the course of construction and erection of facilities, equipment, pipelines, and steelworks for nuclear power, heat power, petrochemical and metallurgical industry facilities as well as transport infrastructure facilities.
### Products and Services

#### Engineering, Integrated Solutions, and Servicing
United Heavy Machinery Plants is one of a few Russian companies engaged in heavy machine building and offering engineering services, integrated solutions and services for numerous industries in Russia, particularly, for nuclear power industry, petrochemical and metallurgical industries, and others.

Thanks to its accumulated experience, upgraded production facilities and technologies, and innovations, the company has pushed on to the new level of operations in the key markets — manufacture of high-tech and highly-competitive products, all-in-one solutions, and EPC contracting.

#### Cryogenic Engineering
United Heavy Machinery Plants is the largest Russian company employing air separation technologies and producing respective equipment, supplying industrial gases and developing complex solutions for associated, natural and LNG gases.

This business area is represented by JSC “Cryogenmash”.

Cryogenmash equipment produces approximately 80% of the annual industrial gas output in Russia.

#### Nuclear Power Industry Equipment
Manufacture of equipment for nuclear power plants is a strategic business area of the United Heavy Machinery Plants.

The company is one of three (along with Toshiba/Westinghouse and AREVA) leading world manufacturers of fully-packaged primary vessel equipment for the nuclear-island-scale nuclear power plants and equipment for spent fuel storage and transport providing investment engineering and servicing for NPPs. United Heavy Machinery Plants has supplied equipment to over 80 NPP units in Russia, Ukraine, Germany, Bulgaria, Czech Republic, Slovakia, Hungary, Finland, India, China, and Iran.

#### Petrochemical Industry Equipment
Modern production facilities, well-proven technologies, many years’ experience in engineering, references, and qualifications of the team obtained in the course of nuclear power equipment production define the unique capacities of OMZ Group companies in terms of engineering and manufacture of various pressure vessels of different applications, weights, and sizes for the petrochemical industry. This business area is represented by the following companies: JSC “Uralhimmash”, LLC “Glazovsky Zavod Himmash”, and SKODA JS a.s.

#### Izhorskiye Zavody JSC
Izhorskiye Zavody JSC is a large Russian machine building company producing unique vessel equipment: oil re-refinery reactors, separators, hydrothermal synthesis vessels, liquid hydrocarbons and gas storage tanks, gas tanks etc.

The plant has engineering capacities required for the manufacture of equipment with the following parameters:

- Outer diameter, mm: 500 to 9,000;
- Length, mm: 300 to 80,000;
- Wall thickness, mm: 4 to 450;
- Weight, t: 0.05 to 2,000;
- Operating pressure, MPa: up to 250;
- Operating temperature, °C: minus 70 to plus 600.

Vessels are made of carbon steels, silicon-manganese steels, low-alloyed chrome-molybdenum and chrome-molybdenum-vanadium steels, corrosion-resistant and high-alloyed steels. The company is experienced in producing vessels using double-layer sheets. Production of this equipment involves the use of high-quality steels of various grades compliant both with Russian GOST and other international standards like ASTM, ASME, JIS, EN, NFA, BS, DIN, SEW etc.

**Products:**
- Reactors for oil re-refining processes (incl. hydrocracking, catalytic hydrocracking, and hydrotreatment)
- Separators
- Hydrothermal synthesis vessels
• Liquid hydrocarbon and gas storage tanks
• Gas tanks
• Other products: receivers for chemically active media, 60-600 m³ gas tanks, transporters, autoclaves

**JSC “Uralhim mash”** is one of the largest chemical machine building plants in Russia. Its major products include large- and medium-volume vessel equipment as well as unparalleled petrochemical equipment. JSC “Uralhim mash” is a unique Russian manufacturer of equipment with an operating pressure of 30 to 250 MPa.

The plant has engineering capacities required for the manufacture of equipment with the following parameters:

- Outer diameter, mm: 300 to 5,000;
- Length, mm: 300 to 75,000;
- Wall thickness, mm: 4 to 300;
- Package unit weight, t: up to 500;
- Operating pressure, MPa: vacuum to 250;
- Operating temperature, °C: minus 70 to plus 1,000.

The company uses the quality management system compliant with ISO 9001:2008.

It holds the licenses and permits of the Federal Agency for Mining and Industry Inspection, State Committee for Construction, and Federal Nuclear and Radiation Safety Authority of Russia as well as certificate of conformity with ASME requirements (Part VIII, Section 2, “U”).

Products:

- Reactor equipment
- Spherical tanks
- Modular equipment
- Column equipment
- Heat-exchange equipment
- Other products: receivers for chemically active media, 60-600 m³ gas tanks, transporters, autoclaves

**LLC “Glazovsky Zavod Himmash”** specializes in engineering, manufacture, and sale of small-volume process equipment weighing up to 65 tons for chemical, petrochemical and oil & gas processing industries: heat-exchange, column, reactor, vessel and other equipment.

The plant has engineering capacities required for the manufacture of equipment with the following parameters:

- Outer diameter, mm: up to 4,000;
- Length, mm: up to 35,000;
- Wall thickness, mm: up to 65;
- Package unit weight, t: up to 65.

The company uses the quality management system compliant with ISO 9001:2008.

It holds the permits of the Russian Federal Agency for Mining and Industry Inspection, GOST-R conformity certificates for all types of equipment produced, license for manufacture of pressure vessels in compliance with ASME requirements (Part VIII, Section 1, “U” and “NB”).

Products:

- Vessel equipment and associated units with a pressure of up to 10 MPa
- Liquefied hydrocarbon gas storage vessels and tanks; underground and overground tanks for liquid product storage; air receivers; autoclaves; crude oil settlers; agitating vessels (reactors); oil and gas separators; columns (w/o vessel internals);
- Column equipment
- Reactor equipment
- Floating-head, fixed-tube-sheet, U-tube and thermal-expansion-joint heat-exchange equipment:
- Heat exchangers
- Evaporators
- Refrigerators
- Condensers
- Tank equipment:
• Vertical steel tanks (sheet-by-sheet type) with a volume of 50 to 5,000 m³
• Vertical steel tanks (coiled type) with a volume of 50 to 2,000 m³
Other products:
• Construction and machine-building steelworks (pillars; beams; collar beams; trusses; girders);
• Customized equipment.

SKODA JS a.s. Advanced production facilities of SKODA JS intended for the production of nuclear reactors as well as expertise in pressure equipment manufacture define unique capacities of the company in terms of the processing equipment production.

SKODA JS uses relevant technologies and experience and has all the necessary certificates to ensure supplies, installation, repairs or upgrade of welded pressure vessels for chemical processing companies of all types. Reactor production shop of SKODA JS is equipped respectively for treatment of any types of carbon and stainless steels, aluminium, various alloys etc.

Special and Conventional Steel Products
United Heavy Machinery Plants is one of the leading global manufacturers (along with JAPAN STEEL WORKS, CHINA FIRST HEAVY INDUSTRIES, and CHINA ERZHONG) of large- and oversize components made of special steels for conventional and nuclear power industries, for metallurgical and petrochemical machine building, and for other special purposes.

In-house metallurgical facilities located in different regions and allowing to produce components of various weights and sizes using numerous special steels make up an important competitive advantage of the United Heavy Machinery Plants.

Pipeline Valves
United Heavy Machinery Plants is a leading company in Russia designing and manufacturing pipeline valves as well as developing standards and providing relevant technical expert reviews.

Nuclear-power ice breakers, all nuclear-power submarines and surface vessels of the Russian Navy as well as all the main NPP systems in Russia and CIS, including NPPs built by Russian companies abroad are equipped with valves based on the design documentation of the United Heavy Machinery Plants.
OJSC “Pervomaiskhimmash”

Pervomaysky Chemical Machine Building Plant founded in 1947 is one of the leading manufacturers of the chemical, oilfield and carbon black processing equipment. The company is located in the center of Russia — 350 km to the south from Moscow, near a large railway junction Pavelets–Ryazhsk–Bogoyavlensk–Kochetovka–Michurinsk and federal highway Volgograd–Moscow what enables to dispatch products by railway or truck to any region. Production site occupies the area of 57.9 ha. In terms of various technologies, the company has welding, machining, assembling and foundry facilities.

It has proven a reliable local supplier of equipment for such leading Russian companies as: PJSC “Transneft”, PJSC “Surgutneftegas”, PJSC “Tatneft”, JSC Machine-Building Factory of Podolsk (JSC ZiO), Omsk Carbon Group, PJSC “Rosneft” as well as for the largest oil & gas producing companies of Kazakhstan, Turkmenistan, and Uzbekistan.

OJSC “Pervomaiskhimmash” holds all the necessary licenses for the manufacture and repairs of the oil & gas equipment, for the manufacture of boiler and pressure vessel inspection articles and chemical equipment as well as certificates and permits for the use of the equipment produced.

Products and Services

**Oil Field Equipment**

**Mobile Steamers (“ППУА” series)**

- Mobile steamer ППУА 500/0,6 mounted on a truck МАЗ-543403
- Electric-drive steam truck ППУА 1600/100M
- Multi-function mobile steamer ППУА 1600/100M mounted on a truck Ural-4320-1951-60 or Ural 4320-1951-70
- Mobile steamer ППУА1600/100M mounted on a truck Ural 4320-1951-60 or Ural 4320-1951-70
- Multi-function mobile steamer ППУА 1600/100M mounted on a truck KAMAZ 43118-3017-46, KAMAZ 43118-3027-46 or KAMAZ 5350-3029-42
- Multi-function mobile steamer ППУА 1600/100M fitted out with remote indicator ДС-Б-050 and mounted on a truck Kraz-65053-700-02
Well Acidizing Units ("АНЦ" series)
Bottom-hole acidizing unit АНЦ-32/50 mounted on a truck KRAZ-65053-02
Well acidizing unit АНЦ 32/50 mounted on a truck KAMAZ-43118-3066(67)-42 or KAMAZ 43118-3066(67)-46
Well acidizing unit АНЦ 32/50 mounted on a truck Ural-4320-1951-60

Mixing Units ("АС" series)
Mixing unit AC-6/30 mounted on a truck Kamaz 63501-3025-40, cone volume of 20 m³.
Mixing unit AC-6/30 mounted on a truck Ural-4320-1951-60
Mixing unit AC-6/30 (УС-6/30) mounted on a truck Kraz-65053-700-02
Mixing unit AC-6/30 mounted on a truck Kamaz 43118-3066(67)-42

Cementers
Cementer АЦ-32 У fitted out with a pump 3пн-32м and mounted on a truck Ural-4320-1972-60
Cementer АЦ-32K fitted out with a pump 3пн-32м and mounted on a truck KAMAZ 43118-3066(67)-42, KAMAZ 43118-3066(67)-46, KAMAZ 43118-3017-46 or KAMAZ 43118-3027-46
Cementer АЦ-32 mounted on a truck Kraz-65053-700-02
Cementer АЦ-32У mounted on a truck Ural-4320-1951-60

Manifold Units
Manifold unit БМ-70/32 mounted on a truck Ural-4320-1951-60
Manifold unit БМ -70/32 mounted on a truck Kamaz 43118-3067-42

Mobile Cementing Monitoring and Control Stations (MCMCS)
Mobile cementing monitoring and control station MCMCS is intended for the installation of a unit processing and indicating cementing data received from sensors located on the manifold unit БМ-70/32. MCMCS is designed as a van body mounted on a truck KAMAZ-43118 and enclosing a berth and a spare wheel behind a cabin. The van body is divided into two compartments: habitation and service rooms. Van body dimensions, mm: L×B×H = 5,600×2,500×2,300.

Well Dewaxing Units
Well dewaxing unit АДПМ 12/150-2 mounted on a truck Kraz 43203-1151-71
Well dewaxing unit АДПМ 12/150-2 на шасси Ural-43203-1151-41 and fitted out with a pump 1,3ПТ-50Д2
Unit АДПМ-12/150-2 mounted on a truck KAMAZ 43118-3017-46, KAMAZ 43118-3027-46 or KAMAZ 5350-3029-42 and fitted out with a pump НБ-50
Well dewaxing unit АДПМ 12/150-2 mounted on a truck KAMAZ 43118-3017-46, KAMAZ 43118-3027-46, KAMAZ 5350-3029-42 and fitted out with a pump 1,3ПТ-50Д2

Mixing and Surge Units
"АСО" series is represented by mixing and surge units intended for preparation and processing of the cement slurries. The unit is essential for complicated operations such as casing cementing as well as for workover and other operations related to oil and gas well isolation. Moreover, the mixing and surge unit can be used for preparation of a drill mud, various process fluids (of different density) that are mainly used for the well site construction or for the hydraulic fracturing of formation.
Mixing and surge unit АСО-20 mounted on a truck KAMAZ 43118-3066(67)-42 or KAMAZ 43118-3078-46
Mixing and surge unit АСО-16 mounted on a truck KAMAZ 43118-3066(67)-42 or KAMAZ 43118-3078-46
Mixing and surge unit АСО-25 mounted on a truck KAMAZ 43118-3066(67)-42 or KAMAZ 43118-3078-46

Pumps
Cement pump НПЦ-32,0
Gas Industry Equipment
OJSC “Pervomaiskhimmash” keeps up with the time and develops the best gas industry equipment in Russia that is being actively used in the largest fields of the country.

The company has completed numerous design works including development, design engineering, and manufacture of gas equipment. The company also sets the priority for design and manufacture of modular boiler plants, industrial boilers for gas supply systems, for agricultural sector, and for public supply systems.

Foundry Products
Today’s foundry products include the following:

Gray cast iron:
Alloy grade examples: СЧ15- СЧ30; Casting weight: 1 to 3,000 kg. Casting capacity: 3,200 tons per year.

Carbon steel:
Alloy grade examples: 25Л, 35Л, 45Л, 110Г13Л; Casting weight: 1 to 3,000 kg; Casting capacity: 4,000 tons per year.

Copper alloys:
Alloy grade examples: ОЦС, ОЦСН, АЖМ, АЖ; Casting weight: 1 to 200 kg; Casting capacity: 600 tons per year.

The company uses the following casting methods:
• steel casting into molds using a sandy clay (SC). In this case, the mold is filled with molten metal, and being cast in, the liquid metal is subjected to cooling resulting in a finished casting. This method is quite a simple and cost-saving process;
• XTC steel investment casting (no-bake casting). Most of medium-size castings are made using the no-bake casting process XTC. Large-size steel castings are pit-molded.

Major Customers

| Transneft | PJSC "Surgutneftegas" | Tatneft |
| JSC Machine-Building Factory of Podolsk (JSC ZiO) | Omsk Carbon Group |
| Rosneft | and other largest oil-producing companies of Kazakhstan, Turkmenistan, and Uzbekistan |
Company Description

Scientific and Production Company “Politechnika” LLC is a leading Russian company focusing on design engineering and batch production of collapsible pillow tanks and soft shells for the needs of the Russian Emergencies Ministry, oil & gas and chemical industry companies, production, R&D, agricultural and commercial companies of any possible profile.

In terms of diversification program in 1997, the SPC “Politechnika” was the first company in Russia to start development and production of brand-new items — mobile collapsible pillow tanks for the storage and transportation of crude oil and petroleum products as well as independent flexible tanks for oil carriers made of thermoplastic and compound barrier materials.

Batch production of pillow tanks, soft shells, and gas tanks was launched in a small town of Redkino (Tver Region) in July 2007. Company's production facilities occupy a territory of over 5 ha accommodating production shops, materials and finished products storage houses, and a test site with a basin having a capacity of over 1,000 cubic meters. Production facilities are fitted out with modern equipment and machines, in particular, with unique elasticity testers, vulcanizing pans, laboratory, test benches, in-house turning and fitter's sections, package shop, and truck fleet. The company arranges research and practice seminars and optional courses in its production facilities where specialists get to know about new types of products and take part in trainings and practical sessions in order to master new techniques, technologies, and their practical application.

Apart from design and batch production of tanks, the SPC “Politechnika” carries out significant R&D works as requested by Russian and European organizations, institutes, and companies. In particular, as it was requested by PJSC Gazprom, the company and Gazprom VNIIGAZ have completed R&D project “Storage of compressed natural gas in mines and underground openings using flexible gas bags”. Among other R&D works are the following: R&D project “Pillow tanks for the storage of salt brines” in cooperation with R&D Institute “Podzemgazprom”; R&D project “Development of gas holders for helium storage” as requested by St. Petersburg Nuclear Physics Institute; R&D work “Flexible retrievers for emergency holding of hydrophysical equipment” as requested by R&D Institute “VNIIOkeanologiya”. R&D work “Mobile fire-proof tank systems” as requested by Group of Companies “Arsenal Spasenya”; R&D project completed along with Yu.A. Gagarin Research & Test Cosmonaut Training Center “Flexible dome for deep-water oil spill containment” as requested by ClearTechOil Ltd, United Kingdom. Project “Deep-water oil spill containment using flexible accumulation and separation domes” completed along with TOTAL S.A., SERS, and ClearTechOil, Ltd (UK); Project “Natural gas extraction from bottom gas-hydrate deposits using flexible accumulation domes” completed along with P.P. Shirshov R&D Institute “VNIIOkeanologiya” and ClearTechOil, Ltd (UK); the company also works together with OJSC “Interdisciplinary Institute of plastics processing” — SPA “Plastik” — on the program of development of modern soft fuel tanks for aviation equipment. In cooperation with Storage R&D Institute of the Russian Federal State Reserve Agency, the company took part in the project “Development and batch production of equipment for fire, flood, oil spill and other emergency prevention and recovery based on flexible shells”.

LLC SPC “Politechnika”

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POLITECHNIKA
**Production of Flexible Tanks, Soft Shells, Gas Tanks**

**Tanks**

Pillow tanks for fuels and lubricants

Engineering of oil tank farm

Insulating oil tanks.
- Pillow tanks PER-M-T for insulating oil storage.
- Flexible tanks for oil spill response. Oil spill response.

Types of oil spill response tanks:
- Soft pillow tanks for water and oil storage made of polyester materials with polyurethane or polyvinyl chloride coatings;
- Flexible bags for collection of fluids fitted out with handles and slings for easy handling.

Flexible tanks PER-W for storage and transportation of drinking and process water.

Fire-proof systems. Fire tanks. The SPC “Politechnika” offers an innovative solution — fire tanks for water made of fiber-glass plastic, polyethylene or high-strength synthetic fiber with a special double-sided polymer coating.

Testing of lifting equipment. Flexible tanks “Кран-Тест” for lifting equipment testing.

**Field Fuel Depots**
The SPC “Politechnika” produces field fuel depots (FFD) consisting of portable flexible tanks (PFT). FFDs are designed for receiving, storing, and feeding of fuels and lubricants in the field.

**Crude Oil Tanks**
The use of portable flexible separation tanks PER-N ensures cost-saving accumulation of well stream, stock tank oil, and formation water in any quantity and at any drill site.

**Pontoons**
Flexible lifting pontoons are designed as soft buoyant tanks for vessel and equipment refloating as well as for ensuring positive buoyancy when towing different equipment and freight by water.

**Fuel & Lubricant Pump**
Field fuel depots are equipped with modern dispensing pump units for easy charging. Dispensing pump units have various configurations: from a simple cost-saving version including fuel & lubricant pump, two filters (screen and multi-purpose liquid filters), liquid meter, and five ball valves. Process flow chart of piping of this unit enables fuel reception and dispensing through any nozzle of two available ones, i.e. any nozzle can be used both for fuel receiving and dispensing; and to special climate versions “Comfort” and “Luxury Plus” suitable for temperatures of minus 60 to plus 60 degrees Celsius. The process piping in this case is made up of several circuits.
Gas Tanks
The SPC “Politechnika” produces flexible dome-shaped constant-pressure and variable-volume gas recovery bags. Gas recovery bags are essential for bulk plants, oil refinery plants, oil loading terminals, fuel filling stations, and other facilities for storage and distribution of refined oil products in order to reduce gasoline losses by 95% at in- and out-breathing.

Field Bag Pipes
Field bag pipes (FBP) are intended for a quick point-to-point transportation of oil and its products, fuels and lubricants, water and process media within a distance of over 200 km.

Impervious Blankets
Impervious blankets, membranes, and screens (series “ПФП”) are intended to be laid in the bottom of oil storage and sludge pits in order to prevent permeation of oil, its products, and oily wastes into soil and subsoil waters. Impervious blankets ПФП are used for temporary oil storage and for construction of fire suppression ponds.

Fabric Tanks
As a replacement of unsustainable oil storage pits, the company offers reusable portable flexible fabric tanks (series “ПЭР-НГ”). These tanks are easy to mount. Equipment can be simply set up on an even ground surface. Flexible fabric tanks ensure cost-saving accumulation of well stream, stock tank oil, and formation water in any quantity and at any drill site. One 3000 m³ tank can contain up to 50 rail cars, and a collapsed tank can be placed in a 3.8×2.8×2.2 m box. Its shell weighs only 1,900 kg.

Kerosene Containers and Tanks
The SPC “Politechnika” supplies portable flexible kerosene storage tanks ПЭР-Н. They are made of a light-weight (1–2 kg/m²), thin (1–3 mm²) and strong fabric and prove easy to operate ensuring high efficiency, technological reliability, and sustainability.

Major Customers
| CJSC “Independent Petroleum Company” | RN-Burenie LLC |
| State Commissioning Agency | OJSC “Yamalgazinvest” | OJSC “TNG-Group” |
| JSC “Elektrosetservice” | KCA Deutag | Halliburton | Tigers Realm Coal |
| Kinross Gold Corporation | Polymetal |
Company Description

“Privodnaya Tekhnika” is the leading production and engineering company in the Chelyabinsk Region specializing in introduction of automation and electric drive systems into metallurgy, pipe rolling, oil & gas industry etc.

It has its own production facilities: modern and fully equipped shop for switchgear assembling, installation and adjustment department, offices, storage facility, engineering center, innovations department, and test laboratory.

The company holds all the necessary certificates, documents confirming the membership within self-regulating organizations of the Southern Urals and building companies of the Urals and Siberia, permits issued by the Russian Federal Agency for Mining and Industry Inspection, and licenses for engineering and manufacture of equipment for nuclear power plants.

Its quality management system has been certified in compliance with GOST R ISO 9001-2015.

“Privodnaya Tekhnika” is the official partner of leading world manufacturers of electric drive equipment, computer-aided manufacturing components and instrumentation in the field of engineering, sales, and maintenance, such as: Emerson (Control Techniques), ABB, Omron, Vega, Phoenix Contact, Schneider Electric, Siemens, Rittal, and Yaskawa.

Major Areas of Business:
- Integrated automation projects for metallurgy
- Variable-frequency electric drives for drilling rigs
- Electric drive systems for cranes and lifting trucks
- Energy-saving pump control systems for industrial companies and housing services and utilities
- Maintenance of the electric drive equipment and automation systems
- Automation of alternative energy facilities (SPP and WPP)
- Manufacture of integrated switchgear and packaged transformer stations with capacity of up to 10 kW
- Engineering of converter equipment, particularly, electric tractor drives
- Electric drive-related development or research & development works
Products and Services

Engineering and Introduction of Electric Drive Systems and Process Automation

Automated Electric Drive and Process Control Systems
Automated heating-and-steelmaking process control system METACAP
Packaged electric drives and soft starters
Pump and fan control stations
Electric drive control systems for facilities of the pipe rolling, steelmaking, sheet mills, drilling rigs, transport and heavy machine building facilities etc.
Software and hardware packages for control of machines, punching machines etc.

Crane Electric Drive Systems
Crane electric drive systems (CEDS) fitted out with AC frequency converter are intended to control crane lifting and travelling gear.

Electric Equipment Package Controlling Drilling Rig Main and Auxiliary Gears
Electric equipment package controlling drilling rigs consists of the following:
I. Automated drilling rig gear control system
II. Drilling rig power supply subsystem
III. Silicon-controlled rectifier (SCR)
IV. Drilling rig electric equipment package
V. Additional systems
VI. Driller’s cabin

Driller’s Cabin
Driller’s cabin is designed to control the drilling rig and protect the personnel against ambient environment impact. The cabin incorporates controls and monitoring and metering instruments ensuring quick remote control of gears and components of the drilling rig as well as video surveillance and communication equipment. It is a workplace of the driller and driller’s assistant.
The cabin is suitable for operation in mild climate areas (“У”), category 1 as per GOST 15150-69 (-45°C…+40°C) in the fields with hydrogen sulphide content below 6 % and accounted for an explosion-hazardous zone “B1г” (zone 1). All the electric equipment used is explosion-proof and complies with Oil & Gas Industry Safety Regulations PB 08-624-03.

Packaged Transformer Stations and Distribution Substations (PTS and PDSS)
Packaged transformer stations and distribution substations are designated for reception, conversion, and distribution of three-phase AC electric power with a frequency of 50 Hz and 60 Hz. PTSs are used to supply power to facilities of the following industries: power, oil & gas, construction and other industries.

Innovations
Innovative solutions for electric and alternative power industries represented by modular converters “MOMENTUM” (“MOMENTUM”) Energy storage units
Electric equipment package for solar array power conversion and transfer to electric network

Services
Metal processing
Laser metal cutting
Metal cutting
Metal folding
Design engineering
Research and Engineering Center “Privodnaya Tekhnika” carries out engineering of instrumentation as well as automated process control and electric drive systems for metallurgical, machine-building, power-producing, oil & gas and other companies.

Customized production of low-voltage switchboards
Design institutes, engineering or any other companies may request the assembling of low-voltage switchboard (LVSB). LVSBs are manufactured in accordance with Specification TU 3430-003-51493276-2010 and comply with GOST R 51321.1-2000, what is confirmed by certificate of conformity No. TC RU.C-RU.AM24.B00135.

Installation and start-up
Apart from engineering and manufacture of equipment, the REC “Privodnaya Tekhnika” carries out a wide range of electric wiring and start-up works related to the equipment and electric drive systems, automated process control systems, and instrumentation in various production construction, modernization or reconstruction sites.

Personnel training
Training and skills upgrading has always been one of the areas of operations of the REC “Privodnaya Tekhnika”. The training took place both for recent graduates of the company and customers’ personnel in the premises of the company together with electric-drive-related departments of the Southern Urals State University and Magnitogorsk Technical University, involving representatives of manufacturers of advanced equipment, company’s foreign partners. In 2007, this business area was transformed into a separate organization — Momentum Training Center.

Maintenance and repair
Maintenance and repair department of the company carries out repairs and warranty maintenance of electric drives produced by ABB, Control Techniques, Omron, Siemens etc.

Major Customers

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<tr>
<th>RN-Burenie LLC</th>
<th>PetroEngineering LLC</th>
<th>PJSC “Surgutneftegas”</th>
<th>Magnezit Group</th>
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<tr>
<td>Asha Metallurgical Plant</td>
<td>ChelPipe Group</td>
<td>Russian Copper Company</td>
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LLC “Stankotekhnika”

LLC “Stankotekhnika” was founded in 1995 based on a machine building production facility that had been producing high-precision metal-working equipment for over 60 years. At that time, the newly-founded company had obtained licenses for production and engineering of oil & gas equipment and started developing this market. It was possible thanks to highly-qualified engineering and operational personnel with profound knowledge and expertise. The company employs a full-cycle machine-building cycle. Powerful machinery, foundry and forging, mechanical assembly, heat treatment, electroplating, painting and coating, electrochemical, laser treatment and other production facilities as well as test and measurement laboratories allow the company to provide oil and gas companies with advanced equipment highly competitive with the best foreign counterparts.

Innovative nature and quality of the products are confirmed by patents and conformity certificates.

Nowadays, LLC “Stankotekhnika” is a modern company keeping up with well-proven traditions of Tula professionals and using advanced technologies and the latest equipment. It is also a highly-creative and tight-knit team sharing one objective.

Engineering Capabilities
Engineering and production of new items is closely related to introduction of new techniques, high-efficiency equipment, and advanced technologies.

Current company’s engineering capacities allow producing up to 100 packages of the blowout prevention equipment and hydraulic tongs per year.
Up to 95% of machining is made using the modern CNC machines produced in Japanese, European and Taiwanese plants and purchased within the last 5 years.

The LLC “Stankotekhnika” performs the following operations:
• blanking;
• machining;
• heat treatment;
• chemical coating and electroplating.
High-Precision Metal-Working Equipment for Oil & Gas Industry

Blowout Prevention Equipment
Blowout prevention equipment is intended for oil and gas well head sealing during well construction or workover in order to ensure work safety, prevent blowouts or wild flows, protect subsoil and environment. Blowout prevention equipment is manufactured in accordance with Specification TU 3661-030-39048342-2006 and compliant with GOST 13862-90, GOST 27743-88, GOST 12.2.115-86, GOST 12.1.003-83, GOST 12.1.012-90, GOST 12.2-003-91, GOST 12.2.007.0-75, and PB 08-624-03. This equipment is available in versions K1/K2 as per GOST 13862-90.

Ram Blowout Preventers
Hydraulically-driven ram preventers (series “ППГ”)
Hydraulically-driven ram preventers are designed for sealing the well heads during well construction, development or workover.
Preventers are manufactured in accordance with Specifications TU 3661-004-39048342-98, TU 3661-019-39048342-2004, and TU 3661-022-39048342-2006 and available in versions K1 / K2 as per GOST 13862-90. Manually-driven ram preventers (series “ППР”)
Manually-driven ram preventers are designed for sealing the well heads during well workover.
Preventers are manufactured in accordance with Specification TU 3661-004-39048342-98 and available in versions K1 / K2 as per GOST 13862-90.
Rams and packers Rams and packers for ram preventers can be supplied along with preventers or upon a separate order.

Annular Preventers
Annular preventers (series “ПУГ”)
Annular preventers are intended for sealing the well heads during well construction, development, and workover around any part of the drill string as well as for complete closing of the well free of any tools.
Preventers allow pulling of a jointed pipe string.
Preventers are manufactured in accordance with Specification TU 3661-023-39048342-2006 and available in versions K1 / K2 as per GOST 13862-90.
Annular rotating preventers (series “ПМВ”)
Annular rotating preventers are intended for sealing the well heads during well construction, development or workover around any part of the drill string.
Preventers allow drill string reciprocation between joints and enable the pulling of a jointed drill string.
Preventers are manufactured in accordance with Specification TU 3661-023-39048342-2005 and available in versions K1 / K2 as per GOST 13862-90.
Annular preventer packers Packers are used as a part of annular preventers and can be supplied along with preventers or ordered separately.
Packers are manufactured in accordance with Specification TU 3661-023-39048342-2005 and available in versions K1 / K2 as per GOST 13862-90.

Crosses
Crosses are used as a part of the blowout prevention equipment. They are manufactured in accordance with GOST 28919-91 and available in versions K1 / K2 as per GOST 13862-90.

Spools
Spools are used as a part of the blowout prevention equipment. They are manufactured in accordance with GOST 28919-91 and available in versions K1 / K2 as per GOST 13862-90.
**Manifolds**

Manifold (rack-mounted or enclosed)
Blowout prevention equipment manifold is used for sealing the well head and ensuring the circulation of muds in oil and gas wells during well construction or workover in order to ensure work safety, prevent blowouts and wild flows, and protect environment.

Manifolds are manufactured in accordance with Specification TU 3661-024-39048342-2006 and available in versions K1 / K2 as per GOST 13862-90.

**Manually-Operated Gate Valves (series “ЗМ”)**

Manually-operated direct-flow slide gate valves are used as a part of the blowout preventer manifold and ensure complete flow shut-off. Gate valves are manufactured in accordance with Specification TU 3661-024-39048342-2006 and available in versions K1 / K2 as per GOST 13862-90.

**Hydraulically-Operated Gate Valves (series “ЗГ”)**

Прямоточные шиберные задвижки с гидравлическим управлением применяются в составе манифольда противовыбросового оборудования в качестве запорных устройств и служат для полного перекрытия потока. Изготавливаются в соответствии с техническими условиями TU 3661-024-39048342-2006 в исполнении К1 / К2 по ГОСТ 13862-90.

**Gas Separator**

Drill mud gas separator is designed for phase separation of a liquid-gas mixture (gas-containing drill mud) during removal of gas and oil shows and during stimulation in the course of well construction.

**Hydraulic Drive Stations**

Station for well workover (rack-mounted or enclosed)
Hydraulic drive stations СГП-10,5-2 are used for remote control of hydraulically-driven components of the blowout prevention equipment and for heating of preventers using operating fluid in cold weather conditions during oil and gas workover in macroclimatic areas with mild or cold climate.

Stations are manufactured in accordance with Specification TU 3661-011-39048342-2001.

Station for drilling (rack-mounted or enclosed)
Hydraulic drive stations СГП-10,5-6 are used for remote control of hydraulically-driven components of the blowout prevention equipment and for heating of preventers using operating fluid in cold weather conditions during oil and gas well construction in macroclimatic areas with mild or cold climate.

Stations are manufactured in accordance with Specification TU 3661-011-39048342-2001.

**Preventer Control Unit (series “БУП”)**

Blowout preventer control unit БУП-10,5 is used to remotely control hydraulically-operated components of the blowout prevention equipment from hydraulic system of mobile units or from standby hydropneumatic accumulator unit. The unit is manufactured in accordance with Specification TU 3661-012-39048342-2002.

**Preventer Heating Unit (series “МОП”)**

Blowout preventer heating unit МОП-15 is intended for heating of preventers in cold weather conditions. It can be used along with any preventers provided with heating chamber. The unit is manufactured in accordance with Specification TU 3661-015-39048342-2003.

**Mechanization Equipment**

Mechanization equipment produced by the LLC “Stankotekhnika” includes suspended hydraulic power tongs and hydraulic drive stations for hydraulic power tongs. All the equipment is certified and approved by the Russian Federal Service for Environment, Technological and Nuclear Supervision for use.
**Hydraulic Power Tongs**

**KTG 25-140**
Suspended hydraulic power tongs KTG 25-140 are used to make up threaded joints of tubing and drill pipes during well drilling and workover. The tongs are manufactured in accordance with Specification TU 3668-001-39048342-97.

**KTG 31-324**
Suspended hydraulic power tongs KTG 31-324 are used to make up threaded joints of drill pipes and casing during well drilling and workover. The tongs are manufactured in accordance with Specification TU 3668-002-39048342-97.

**Tongs Hydraulic Drive Stations**

**Power-operated hydraulic drive stations**
Power-operated hydraulic drive stations СГП-20Э are manufactured in accordance with Specification TU 4145-001-39048342-2001.

**Diesel hydraulic drive stations**
Diesel-engine hydraulic drive stations СГП-20Д, СГП-20ДМ, and СГП-20ДМ1 are manufactured in accordance with Specification TU 4145-002-39048342-2001.

**Downhole Equipment Packages**

Downhole equipment packages for vertical and directional gas wells are used for the following purposes:
- Packer separation of beds and isolation of the string and annular space from downhole conditions during gas well operation as well as during workover and servicing;
- Opening and isolation of annular space from tubing core using a circulation valve during production operations in the course of well development and operation;
- Automatic shut-off of the tubing using a downhole valve in terms of a double production increase; tubing core pressurization using a shear pin valve.

**Spare Parts**

SPTA catalogues are available for the following equipment: ram preventers ППГ2, annular preventers ПУГ 2, manifolds МПО, hydraulic drive stations СГП.

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**Major Customers**

| LLC “Gazprom-Burenie” | LLC “Eurasia Drilling Company” | CATKoneft |
| LLC “GAZPROM PODZEMREMONT” | Gazprom | LLC “Gazprom Dobycha Urengoy” | etc. |
CJSC “Tulaelectroprivod”

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Company Description

CJSC “Tulaelectroprivod” is a leading Russian company for production of electric drives for pipefittings with its history over 75 years. Its major business domain is the design, manufacturing, supply and service maintenance of electric drives for pipefittings. Its customers are the major Russian manufacturers of pipefittings, as well as branch companies and subdivisions of PJSC “Gazprom”, PJSC “Sibur Holding”, OJSC “Surgutneftegaz”, JSC “KazTransOil”, RUE “Belorusneft” Production Association” and other companies engaged in production, processing and transportation of oil and gas.

Tula electric drives of intellectual import-substituting series ЭП4 are operated at the facilities of OJSC “Severstal”, Bogunite Nuclear Power Plant (Slovakia), Kalininskaya Nuclear Power Plant (Russia), Navoyski and Almalykski mining-and-metallurgical integrated works in Uzbekistan, has been supplied to Heluan Metallurgic Plant (Egypt), as well as at mines of JSC “Alrosa”.

The major consumers of the Company’s products for power engineering are mainly the nuclear power engineering facilities. These are all nuclear power plants of “Rosenergoatom” Corporation, power generation units in China (Tianwan Nuclear Power Plant), India (Kudankulam Nuclear Power Plant), Belarusian Nuclear Power Plant constructed by CJSC “Atomstroyexport”, as well as companies providing storage and utilization of spent nuclear fuel, scientific and research reactors and other objects.

The products of CJSC “Tulaelectroprivod” are used at the facilities of JSC “Mosteploseti”, PJSC “T Plus”, OJSC “MOSGAZ”, regional heat supply systems and water treatment plants and numerous thermal power and community facilities.


The Company continuously implements the program for modernization of major production facilities and expansion of import-substituting series of electric drives with enhanced consumer parameters. With the support of Industry Development Fund in 2018 the Company launched the expansion program for production of limited slewing drives for electric pumps in explosion-proof and common versions. Major competitive advantages of CJSC “Tulaelectroprivod” are strict observance of quality, occupational safety and industrial security principles while performing its major business functions.
Products and Services

Manufacturing of electric drives for pipefittings

Multi-turn electric drives
Electric drives for two-side socket for valves:
- General and explosion-proof electric drives with two-side socket, types М, А, Б, В, Г, Д
- Electric drives with two-side socket, types М, А, Б, В, Г, Д for nuclear power plants
- Special configuration electric drives А-16, А-17, А-18 for pressure valves

Electric drives ЭП4 for shut-off and shut-off and control valves:
- Electric drives ЭП4 of general and explosion-proof versions
- Electric drives ЭП4 for nuclear power plants

Limited-slewing electric drives for shut-off and control valves:
- Electric drives ЭПН for small and medium-size valves
- Combination of multi-turn electric drive ЭП4 with non-multi-turn reducer for small and medium-size valves (DN300-DN1400).

Straight-running electric drives for shut-off and control valves:
- General — Specifications TU 3791-003-70780838-2006
- Electric drives series ЭП4 in general and explosion-proof versions with add-on device series МП

Control tools
- Electric drive control console
- External smart control modules

Reducers:
- Multi-turn reducer ЭП410
- Multi-turn reducer ЭП430
- Non-multi-turn reducer, type РН
- Straight-running add-on devices, series МП

Major Customers

| Gazprom | PJSC “Sibur Holding” | OJSC “Surgutneftegaz” |
| JSC “Kaztransoil” | RUE “Belorusneft” Production Association” |
| JSC “Rosenergoatom Association” | CJSC “Atomstroyexport” |
| JNPC (China) | NPCIL (India) |
Company Description

JSC “Turbonasos” is an innovative science and research company that is a member of State Space Corporation “Roscosmos”.

The mission of JSC “Turbonasos” is to provide strategic industries of the state economy with up-to-date Russian industrial equipment by means of development, manufacturing, supply to the market and after-sales service of competitive high-technology products.

During 25 years of its business JSC “Turbonasos” has declared itself as a developer and manufacturer of high-technology products for the rocket-and-space industry and the Navy, as well as fuel-and-energy sector, chemical and metal sectors of the national economy.

The evidence of successful development and supply of import-substituting industrial products for oil-and-gas industry is the products that JSC “Turbonasos” has implemented during 7 years of its operation:

- development and supply in 2011-2012 of automated multiphase pumping plants МНС180 and МНС240 for LLC “Lukoil-Perm” and OJSC “Samaraneftegaz”;
- development and supply in 2016 for OJSC “Slavneft-YANOS” of steam-jacketed chemical pump ХВН О 50/50 for pumping of liquid sulfur;
- development and supply in 2010-2017 of main line oil pumps МНН1250, МНН2500, МНН3600, МНН7000 and МНН10000 to PJSC “Transneft” branch companies;
- development and supply in 2016-2017 of slurry electric pump installations ПНГ Б250.40 and ПНГ Б364.42 for pumping of drill fluid for branch companies of LLC “RN-Burenie”;
- development and supply in 2010-2017 of oil and chemical pumps to Belarus, Kazakhstan, Uzbekistan and Turkey.
Products and Services

**Pumps**
- Main line oil pumps МНН
- Main line oil installations АНМ
- Booster oil pumps ПГН
- Booster oil installations АПГН
- Booster vertical oil aggregate АНПВ 600/60
- Oil horizontal electric pump installations НГН
- Oil electric pump installations НВН
- Oil vertical electric pump installations НВ-Д-1М
- Chemical horizontal electric pump installations ХГН
- Chemical vertical electric pump installations ХВН
- Chemical vertical electric pump installations ХВН for pumping of liquid sulfur and hot sulphuric acid
- Slurry horizontal single-block electric pump installations ПГНМ
- Slurry hermetic submersible electric pumps ПΠН
- Slurry horizontal electric pump installations ПГН
- Slurry horizontal electric pump installations ПГН for severe operating conditions
- Pumps ПГНб for pumping of drilling fluid
- Slurry vertical electric pump installations ПВН
- Slurry vertical electric pump installations ПВН650/50, ПВН1000/35

**Turbine pumps**
Turbine pump installation for supply of feed-water into steam boilers

**Compressors**
- Liquid-ring compressor

**Ejectors**
- Ejectors

**Shut-off and control valves**
- Reducing devices for air pipelines for mines
- Shut-off and rotatable valve
- Shut-off and control valve КЗР 1800

**Hydraulic cyclones**
- Filtering hydraulic cyclones
- Hydraulic cyclones
- Linear hydraulic cyclone units
- Hydraulic cyclone units

**Pumping plants and installations**
- Pumping hydraulic cyclone installations for staging of ore suspensions
- Mobile automated pumping plants for mud pump-down
- Mobile automated pumping plants for pumping of multiphase medium
- Automatic modular plants for pumping of multiphase medium
- Pneumatic puncher

**Engineering projects**
- Ventilation modular cooling tower
- Chimney-type cooling tower
Services
Benchmark testing and hydraulic calibration of pumps, installations, valves

Customer service
JSC “Turbonasos” offers technical support of capital development, reconstruction and re-equipment of production facilities. JSC “Turbonasos” offers the development and manufacturing of import-substitution equipment for the companies involved in oil-and-gas industry, metal and chemical sectors, as well as manufacturing of spare parts for imported technological equipment.

Major Customers

| PJSC “Norilsk Nickel” | Transneft | PJSC “NLMK” |
| PJSC “Gazprom Neft” | Rosneft | OJSC “Stoilensky Mining and Processing Combine” |
| PJSC “Priargunsky Industrial Mining and Chemical Union” | etc. |
LLC “Uralmash Oil and Gas Equipment Holding”

Company Description

LLC “Uralmash Oil and Gas Equipment Holding” is a leading Russian manufacturer of drilling rigs for development and deep exploration drilling.

The product range of LLC “Uralmash Oil and Gas Equipment Holding” includes drilling rigs with capacity from 750 to 3000 hp, assembly units and components of drilling rigs. Our Customers are all major players of Russian oil-and-gas market: “RN-Burenie”, “Surgutneftegaz”, “Gazprom Burenie”, etc.

LLC “Uralmash Oil and Gas Equipment Holding” constantly expand its assortment — we mastered the industrial production of mobile installations based on self-propelled chassis with capacity of 750 and 910 hp with the option for grouping of wells, as well we mastered the industrial production of top drive systems (TDS) with the load capacity of 3200 and 4500 kN. Currently we are developing TDS with the load capacity of 1600, 2500 and 5000 kN, new mud pumps, drilling equipment for offshore drilling.

The engineering center is equipped with automated workstations and tridimensional aided design systems. LLC “Uralmash Oil and Gas Equipment Holding” adopted the unified computer system for process support of the drilling equipment production, from the concept development stage and generation of technical specifications to passing the equipment to the Customer and after-sales service. The design process of drilling equipment fully corresponds to ISO 9001:2008 standard.

The production is performed at three enterprises: “URBO Plant” — branch of LLC “Uralmash Oil and Gas Equipment Holding” in Ekaterinburg, “NEFTEMASH Plant” — branch of LLC “Uralmash Oil and Gas Equipment Holding” in Otradnoye, “BKU Plant” — branch of LLC “Uralmash Oil and Gas Equipment Holding” in Tyumen.

The quality management system is certified to meet the requirements of international standards ISO 9001:2008, API Spec Q1 in the sphere of design and manufacturing of drilling rigs, sets of drilling equipment, drilling rig units and spare parts. All the equipment has conformity certificates of the Customs Union and certificates of authority to use the official API Monogram API-4F, API-7K, API-8C.

One of the most important business domains of LLC “Uralmash Oil and Gas Equipment Holding” is the service maintenance of drilling rigs. LLC “Uralmash Oil and Gas Equipment Holding” offers a full range of services of drilling equipment maintenance — from instruction and training of specialists for drilling companies for operation and maintenance of equipment while in service to supply of the required spare parts through the service department and SPTE warehouses in major oil-and-gas producing regions of Russia.
Products and Services

Drilling equipment

Drilling rigs
Mobile drilling rigs (Drilling rigs with capacity from 815 to 910 hp and relative drilling depth from 8200 to 10500 ft).
Cluster drilling rigs (Drilling rigs with capacity from 815 to 2040 hp and relative drilling depth from 8200 to 21325 ft).
Fixed drilling rigs (Drilling rigs with capacity from 2040 to 3000 hp and relative drilling depth from 16400 to 26250 ft).

Mud pumps
Triplex mud pumps with the capacity from 800 to 2200 kW.

Draw works
Draw works with chain transmission, ET and AC series, with the load capacity from 815 to 3000 hp.
Draw works with chain transmission ensure efficient operation during the tripping process while drilling.

Swivels
Swivels with the load capacity from 220462 to 661386 lbs.

Crown blocks
A crown block is a fixed part of the block-and-tackle system. Crown blocks are installed at the crown safety platform of the derrick with maximum hook load from 1600 to 5400 kN.

Rotary tables
A rotary tables is designed to rotate the drilling instrument and support drill-rod strings while drilling of wells. We manufacture rotary tables of three standard sizes with the port of 27.5, 37.4 and 49.6 in.

Auxiliary electric draw works
Auxiliary electric draw works JIB-50 AT is designed for transportation of cargo and instruments from catwalk to the drilling site, as well as for lifting of different cargo at the drilling site within the limits of nominal capacity.

Driller’s cabin
A driller’s cabin is designed for installation of control devices and control and measuring equipment and is comfortable driller’s workstation for on-line remote control of mechanisms and installations of the drilling rig.

Mud systems
Sets of equipment of mud systems have been developed with account of modern requirements to the technological process of circulating fluid clearing and correspond to safety regulations in oil and gas industry. Mud systems for drilling rigs with volume from 335 to 3500 bbl with different configurations of cleaning equipment.

Screw conveyor
Screw conveyor is a component part for cleaning systems with the capacity from 4226 to 10566 gallon per hour.

Top drive systems
Top drive systems with load capacity of 3200 and 4500 kN for drilling rigs.
Service
Major types of services provided by the specialized service company “Uralmash-Tehservice” that is an affiliate of LLC “Uralmash Oil and Gas Equipment Holding”:
- Warranty service of the equipment;
- Technical maintenance of drilling rigs, used at the mine fields;
- Maintenance of home-produced mechanical equipment;
- Maintenance of imported drilling equipment;
- Maintenance of batch thyristor devices, automated control systems;
- Derrick building;
- Field supervision, erection and alignment of new equipment;
- Re-erection and alignment of the installed equipment;
- Training of drilling companies’ staff how to service and operate modern Russian drilling equipment;
- Current and emergency maintenance of drilling equipment in regions;
- Overhaul of equipment;
- Modernization of off-market drilling equipment;
- Supply of drilling and service companies with the required materials and equipment through the system of regional warehouses within complex service projects.

Major Customers
- RN-Burenie
- Gazprom-Burenie
- Surgutneftegaz
- Eriell Group
- Samotlorneftepromhil
- Investgeoservice
- Eurasia Drilling Company
- Siberian Service Company
- Intellect Drilling Services
- Rosgeo
- etc.
OJSC “Electromechanika” specializes in development and manufacturing of equipment for oil-and-gas, petrochemical, oil refining and nuclear industries.

In such business domains as development and manufacturing of top drives, the Company holds the leading positions in the markets of Russia and the CIS.

At present OJSC “Electromechanika” has all the necessary resources that enable successful development of its major production activities.

**The Company includes:**
- design and technological departments, production control department;
- machine-building production with a vast stock of universal and specialized mechanical-processing and welding equipment;
- central factory laboratory with the activities approved by licenses and certificates;
- service centers in the cities of Surgut and Nizhnevartovsk.

For manufacturing of the equipment for oil-and-gas, petrochemical, oil refining and nuclear industries OJSC “Electromechanika” applies state-of-the-art progressive technologies, high-quality components, mainly home-produced ones. For factory tests the certified bench equipment is used.

In the factory we have a non-stop modernization program: we have developed the welding production to manufacture complex large-dimensioned steel constructions, check assembly grounds and bench-testing units, we introduced the most recent plants and equipment that helped to expand the product assortment and substantially increase the production output.

The Company has a wide range of reliable partners, including drilling and geophysical companies from the oil-and-gas sector, manufacturing companies, academic institutes, higher education establishments, financial and insurance companies.

Production facilities of the Company exceed 14 thousand square meters.
Staff:
The major competitive advantage of the Company is its high-qualified staff, that is able to resolve the most complex and manifold challenges.

The factory staff includes the experienced working men, qualified engineering and technical personnel, and quality control specialists.

The staff passes primary and scheduled qualifications to get the admission to manufacturing and operation of the equipment regulated by Federal Service of Environmental, Technological and Nuclear Supervision (Rostheknadzor) of the Russian Federation.

The engineering and technical personnel is qualified according to the industrial safety rules in the oil-and-gas and nuclear industries.

The personnel that manages welding operations have the 2nd and 3rd level qualifications according to training requirements for welding production specialists in the Inter-Industry Qualification Center of the National Welding Control Agency.

The personnel that performs welding operations have the 1st level qualifications according to training requirements for welding production specialists in the Inter-Industry Qualification Center of the National Welding Control Agency.

The personnel that perform sight and metering control and non-destructive check have been qualified for the right to make such checks by the Federal State Unitary Enterprise “Central Science and Research Institute of Construction Materials “Prometheus”.

Products and Services

Oil-and-gas production equipment

Electric top drive ВЭП-320М
The electric top drive system ВЭП-320М with the carrying capacity of 320 tons is designed for vertical, directional and horizontal drilling of oil and gas wells as part of domestic and imported drilling rigs (БУ4000/250 ЭЧК БМ-2, БУ-2900/200 ЭПК-БМ-3, БУ-3900/225 ЭЧК-БМ-3 manufactured by OJSC “Volgograd Drilling Equipment Plant”, БУ-5000/320 ЭК-БМ, БУ-3900/225 ЭК-БМ, БУ4000/250 ЭК-БМЧ manufactured by LLC “Uralmash Oil and Gas Equipment Holding” and УБК 250 МК-Ч manufactured by OJSC “Generation VO”, etc.)

Electric top drive ВЭП-250
The electric top drive ВЭП-250 is designed for vertical, directional and horizontal drilling of oil and gas wells as part of domestic and imported drilling rigs, both mobile (ZJ40-38, ZJ30/43, etc.) and fixed ones (БУ 4000/250 ЭК-БМ4, БУ 4000/250 ЭЧК-БМ2, УБК 250 МК-4, etc.)

Hydraulic top drive ПВГ-160Р
Top drive ПВГ-160Р with the carrying capacity of 160 tons with ground-based hydraulic unit is designed as a component of domestic and imported mobile drilling rigs (МБУ-125, МБУ-140 manufactured by OJSC “КМЗ”; МБК-125, МБК-140, МБК-160, МБК-200 manufactured by LLC “Bezhetsk Experimental Plant”; МБС-125, МБС-140 manufactured by LLC “Idelneftemash”; АРС-125 manufactured by “Seismotechnika” (Belarus); КВ-210 by “Cardwell” (USA); “Hyduke” (Canada), etc.

Power swivel ВВС-80/100
The power swivel ВВС-80/100 with the carrying capacity of 80 or 100 tons with ground-based hydraulic unit is used for workover of oil and gas wells including side-tracking. It assures high efficiency and safety of works using the top drive technology. It is designed to equip domestic and foreign hoist units of А60 type (УПА60), А60/80 type (УПА60/80), АП80, DXJ80 and others.
Drilling pumping unit НБУ-500
Drilling pumping unit НБУ-500 is designed for discharge pumping of the drill fluid into the well while drilling, development of wells, sidetracking and repairs of oil and gas wells, operated in moderate and cold climate within the operating temperature range from minus 40°C to plus 45°C.

Chemical, petrochemical and oil refining equipment
OJSC “Electromechanika” has the rich experience in manufacturing of equipment for chemical, petrochemical and oil refining industries.

The Company is aimed on maximum satisfaction of the Customer’s requirements by means of the quality of manufactured products, adoption of optimal technical solutions. This task is resolved by high-qualified personnel, adopted progressive technologies, fitting the company with the high-technology equipment, constant quality control at all production stages.

The company is ready to manufacture and supply any complex equipment according to the Customer’s design documents or developed by the Company’s design bureau.

Equipment for nuclear plants
In January 2010 OJSC “Electromechanika” for the first time was licensed to manufacture the 2nd and 3rd safety class equipment for nuclear reactor.

During the recent years for the nuclear power plants of Beloyarskaya, Novovoronezhskaya, Leningradskaya, Kalininskaya, Balakovskaya, Busher, and Kudankulam the Company supplied over 1000 pieces of different equipment: pressure vessels, heat-exchange equipment, fittings, pipelines and pipeline components.

Service
Service centers of OJSC “Electromechanika” in the cities of Surgut and Nizhnevartovsk render a full range of services for assembly, start-up and commissioning, warranty and after-warranty and maintenance service and repairs of all types of the output equipment.

The service centers are equipped with the necessary tools, instruments, spare parts. The park of service vehicles allow to perform diagnostics, technical maintenance and repairs of equipment directly at the operation site.

The staff of service centers: mechanics, electricians, hydraulic technicians — have passed training and have been qualified at the manufacturing factories and, in their turn, train the personnel of the operating companies on how to operate, maintain and repair the equipment.

Major Customers

| OJSC “Surgutneftegaz” | OJSC “RN-Burenie” | OJSC “Intellect Drilling Services” |
| OJSC “Eurasia Drilling Company” | JSC “Samotlorneftepromhim” | OJSC “Katobneft” |
| OJSC Drilling Service Company “Grand” | Managing Company “Tatburneft” |
LLC Nafta-Tehnika was established in early 2015 in the city of Kostroma.

The main business of the company is R&D, mechanical engineering, automation, providing services in the field of well casing, production of pumping units for various industries and drive engineering design.

Employees:
Our key employees are engineers, designers, consummate professionals with extensive experience (over 10 years) in the development, production and servicing of oil and gas equipment. They are ready to design and manufacture units in accordance with customer’s technical specifications.

The department of the chief designer includes specialized subdivisions: hydraulics, pneumatics, programming and automation on high and low levels, electrical engineering, assembly and project department, whose employees are very responsive to their work and each particular task.

Production:
The company has several sites: a workshop for the assembly of specialized products, a machining site. All production sites are located in Kostroma. The construction of a plant for the production of specialized equipment is in full swing. The new plant will expand the company’s manufacturing capabilities and consolidate mechanized and assembly production, paint-spraying booth, test site and office premises.

Products and developments:
The company focuses on the quality of its products, which are projected in 3D in accordance with accepted GOSTs (national standards) and regulatory requirements, and coordinated with the Customer and only after his approval is launched into production. All the proposed equipment on the basis of wheeled chassis does not exceed axle and total weight limits for travelling on public roads.

The company produces single-pump units based on vehicle chassis (8×8 axle configuration) and 10×10 chassis, double pump units (10×10 axle configuration).

Our software engineers have developed and continue to improve the automatic cement slurry preparation system (ViK-A) with the use of a mixing head, the control and monitoring system for pipeline pressure testing station ASOT. These monitoring systems can be used both in our pump units and also as mobile portable stations. The system is adapted for drilling programs and can be implemented in the general scheme by agreement with the Customer. The system is compatible with all Windows platforms, mobile OS Android and iOS.
Products and Services

Cementing equipment:
- ACS2-700x40 with NT-70 pump is a double pump cementing unit with a mixer. The equipment can be based on vehicle chassis, on sledge or can have block-modular construction.
- ACS-300x40 is a cementing unit with a mixer (with/without high-pressure pump). The equipment can be based on vehicle chassis or on sledge.
- AC2-500x40 is a double pump cementing unit. The equipment can be based on vehicle chassis.
- ATS2-700x70 with SPM TVS 600S pump is a double pump cementing unit with a mixer. The equipment can be based on vehicle chassis, on sledge or can have block-modular construction.
- ATS-300x70 is a single pump cementing unit with a mixer. The equipment can be based on vehicle chassis, on sledge or can have block-modular construction.
- ATS-500x70 is a single pump five-plunger cementing unit with a mixer. The equipment can be based on vehicle chassis, on sledge or can have block-modular construction.
- UNO-500x100 is a well pressure testing unit (up to 100 MPa).
- Cementing processes control stations (modernized) based on the chassis of KAMAZ truck.

Command station.
- Mobile portable control stations.

Pumping equipment for public utilities and agricultural needs:
- ASOT — Automated pipeline pressure testing station
- DNU — Diesel pump unit

Maintenance, repair and recovery:
- All types of work on equipment recovery
- Training
- Commissioning works
- Engineering support
- Warranty and post-warranty service

Service:
The company's service department conducts installation supervision and commissioning works, trains highly skilled operators by providing theoretical and practical knowledge, so that they can operate the equipment in accordance with the requirements of the Customer. Our representatives are ready to promptly come to the customer and eliminate breakdowns or complaints on the operation of the equipment. The company is interested in its failure-free operation. For this purpose, we have a warehouse with spare parts and service tools for uninterrupted operating maintenance and prompt repair of the products. Technical support is provided until the equipment's warranty has expired, after-sales service and maintenance is available until the end of its service life. All manufactured products meet high requirements for quality and performance.

Projects:
A well repair unit based on the KAMAZ truck chassis (8×8) with an automatic cement slurry preparation system and a high-pressure pump is in production.
Development and design: mobile well repair drilling units, mobile drilling derricks with 200-250 tons load capacity and other units.

Major Customers

| OJSC “Tatbur-Neft” | OJSC “IGS-Technology” | OJSC “Severstroy” | etc. |
Company Description

Nordline Logistics is a professional transport and logistics company that offers a wide range of services in the sphere of logistics and foreign economic activities.

The “Nordline Logistics” company arranges its operation based of fundamental values of the transport and logistics business — reliability, competence, professionalism and individual approach.

High professional level of the “Nordline Logistics” company personnel and the well-arranged working processes enable our company to ensure constantly high quality of services, outstanding reliability, safety and timely arrival of any complex cargo.

We provide cargo transportation by all transport means: automobile, marine, sea, air and railway, as well we provide multimodal transportation — the combination of these means of transport.

Our Company provides the following services:
- International transportation;
- Inland transportation in the Russian Federation;
- Transportation of large-dimensioned and heavy-lift cargo;
- Project logistics;
- Customs clearance;
- Insurance of cargo;
- Certification;
- Consultations and support of foreign trade contracts
Professional freight forwarding services

International logistics
Nordline Logistics is an integrated supplier of international logistics services that provides full-cycle freight forwarding. The Company applies flexible logistics solutions to manage the supply chains starting from consulting on foreign trade issues to complex support of foreign trade contracts, arranges international transportation with all transport means, certification, storage, customs clearance and insurance of cargo.

Inland transportation in the Russian Federation
Inland transportation in the Russian Federation is one of the top-priority businesses of our Company. We have continuing direct contracts with reliable time-proved partners: Russian railways, owners of railway rolling stock, owners of modern automobile transport – from overall trailers and platforms to low-frame trawls and modular trailers with high freight capacity that enables us to ensure timely delivery of transports to the loading site.

Transportation of large-dimensioned and heavy-lift cargo
One of our major business domains is the project logistics and transportation of large-dimensioned and heavy-lift cargo. Project logistics is always connected to solving non-conventional tasks. Our professional staff brilliantly solve such tasks with full immersion into the process and understanding all peculiarities of the project that finally enables us to find out optimal logistics solutions for our clients.

Customs clearance
“Nordline Logistics” company offers a full range of services for customs clearance of cargo:
- Classification of goods according to Goods Nomenclature for Foreign Economic Activities;
- Consulting on the foreign trade issues;
- Preparation of the set of documents required for customs clearance procedures;
- Filing for conformity certificates and declarations, other authorization documents necessary for customs clearance;
- Calculation of customs charges;
- Representation of interests in the customs authorities.

Major Customers

“Nordline Logistics” company cooperates with leading companies of oil-and-gas industry, heavy machine building and nuclear power engineering.
Company Description

We do our business in the following directions:
Participation in development of the normative-technical base for technical regulation within the Eurasian Economic Union
Conformity assessment of industrial products to the requirements of the Customs Union Technical Regulations:
- Customs Union Technical Regulations “Safety of Low-Voltage Equipment” (TP TC 004/2011);
- Customs Union Technical Regulations “Safety of Machines and Equipment” (TP TC 010/2011);
- Customs Union Technical Regulations “Safety of Gas-Engine Devices” (TP TC 016/2011);
- Customs Union Technical Regulations “Electromagnetic Compatibility of Technical Equipment” (TP TC 020/2011);
- Customs Union Technical Regulations “Safety of Equipment Operated under Excessive Pressure” (TP TC 032/2013).

The personnel of LLC “Alpha-Euro-Test” includes the qualified specialists in the sphere of certification and industrial safety with over 15 years of experience in the business domain.
LLC “Alpha-Euro-Test” undertakes any complex tasks connected with conformity assessment of the products to the requirements of the Technical Regulations of Eurasian Economic Union (Customs Union) and national standards; offers its help in obtaining approvals and authorizations based on real test reports of companies’ products that makes it possible to be sure that the supplied products meet the safety requirements determined by the legislation of the Russian Federation.

LLC “Alpha-Euro-Test” offers its help in arrangement of conformity assessment:

Conformity assessment of products to the requirements of the Customs Union Technical Regulations “Safety of Low-Voltage Equipment” (ТР ТС 004/2011);

Conformity assessment of products to the requirements of the Customs Union Technical Regulations “Safety of Machines and Equipment” (ТР ТС 010/2011);

Conformity assessment of products to the requirements of the Customs Union Technical Regulations “Safety of Gas-Engine Devices” (ТР ТС 016/2011);

Conformity assessment of products to the requirements of the Customs Union Technical Regulations “Electromagnetic Compatibility of Technical Equipment” (ТР ТС 020/2011);

Conformity assessment of products to the requirements of the Customs Union Technical Regulations “Safety of Equipment Operated under Excessive Pressure” (ТР ТС 032/2013).

Declaration of conformity of products to the requirements of the Customs Union Technical Regulations “Safety of Low-Voltage Equipment” (ТР ТС 004/2011);

Declaration of conformity of products to the requirements of the Customs Union Technical Regulations “Safety of Machines and Equipment” (ТР ТС 010/2011);

Declaration of conformity of products to the requirements of the Customs Union Technical Regulations “Safety of Gas-Engine Devices” (ТР ТС 016/2011);

Declaration of conformity of products to the requirements of the Customs Union Technical Regulations “Electromagnetic Compatibility of Technical Equipment” (ТР ТС 020/2011);

Declaration of conformity of products to the requirements of the Customs Union Technical Regulations “Safety of Equipment Operated under Excessive Pressure” (ТР ТС 032/2013).

Participation in development of the normative-technical base for technical regulation within the Eurasian Economic Union.

Major Customers

| Exxon | NICOTRA Gebhardt GmbH | ANDRITZ AG | CJSC STC “Industrial Safety” | |
| OJSC “ASTOR TRADE” | etc. |
LLC “Scientific and Production Enterprise”
35th Mechanical Plant”
(LLC NPP “35th Mechanical Plant”)
The manufactured products are based on in-house construction developments of the Company. The personnel of the Design Department includes both experienced specialists and young specialists with high potential, major part of whom are the graduates of Bauman Moscow State Technical University.

At present LLC “Scientific and Production Enterprise “35th Mechanical Plant” is a company with the set of equipment and hardware that provides full technological production cycle of various metal structures and tools, from cutting of metal rolls and sheets to painting and shipping of finished goods to the Customer.

**Products and Services**

**Scientific and Production Enterprise “35th Mechanical Plant” (NPP “35th Mechanical Plant”)** manufactures and sells technological equipment for gas and oil industries.

Since 2004 the Plant performs serial production of auxiliary technological equipment for gas-pumping units for gas-transmission and gas-production industries. During this period, we have launched the production of exhaust systems, air-filtering devices, pipe regenerators, air heaters, air sorters, utilization heat-exchange units, exhaust mines for balance-of-plant needs of mobile electric plants.

Currently the component list of the output products includes over 30 positions of products for gas-pumping units ГПА-Ц-16, ГТК-10-4, ГПА-16 “Ural”, ГПА-10-01, ГПА-Ц-25НК, ГПА-Ц-6,3, ГТ-750-6, ГТ-6-750 and electric plants ПАЭС-2500.

In the beginning of 2014 due to the forecasted increase of hydrocarbon processing indicators in Russia there was made a decision to assimilate and launch production of vessels operated under pressure for oil and gas industries.

The component list of the output products includes vessels, heat-exchange equipment, column and block devices, filters, separators.

**Major Customers**

- Gazprom
- OJSC “Gazprom Transgaz Yugorsk”
- OJSC “Gazprom Transgaz Uhta”
- OJSC “Gazprom Transgaz Surgut”
- OJSC “Gazprom Transgaz Chaykovsky”
- OJSC “Gazprom Transgaz Saint-Petersburgh”
- OJSC “Gazprom Transgaz Stavropol”
- OJSC “Gazprom Dobycha Nadyym”
- OJSC “Gazprom Dobycha Urengoy”
- OJSC “Gazprom PHG”
- JSC “UEC–Gas Turbines”
- JSC “Aviadvigatel”
- OJSC “NOVATEK”
- JSC “KMPO”

and other large oil-and-gas companies
Company Description

The Company UMSSoft ltd. (Tomsk) since 2006 has been engaged in development and implementation of technological solutions for industrial medicine and work safety.

Awards:
Gold medal. “Kuzbas Industrial Forum-2016”
Gold medal. Coal and Mining in Russia. Novokuznetsk 2018
“UMS Diagnostics Gate” is a flagship solution in the market of health check automation. It won 4 gold medals at the largest industrial forums for the best innovative solutions for industrial healthcare.

“UMS Diagnostics Gate” is a hardware-software system for automation of health check before and after working shifts of drivers and workers of industrial enterprises that work at hazardous production facilities. The equipment has the registration certificate of a medical product (P3H 2018/7280) and provides full compliance with the requirements of the Order No. 835н of December 15, 2014 of the Ministry of Health of the Russian Federation. The system is equipped with the most appropriate for automation data collection systems that help within the shortest period (from 40 seconds) to obtain the information about the heart rate indicators, blood pressure, dysrhythmia signs, alcoholic content in expiration, increased body temperature and drug intoxication signs. All these data are collected at the server that can be used by medical personnel and heads of companies to see and analyze the statistical information. Software module for the Monitoring system for vascular heart disease risk factors on the basis of the “UMS Diagnostics Gate” system can automatically identify employees with increased risk of vascular heart diseases and assigns an appropriate risk group according to the adjusted parameters. This module as well enables to keep the Employees’ health charts, record the number of complains, and generate referrals. The information collected for each employee within the long period makes it possible at the company level to identify the risk reduction measures connected to the human factor and increase the general health level of the personnel.

“UMS Work Safety” is a hardware-software system to perform automated training and testing of employees on work safety in different industries. The system is designed for speedy testing, scheduled testing of all full-time employees, scheduled / unscheduled training. The use of the system helps to reduce the injury rate, enhance the literacy and responsibility levels of the employees regarding the accident prevention, work safety and operation of machines and equipment.

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Major Customers

- JSC “Coal Company Kuzbassrazrezugol”
- JSC “AK Railways of Yakutia”
- PJSC “Sibur Holding”
- PJSC “INTER RAO”
- JSC “HK SDS-Ugol”
- Kemerovo JSC “Azot”
- PJSC “Transneft”
- JSC “SUEK-Kuzbass”
- JSC “Mezhdurechie”
Unity is our strength!

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