

KRONICLE OF EVENTS

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KRONDE
GROUP OF COMPANIES

Partners about us



KAMAZ Group is the largest automobile corporation of the Russian Federation. It ranks among the world's top heavy truck manufacturers. As an internationally known enterprise, we attach great importance to maintaining our good reputation on the world market. Therefore we are very careful when choosing our contractors being aware that our success depends on their work to a large extent.

Our cooperation with KRONDE Group began several months ago. At the end of 2011 Kronstadt Ltd won a tender for supply of Italian tube benders with accessories to our works in Naberezhnye Chelny. The commissioning was carried out

on-site by Kronstadt's service center, and we are still satisfied with operation of the machines.

The partnership has met our expectations: Kronstadt proved a responsible partner who timely fulfills its obligations and offers flexible terms to its customers.

We will continue our cooperation with Kronstadt Ltd and are relying on high competence and commitment of its staff. This year KAMAZ has already requested from KRONDE an offer for equipment supply.

R.S. Dolgovjazov
Production Manager KAMAZ OJSC

Our cooperation with Kronstadt Ltd dates from 2002 when they began with small-scale supplies of foreign parts for first tugboats built at our shipyard.

Since then Kronstadt has remained our constant partner providing Pella's vessels with a wide range of necessary equipment.

Kronstadt's promptness and responsible attitude towards their liabilities, high competence level, comprehensive knowledge of world shipbuilding solutions is appealing to us. That is the reason why we decided on Kronstadt when choosing a supplier of high-technology equipment for our new ships – the PL 475 long-liner and the SKPO-1000 complex port service vessel.

We highly appreciate contribute of Kronstadt Ltd to providing our facilities with up-to-date equipment and are looking forward to extending our cooperation.

Jakov.P. Reiderman
Deputy General Director OJSC «Pella»



PNEUMO ALLIANCE LTD has been operating on the Russian market since 1996 and has been the KronDe compressor equipment dealer for two years.

Having 16years working experience, we have acquired our specific vision of a perfect supplier. As the dealer of KronDe, we are sure our requirements will always be met and our requests will be understood correctly.

The equipment is delivered to us from the warehouse in no time. KronDe offers us considerable discounts favourable for our business as well as informational support (leaflets, booklets, posters, presentations etc.).

An experience encountered by us shows dealer policy of the company. When our company became compressor sales representative for KronDe, we were set the task of promoting this equipment group among our customers. Equipment sold by us is generally demonstrated in our show room in St. Petersburg.

Since KronDe Group kindly granted us an exposition sample free of charge, we managed to show our goods to our prospective customers, without investing money. The sales grew up, and we are thankful to our supplier for understanding.

Natalia Grishina
Director PNEUMO ALLIANCE LTD

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Production of synthetic fiber in Russia is possible with the help of Maag extrusion pumps



In the year 2008 President Medvedev charged Russian government and business community with tasks concerning development of a competitive textile industry. As a priority, providing production facilities with high-quality raw materials (including chemical fibers and first of all PET) was set.

Special attention must be paid to PET fibers due to wide application range they have – they are used for production of fishing nets, conveyor belts, ropes, for tires reinforcement and in manufacture of industrial fabrics, cord fabrics and sewing threads.

Opportunities of Russian raw materials market

Two classes of chemical substances used for synthetic fiber manufacture are polyamides and polyesters. Today in Russia there are only circa 10 companies producing these intermediate materials.

One of the leading domestic polyamide manufacturers is KuibyshevAzot JSC headquartered in Samara region. KuibyshevAzot ranks 8th place in the world in polyamide production capacity, and is planning to increase it this year to 230. 000-240. 000 tons per year that is to the optimal world production level. The half of the produced caprolactam is processed into polyamide 6 of which the thread is manufactured. Currently the company is constructing a new experimental installation for producing new generation synthetic yarn.

The second place among Russian polyamide producers and at the same time the 17th place in the world is held by Kemerovo JSC Azot. Its production capacities make 110-115 thousand tons per year. The company Shchekinoazot is also an important player in the Russian market ranking 30th place in the world.

After modernization its production capacity has grown to 90 thousand tons per year. Another two large producers of raw materials for textile fiber in the former Soviet territory are Azot JSC (Cherkassy, Ukraine) and Grodno Azot JSC (Byelorussia).

The polyesters proper are manufactured by only three enterprises in Russia – Sibur-PETF in Tver, Polief in Blagoveshchensk, and New Polymers Plant "Senegal". The end products of these manufacturers are PET granules of food quality. This type of raw material is well suited for bottle preform production, but not for textile yarn. Besides PET, Russian industry applies polyesteracrylates, polyestermaleinates and glyphthal resins.

Prospects of textile fiber production in Russia

Presently in Russia polyesters are generally considered a construction material for bottle preforms, while in Europe plastics are superseded by biodegradable materials. The world trend of artificial fabric production is manufacture of synthetic fiber out of polyamide and polyester threads. Since we don't produce polyester-based synthetic fiber, the Russian science develops new fibers on the basis of polycapromamide.

Russia has scientific capacities which are able to solve this problem. These are FGUP "VNIISV", a research institute for synthetic fiber with a pilot plant, in Tver, and Giprov, an institute designing facilities for production of chemical fibers and polymeric materials, located in Mytishchi, Moscow region.

The main problem encountered when we are producing synthetic yarn is high viscosity of the polymeric material (2000 S) and pumping "from vacuum". Cavitation-free operation of the pump is also required in such severe conditions. There are few pump brands meeting these requirements. Pumps of

Maag Pump Systems, Switzerland, designed for conveying high-viscosity media are supplied to Russia by Kronstadt LLC.

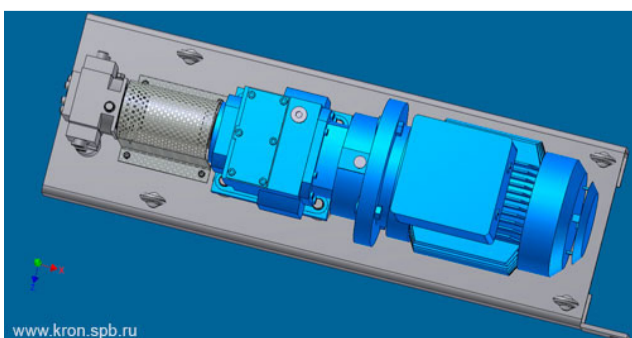
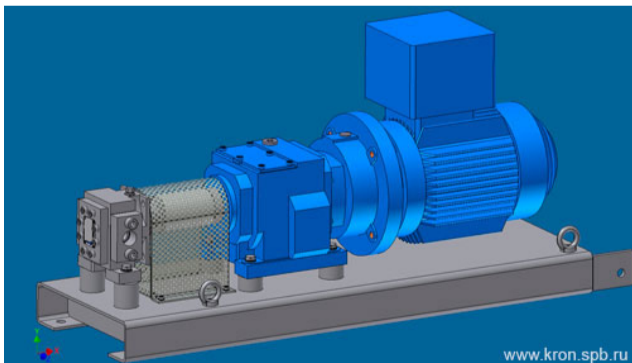
High pressure gear pumps are suitable for chemical, pharmaceutical and other industrial applications where safety, accuracy and reliability are of special importance. Maag pumps can work under low suction pressure down to vacuum, they have minimum internal leaks, extremely high feed accuracy, high developed pressures (to 350 bar). They transfer liquids of up to 4000.000 mPa viscosity at 320°C. The seals are also produced by Maag, which is an additional advantage. As said before, Kronstadt LLC is Maag's exclusive agent in the territory of Russia. Our company is interested in participating in innovative projects and maintains stable partnership relations with design bureaus, power corporations and oil and gas producers.

Kronstadt's participation in Russian projects involving synthetic fiber production

In accordance with the resolution of the Council of Ministers of Russia and Belarus "On Program for Creation and Organization of Mass Production of Equipment for Special Chemical Fibers Manufacture", the PKB Plastmash OJSC has started designing an Arselon production line.

Kronstadt is the main supplier of Maag pumps for the designed line. Maag Pump Systems gear pumps of various modifications will be used for component dosing throughout the entire cycle of Arselon production, from metering of concentrated sulfuric acid to conveying final product.

Kronstadt LLC has been contributing to modernization of Russian industry for many years and hopes that this project will be another one significant event in the history of the company.



Note:

Arselon fiber refers to a class of poly-oxadiazole polymers. Its production was launched by Khimvolokno in Svetlogorsk, Byelorussia in 1975. Arselon has stable physical and mechanical properties under temperatures up to 300°C.

KronDe markets CompAir compressors in Russia

CompAir compressors from Germany have been around since 1968, the history of the company dates back to 1801. It was acquired by an American industrial giant Gardner Denver, Inc. in 2008. CompAir offers a broad range of compressors which may be successfully applied in different industries, whether it is metal working or shipbuilding, microelectronics or food industry.

Though CompAir ranks among the world's five premium compressor manufacturers, it is still not so familiar in Russia and CIS region. One of CompAir's main dealers in our country is KronDe Group.

In 2011 KronDe presented the German company as its partner at PCVExpo International Exhibition held in Crocus Expo Exhibition Center, Moscow. Our exhibition booth was visited by representatives of enterprises from Russia's industrial regions – Volga basin, Ural, Central Russia etc. Many of them took interest in CompAir products and became customers of KronDe Group.

Our company sees very good prospects for cooperation with factories from the Russian South. Many businesses from metallurgical, energy, chemical, food, machine building and light industry sectors in Rostov-on-Don, Volgograd, Krasnodar, Astrakhan and other major cities are modernizing their production facilities and require new equipment supplies.

Interest of enterprises from that region to our product range has already resulted in large purchase orders for equipment of different groups including CompAir compressors. For example: one of our key customers in this direction is Rosenergoatom, a concern manufacturing electric and thermal energy at nuclear plants. The concern controls all the operating NPPs and 7 nuclear plants under construction. Rosenergoatom has



ordered L132 oil-injected compressors for constructed power units of Volgodonsk NPP.

Our experience lets us conclude that L02 – L250 Series are most asked-for today. KronDe has already signed contracts of their supply to a number of enterprises from Siberia and Far East. This March one screw compressor L30 RS was shipped to the city of Barnaul in Altai, where it had been ordered by AltaiSpetsIzdeliya LLC specialized in producing container filling stations, modular pump stations etc.

Survey of our customers' opinion has shown that it was the possibility of installing compressors close to the air consumption point that made them choose CompAir products. These compressors may be operated without providing a special central compressor room and long expensive air lines. Small size, built-in equipment for air compression and condensate purification and very low noise level are their main advantages.

KronDe builds promotion of CompAir brand upon cooperation with responsible local representatives.



We are pleased to invite you to visit our stand at Metalloobrabotka 2012

The exhibition takes place in Moscow
from 28 May to 1 June,
EXPOCENTER, Forum Hall.
Kronstadt's booth number is FC140



This year we will present:

Dener Makina (Turkey) Sheet Metal Working
PL 1530 CNC Plasma Cutting Machine (1500x3000mm table)

**Raw Material Processing Machines
by Scotchman Industries Inc. (USA)**

Shearmaster 610 Plate Shear
9012-24 M (90 ton) and FI-8510-20M (85 ton) Hydraulic Ironworkers
CPO 350 PK/PD Semi-Automatic Cold Saw

Vibrochimica (Italy) and Gecam (Italy) Metal Finishing Machines

VBTH 150 Vibratory Round Bowl Finishing Machine
Gecam 142 Orbital Grinding Machine with Abrasive Belt
for Straight and Bent Pipes

Technical experts from Scotchman, Dener Makina and Kronstadt
will be present at our booth to answer all your questions
and to show how operates equipment of all the brands above!

Looking forward to seeing you at FC 140

Varisco J Series engine-driven pumps for heavily polluted liquids from KronDe's stock in Moscow!

Rapid delivery to every district of Russia!

The engine-driven pumps have been designed on the basis of J Series pumps for transferring heavily polluted water with solids presence up to 76mm diameter. Self-priming is made from the depth up to 8m, capacity is 1350m³/hour. Construction materials: bronze, cast iron, stainless steel AISI 316, aluminium.

Applications:

- Transferring hot, corrosive, polluted wastewater
- Exhausting wastewater and groundwater
- Irrigation
- Firefighting
- Dosing neutralizing liquids
- Pumping young wine
- Recovery of hazardous liquids
- Concrete grouting
- Bilge water pumping
- Ship pipeline pressure cleaning
- Liquid dung oxidation et alii



KRONDE Equipment: development and prospects

It has passed a year since KRONDE equipment came to the market. Meanwhile the first several large-sum contracts have been concluded, we have set up dealer relations with a number of firms. Did KRONDE's own mark justify their expectations? How will this idea develop further? The KRONDE's development director Alexander Durinsky responds to the questions.

– Mr. Durinsky, an own trademark is now a popular trend on the equipment market. Which advantages has such a business concept?

– When we offer our own trademark to our clients, we offer them confidence – a confidence in high quality of parts, a confidence in adherence to processing methods. Concluding an agreement with a factory on manufacturing equipment under our brand, we have the opportunity to control product quality in all production phases and can ensure compliance with deadlines. Specialists of KRONDE Group visit the facilities to inspect intermediate production stages as well as for final acceptance. Not to mention that we are not dependent on manufacturer's carriers, because we have our logistics operator, Kanonerskiy. That allows us to control terms of equipment delivery to the customers. I would like to summarize that own trademark means good quality and eliminating influence of unforeseen contingencies upon terms of delivery. Furthermore, availability of your own brand allows avoiding undesirable lacks in the production range. It is common knowledge that relations of the supplier with the manufacturer often depend on outside factors and may go in an unexpected way. But our own mark is a warranty that we ever provide our client with all the necessary equipment.

– KronDe Ltd is rapidly developing its dealer net. Do some defined principles of its forming exist? Which advantages do you see for companies from various regions which would like to cooperate with you?

– There is just one principle – individual approach to cooperation. In Russia there are many large companies engaged in the sector for

a long time, knowing well their customer, having strong links, their own storehouses and service centers. But also there are young companies which are striving for large orders and position on the market. Naturally, the companies of the first and the second group require different things from us, and we try to meet expectations of each particular partner. Large companies need a competitive brand which they would oppose to offers of their rivals. We afford them delay of payment, dealer discounts and other preferences, in a



word, everything that would favour sales growth of our equipment. To the smaller companies not disposing of circulating assets we offer another cooperation type – they "explore" their prospective customers and make an offer. If all goes well, they undertake the complete transaction, control payments and monitor delivery. As for the purchase proper, it is made between the customer and our company. Thus the dealer is in fact acting as our authorized agent in the district. In this situation the startup company will develop almost without investments.

I wish to add that we render all-round information and marketing support to our district partners. We supply them with advertising materials for exhibition booths, if they are willing to represent us there, provide databases of regional enterprises and other analytical results prepared by our marketing department. We are building the dealer network not merely for sales growth through increase in turnover. We want to make KRONDE a quality mark, a name which enjoys confidence in the whole Russia. All our partners share our aspirations.

– Do you intend to broaden the range of equipment produced under your brand?

– Now we are going into the issue of manufacturing welding equipment and engine-driven pumps. Other interesting direction are KRONDE pumping stations. We have concluded a contract with an American pump maker, and will undertake equipping with the motor, installation on the frame and certification. In this way, premium quality is maintained, while costs are reduced by nearly half.

– KronDe supplies a wide array of industrial equipment. Is equipment under KRONDE's brand your principal direction of activity?

– It is reasonable to found our own brand not for all equipment groups. We are working at an integral concept of our brand and are making the production range step by step. We are also looking to cooperate with local companies and service centers. High quality and promptness of our service all over Russia and CIS countries is our priority.

KRONDE equipment

Special offer!

**Hydraulic press brake KRONDE Master 100/3200
supplied from stock in St. Petersburg
in only two days!***

Standard:

- CNC ESA 525
- Punch and die clamping system Amada – Promecam
- Standard tool kit

Steering axles:

- Y1,Y2 – beam stroke
- X- back gauge stroke
- V- antideflexion system is numerically controlled

CNC ESA 525 (Italy)
Modes: manual, semiautomatic, automatic with programmable back gauge stroke (X-axis) and bending angle



E-mail: metall@kronde.ru * The offer is valid until 01.05.2012

A Few Words about KRONDE Metal Working Equipment

The experience of our company has shown that most industrial plants in Russia can not afford to buy metal working equipment of European manufacturers because of its high cost.

Therefore constructors of KRONDE Group have visited several Asian and European facilities in search of manufacturers whose production would comply with modern European standards and requirements of the Russian market and simultaneously were middle priced.

It was some leading Chinese, Taiwanese and Turkish manufacturers importing their products to Europe which met the specified demands.

The equipment is marketed throughout Russia and CIS by a dealer network having branches in many regions. Optimization of shipping costs and introduction of long-term production programs in the plants allow reducing product final cost.

Our European representative office, the company KRON-CIS (Hamburg, Germany, since 1994) has been directly involved in working out equipment under KRONDE brand.

Our delegations visit the producing plants for quality control of equipment.

Specialized service centers of KRONDE render after-sales and post-warranty service of metal working equipment as well as trainings for customer's staff.



TIME FOR MODERNIZATION – TIME FOR KRONDE

KRONDE BAND SAW MACHINES



Semi-Automatic Band Saw KRONDE, PRAKTIK SA Series:

Features:

- Saw web variable speed drive available as a standard for all models. (Recommended cutting data for most billets can not be implemented on machines with stepped speed variation.);
- Robust vertical guides with bearing assembly and sintered-carbide tips prevent web deviation when cutting solid materials. Manual positioning depending on billet width;
- Hydraulic vise with up to 45° jaw turning. They accelerate angle cutting on short billets.



Semi-Automatic Band Saw KRONDE, STARK SA Series

Features:

- Hydraulic vise with up to 45° jaw turning;
- Saw web variable speed drive available as a standard. (Recommended cutting data for most billets can not be implemented on machines with stepped speed variation.);
- 3 points cutting coolant feed available as a standard.



Automatic Band Saw KRONDE, KONSTRUKT A Series

Features:

- Saw frame with up to 60° turn;
- Saw web variable speed drive available as a standard. (Recommended cutting data for most billets can not be implemented on machines with stepped speed variation.);
- Suitable for 2/3 shift intensive operation;
- Hydraulic feeding vise.

KRONDE SHEET CUTTING EQUIPMENT



Electromechanical Guillotine Shears KRONDE, Series QS

Standard specification

- Manual adjustment back gauge 750 mm;
- Portable foot pedal with STOP button;
- 1 side and 2 front guides;
- Safety guard;
- Cutting line lighting.

KRONDE PROFILE BENDING MACHINES

BR profile bending machines are designed for use by metal frame manufacturers. BR 80-100 Series may be equipped with hydraulic guide rolls located on both sides of central bending rolls with two axes of displacement (they are a standard on BR 120). BR 100-120 Series are equipped with hardened bending rolls.



Hydraulic Profile Bending Machine KRONDE BR 40 Series

Bending speed: 2,2 m\min



Hydraulic Profile Bending Machine KRONDE BR 60 Series

Bending speed: 6,4 m\min

KRONDE PLATE BENDING MACHINES



Manual Three-Roll Plate Bending Machine KRONDE WAL M Series

Manual and Electromechanical Three-Roll Plate Bending Machines KRONDE

Electromechanical and manual-operated asymmetric 3-roll plate bending machines KRONDE are applied for manufacturing different type rectangular tubes, water pipe casings, air ducts etc.

One of peculiar design features of KRONDE 3-roll plate benders is capability to obtain small bending diameters on a thick plate. For instance, KRONDE CYL Model allows obtaining a 150 mm diameter on a 1000x4 mm plate.

3-roll manual plate benders are used for thin plate bending, generally for air ducts and chimneys. The lower rolls are lifted and dropped through the flywheel. Full manual mode as a standard



Electromechanical Three-Roll Plate Bending Machine KRONDE, WAL SA Series

WAL SA is the most powerful KRONDE electromechanical three-roll plate bender series. They are capable of bending 7-8 mm thick plates. Plate width ranges from 1600 to 3100 mm. The rolls have been hardened and ground, they are designed for machining stainless steel, low-alloy or structural steel. The benders have a rear side driven bending roll.

A cone bending arrangement is available as a standard. The data are specified for the steel having 240 MPa yield point. When cone bending is carried out, capabilities of bending a plate of the specified thickness reduce by 50%.

We are pleased to invite our colleagues and partners to attend the workshop on “Applications of Rubber Cord Expansion Joints in Power Industry”

The workshop on application of rubber cord expansion joints in power industry takes place on May 24, 2012 in St. Petersburg. The workshop is sponsored by Ditec Dichtungstechnik GmbH, a German producer of expansion joints, Kronstadt Ltd as Ditec's exclusive representative in Russia and CIS countries and the International Valves Magazine. We are glad to meet you in the Conference Hall at Okhtinskaya Hotel (St. Petersburg, Bolsheokhtinsky prospect 4). Participation is free of charge.

Rubber cord expansion joints in industrial applications

Expansion joints of metal, fabric and rubber are used in every industry branch. Their choice depends on pressure and temperature.

Fabric E/J's are applied at pressure to 0.3 bar and process temperature to 1200 °C. Rubber cord E/J's are designed for temperatures to 200 °C and pressures over 0.3 bar. Temperatures above 200 °C and high process pressures require installation of metal expansion joints.

The expansion joint is a unit manufactured to compensate for or counterbalance various influences on an operating system

Rubber E/J's are widely used for many important properties they have:

- Compensation for thermal expansions
- Absorbing axial, lateral and angular displacements
- Sound insulation
- Smoothing over inaccuracies in pipeline assembly
- Shock absorption

- Resistance to vacuum and pressure

Rubber cord expansion joints for power industry

- Corrosion resistance
 - Prolonged lifetime
 - Maintenance-free
 - Temperature stability
- Rubber cord expansion joints are one of the best design solutions for supplying a large volume of cooling water to the turbine condensers.

While the power plant is being started, preheated or stopped and cooled, the rubber cord E/J's are reducing loads and forces acting on nozzles of the turbine condenser, are lowering pipeline pressure exerted on turbine room walls and are absorbing noise and vibrations generated during pump operation. The construction material is natural or synthetic rubber. The EPDM is also widely used



Strength test of a rubber cord expansion joint

or mechanism. The E/J's enable medium movement in pipes without their damage.

Pipelines transferring permanent working medium are usually exposed to thermal expansions and pressure, all kinds of vibrations and foundation settling. Such forces may be resisted by flexible elements which would compensate for vibrations and consequently prevent damaging pipelines. Designed to be a flexible link in a pipeline system, an expansion joint is an optimal solution in cases where the pipeline is not able to compensate for vibrations and thermal expansions.

Nowadays rubber expansion joints are called-for by Russian design bureaus engaged in development of thermal and nuclear power stations due to their capability to compensate for temperature expansions and absorb lateral, axial and angular displacements.

as a safe, non-toxic material rated B2 (normal flammability – it extinguishes in 17 seconds after ignition).

Loss of tightness is considered as the failure criterion for a rubber expansion joint. The serviceability ratio is 0.995 according to GOST 27.002-89. Shore A hardness of EPDM when supplied by the manufacturer is 60°±5°. The expansion joint in operation must be regularly checked visually and by measurement for bellows durability and their bending or flexure. The rubber expansion joint must be protected against direct sunlight and not be exposed to non-nominal pressure, twisting and pollution.

The rubber joints must be replaced if their hardness has reached 85° Shore. Life expectancy of the rubber element is usually over 20 years under design parameters. The rubber E/J is maintenance-free through its



whole lifetime. Safety factor is over 6 relative to rupture pressure. Rubber expansion joints sustain repeated cyclic displacements relative to their initial mounting position, short-term deformations from axial compression and elongation, and short-term lateral deformations. The chosen material, face-to-face length and shape is specified with consideration for process parameters – temperature, pressure, axial, angular and lateral displacements, thrust force, flow rate and chemical composition of the working medium.

For instance: single-arch rubber cord expansion joints with 1200-2400mm diameter have displacements as follows: allowable bending angle +/- (1–2) degrees, allowable deformation in axial position +/- (20–25) mm, allowable deformation in lateral position +/- (10–15) mm. Rubber cord E/J's with an internal ring are installed in low pressure pipelines where vacuum is generated during operation.

Multiple-arch rubber expansion joints are applied to compensate for extreme axial, angular and lateral displacements. Steel flanges with clamps and metal or reinforced rings between arches stabilize the movement during compensation for axial displacements. Thrust flanges, counter flanges, nozzles and fasteners are made in carbon steel. The quality is confirmed by quality plans and inspection and test plans. Rubber, fabric and metals used for manufacture are certified by respective production plants and pass incoming inspection in the factory manufacturing rubber E/J's. The standard E/J's scope of supply includes a rubber-cord insert, an arch, a thrust flange, a counter flange, nozzles, fasteners, an installation drawing, a certificate of origin, operation,

transporting and storage instructions, quality plans. Diameter of rubber cord expansion joints may reach 4000mm. Manufacturing costs of a large-size rubber cord expansion joint are several times lower than these of a metal expansion joint of the same diameter, because in this case application of expensive auxiliary equipment is not required. The rubber E/J's must be stored for a long time in special vulcanization chambers until they get vulcanized homogeneously. Rubber cord E/J's may be also used for pumping aggressive media under up to 200°C. In this case the internal surface is treated with silicone. If the E/J is designed for use at corrosive media, its internal coating is made of fluorescent elastomer or PTFE.

The expansion joints are designed and manufactured in compliance with the design specifications provided by the customer. The chosen material, face-to-face length and shape is specified with consideration for process parameters. Design pressure, test pressure and operating pressure exerted on the bellows is significant for designing bellows thickness and connections of the expansion joint.

The higher the pressure is, the thicker bellows material must be. This E/J's element is generally designed for operation under a pressure higher than design or operating one except test conditions where test pressure must be 1.5 times operating pressure. In these circumstances the bellows shall have a higher nominal pressure than it must be for use.

Reliability of the rubber cord expansion joints is confirmed by their successful operation in thermal and nuclear power stations of India, France, Germany, Italy and Scandinavia.



Ditec rubber cord expansion joints supplied by Kronstadt to the Beloyarskaya Nuclear Power Plant



KronDe expands its product range with Hüdig dewatering pumps.

Now, when the spring has come and building has intensified, the problem of dewatering is urgent again. The dealer agreement concluded between KronDe and Hüdig provided us with the entire spectrum of this equipment type, for products of the German company have served as a successful addition to Varisco pumps which have been already supplied by KronDe for some time.

Hüdig, a company founded over 100 years ago, produces irrigation machines, pump aggregates, waste water pumps, dewatering equipment and generator sets. Its products are applied in agriculture, civil and military construction and in industry all over the world. Specific features of some Hüdig dewatering pump models are vacuum vessels with submersible pumps as well as automatic mode function. A large capacity of the pump tank eliminates the necessity for frequent starts and stops of the submersible pump.



Kronstadt's offer for metal construction machining equipment has widened.

In recent years construction market is in an expansion phase, which means that equipment demand on the part of building contractors is also growing.

Large beams such as angles, joists or channels used in building often must be punched. Kronstadt took these requirements into consideration and added CNC lines for profile and pipe drilling, cutting and punching by IMAC s.r.l. to its metal working equipment range. Products of this maker suit best that purpose in civil and military construction applications.

IMAC srl, Italy, offers special solutions for suppliers of construction equipment (cut, drilled or punched beams) and for enterprises from machine-building or oil processing sector where drilling of elongated circular pipes is needed.



This winter Kronstadt Ltd has signed a dealership agreement with a German filter and separator manufacturer Faudi GmbH. Under the agreement Kronstadt becomes supplier of this equipment in the territory of Russia and CIS countries.

Faudi (Germany) is an engineering company with over 70 years experience in manufacturing filters and separators for liquids and gases. Faudi GmbH has chosen Kronstadt as its strategic partner for the Russian market taking into account our success and experience in supplying world brand equipment to Russian enterprises of various industries. Kronstadt offers Faudi equipment for a wide range of applications: refinery and petrochemical plants, gas processing and gas chemical facilities, fertilizer plants, pipelines, gas storages (including underground ones), continental and offshore oil and gas production, chemicals.



Kronstadt Ltd started as of January 2012 its cooperation with Dener Makina, the prominent Turkish producer of sheet metal working machines. The authorized dealer certificate has entitled Kronstadt to supply and service Dener Makina equipment in the territory of the Russian Federation.

For over 30 years Dener Makina has been manufacturing CNC sheet bending press brakes and guillotine shears of European quality. Its production capacities cover about 20,000 m in Kayseri industrial zone. Dener supplies its products worldwide and has representatives in 42 countries. The recently launched cooperation between Dener and Mitsubishi has allowed presenting their production in the American, Canadian, Chinese, Indian, Japanese and Mexican markets under one common brand name. The Turkish company is ISO 9001 certified and has all relevant Russian certificates. The whole production range is CE marked.



Manufacture of a rubber cord expansion joint

E/Js of similar composition and properties have been supplied to the Finnish Olkiluoto 3 power plant with an EPR-1600 reactor constructed by AREVA.

This type of expansion joints is supplied also to the Kudankulam NPP which is constructed in India with the participation of Russian Atomstroyexport.

Kronstadt LLC has obtained a licence from the Federal Service for Environmental, Technological and Nuclear Supervision entitling to equipment supplies (including expansion joints) for nuclear plants, selection of suppliers and subcontractors, quality control, temporary storage and control of delivery completeness.

Our company has supplied Ditec rubber E/Js to the 4th power unit of the Beloyarskaya NPP. The equipment was tested in Germany by the manufacturer and Kronstadt as its exclusive partner in Russia.

The design documents list for this project had been developed by the specialists of Kronstadt, and design specifications had been issued by Atomenergoproekt, the design bureau from St. Petersburg which is projecting the turbine room for the 4th power unit of the Beloyarskaya NPP. The design documentation

for this complicated project was worked out for two years.

The complicity of the project consisted in at least 20 years expected lifetime of expansion joints and high requirements to reliability and safety. According to the design specifications,

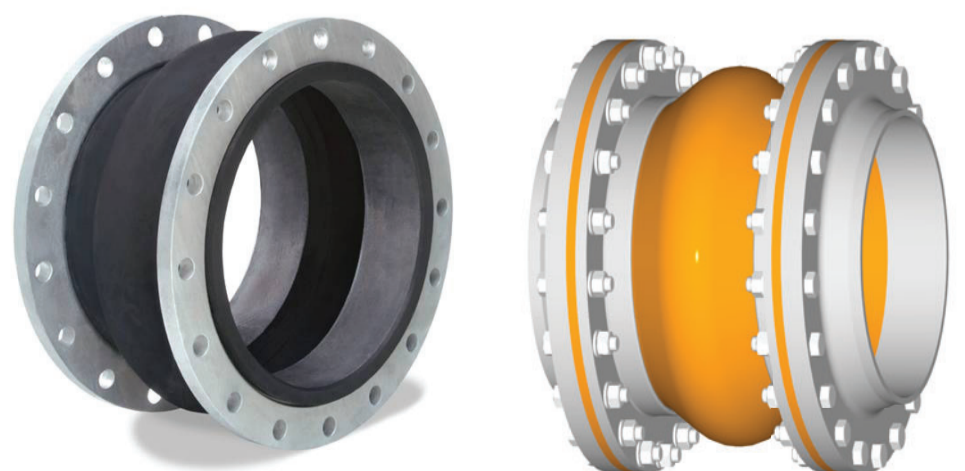


Rubber cord expansion joints on the pipeline

rubber expansion joint failure criterion would be its loss of tightness, and serviceability ratio would be 0.995 acc. to GOST 27.002-89. That's why bellows hardness was measured by a special procedure developed by Ditec. According to the procedure, condition of an expansion joint is forecasted based on EPDM

actual hardness. It enables to avoid abrupt pipe breaks during operation.

Vassiliy Kovalev
Expert for expansion joints Kronstadt LLC



Universal, angular and lateral rubber expansion joints with one arch

1812-2012. 200 Years After the Patriotic War with Napoleon I Trumpets of Victory Sound once again



2012 is a special year for Russia, because it has been 200 years since Russian troops defeated the Great Army of Napoleon I in the Patriotic War of 1812. The anniversary of this momentous event in European history is widely celebrated all over the country. The ceremonial events are arranged by the Russian Federation Ministry of Defense and Ministry of Culture and supported by culture and business community. KRONDE Group also takes part in the project Trumpets of Victory.



Trumpets of Victory is a complex project focused on anniversary of the victory against Napoleon and honouring heroes of the war. The heart of the project is a similarly-named album released by the Russian Horn Orchestra. Trumpets of Victory is the first-ever album of Russian martial music of early 19th century in its authentic horn sounding.

At the beginning of the 19th century there were no military bands like nowadays. In parades military wind music was played by horn orchestras, because they were the only

«We have prepared a cycle of lectures combined with military music concerts working in partnership with the historian Boris Kipnis and Art Piter Producer Center. We consider that our project has good reason to draw attention of the youth and will help them know better about the Patriotic War of 1812 and the exploit of the whole nation which held out against the enemy in these hard times», – say the project participants, Sergey Polyanichko (founder and conductor of the Russian Horn Orchestra) and Sergey Sukhachev (general manager of KRONDE Group).

musical bands capable of playing martial music of sufficiently rich timbre and sound intensity. Therefore the music from Trumpets of Victory represents real tunes of this war to which Russian soldiers were going into the assault.

The album is constructed as a chronological sequence of marches from guard and army regiments which distinguished themselves in actions during 1799-1812.

Here are the contents:

A.W.Suvorov Italian campaign

March of the 17th H.R.H. Great Duke Vladimir Alexandrovich's Archangelogorodsky Infantry Regiment.

Austerlitz

March of the H.M. Empress Maria Theodorovna's Chevalier Guard Regiment.

Friedland

March of the Life-Guards Horse Regiment.

Neman

March of the His Majesty's Life-Guards Cossack Regiment.

Klyastitsy

March of the Life-Guards Pavlovsky Regiment.

Smolensk

March of the Life-Guards Semenovskiy Regiment.

Borodino

March of the Life-Guards Izmailovskiy Regiment.

Tarutino (militia)

Folk song (Ach, ty step shirokaya...) (Ach, you wide steppe)

Maloyaroslavets.

March of the Tomskiy Infantry Regiment.

Guerillas.

March of the Akhtyrskiy 36th Hussar Regiment.

Krasnoi

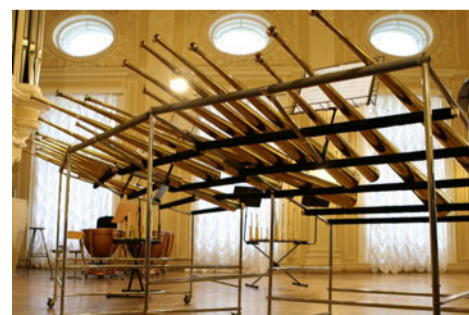
March of the Life-Guards Finliandskiy Regiment.

Berezina

March of the Life-Guards Preobrazhenskiy Regiment.

Napoleon's flight. End of the war.

Kol' slavyen nash Gospod' v Sionje (How Glorious Our Lord Is on Zion) (D.S.Bortnyansky)



A glimpse of the history of horn music

The first horn orchestra appeared in 1751 in St. Petersburg. The architect of this concept was Knight Marshal Semen Kirillovich Naryshkin, who had heard tunes played by huntsmen's horns. The new and unusual occurrence became popular with the court in a short time. A favourite among state authorities and nobility, horn music sounded in palaces and parks, at balls, parades and society celebrations. Horn bands were engaged at diplomatic receptions and folk festivals.

Horn orchestras vanished between 1834-1840 for reason of development of wind music. The first attempt to restore them was made in the 80-ties of the 19th century, thereafter horn music was played nearly at every state banquet under Alexander III and Nicholas II. The last remarkable date in the horn bands history was the year 1913. Commemoration of the 300th anniversary of the House of Romanov and inauguration of the St. Nicholas' Cathedral in Kronstadt belong to the last large-scale festivities where horn tunes could be heard.

However, the horn music tradition was believed to be irretrievable till beginning of this century. One of musicians who have tried to resurrect this wonderful cultural phenomenon was a French horn player Sergey Polyanichko. In 2006 he founded the Russian Horn Orchestra, a band becoming more and more popular among both professionals and the public at large.

KRONDE Group and the Orchestra founded the so-called KRONDE Workshop in 2011. This is the only musical horn workshop in the world.

The second, but equally important constituent of the project

A popular scientific book The Glorious 1812 by Boris Kipnis, a prominent military historian from St. Petersburg. The book just like the CD is about the events of the Patriotic War, the personal confrontation between Alexander I and Napoleon, historical prerequisites for the war and consequences of this tragic period in the European history.

The book's pages are inhabited by both well-known and favourite characters and forgotten but still real heroes of that time. It is intended to be a support for students, teachers, lecturers who would like to know more about one of the most significant events in the Russian history, the Patriotic War of 1812.



The third part of the project – lectures accompanied by military music concerts

The activities will be held in a number of Russian cities, in a multi-media form familiarizing the general public with the project. The program has been prepared in partnership with Mr. Kipnis and Art Piter Producer Center.

This idea became reality owing to efforts of many participants – the Russian Horn Orchestra, its title sponsor KRONDE Group, the Ministry of Defense of the Russian Federation, the St. Petersburg Military-Historical Museum of Artillery, Engineer and Signal Corps as well as Art Piter Producer Center. The project has been highly appreciated by the commission for preparation for the anniversary celebration and will make an impression at the festivities.

The presentation took place on 5 April at Maltese Capella, St. Petersburg. The project participants told about the Trumpets of Victory, friends of the project said welcome speeches, after that the Horn Orchestra played selected marches from the album.

Russian Horn Orchestra is a musical band from St. Petersburg restoring the forgotten tradition of Russian horn music. This musical form dates from the middle of the 18th century. Horn music sounds like organ and has no equivalents in the world.

Secret of peculiarity of a horn band is concealed within its internal structure. One musician can elicit only one note from the horn he is playing. Only when the whole choir is playing, separate notes connect and form an entire musical composition.