

INVESTMENT PROJECTS



BELARUSIAN INVESTMENT & INDUSTRIAL FORUM 2019







OJSC Legmash Plant

PRODUCTION OF INNOVATIVE EQUIPMENT AND COMPONENTS FOR GAS AND OIL INDUSTRY





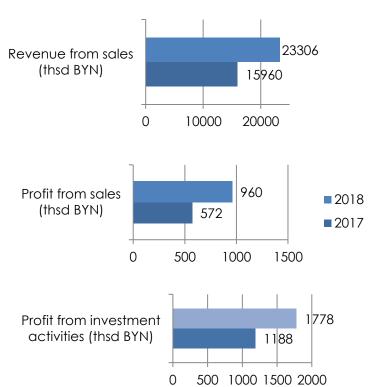
About the Company

The plant was founded in Orsha (Vitebsk region) in 1945 for the production of heating coppers and in 1952 on the basis of the plant new production line for release of household sewing machines was organized. Since 1963, the plant began to produce industrial sewing machines because the demand on household sewing machines was satisfied. From 1976 to 1990 the plant was the main enterprise of Promsvyaz in which Poltava and Rostov-on-Don plants Legmash were part of its. In 2007 the plant got the modern name of OJSC Legmash Plant, and since 2012 the plant has been a part of the largest Belarusian holding "Belarusian metallurgical company".

Today the plant is engaged in metal processing, production of goods from polymeric materials, painting by polymeric paints, to flex sheets, pig-iron and aluminum molding and so forth. The main advantage of OJSC Legmash Plant today is the high quality of products providing competitiveness. In production process the plant uses certificated and hygienic safety raw materials.



According the OJSC to Leamash Plant results financial and economic activities demonstrate of financial improvement indicators. Revenue from sales in increased by compared to 2017, profit from sales in 2018 increased almost 68% compared to 2017, and income from investment activities in 2018 increased by 50% compared to 2017.





Property Structure







OJSC Legmash Plant



Products

- Cast iron cookware
- Parts, units, replacement equipment for metallurgy
- Metalworks
- Water-cooled elements
- Coil container
- Mandrel piercing
- Bag filters
- Lifting
- Wire and plastic products
- Chimneys
- Protective clothing



Geographical presence









OJSC Legmash Plant advantages

- High quality of products is the strategy of OJSC Legmash Plant;
- Certified or hygienic and safety raw materials;
- More than 70 years of experience in the production of various types of products;
- Railway line is nearby, as well as roads of national destination for freight and passenger transport, which are used for communication with Europe and Asia;
- Certified quality management system of products corresponding to the requirements of STB ISO 9001-2015;
- OJSC Legmash Plant has the land plot as well as buildings which are used to carry out additional production activities.



Implementation of the investment project supposes production of innovative equipment, which will be completely new products for the Republic of Belarus and will be demand at the market of the Customs Union with the developed oil and gas industry.

The investment project implementation also supposes to produce new kind of products for:

- hydraulic feed-through packer;
- couplings for cuff cementing;
- suspension of the shank of non cemented;
- suspension of the shank of the hydromechanical cemented;
- ball check valve; rotating column.



Project's advantages

- Innovative equipment and products for the Belarussian's market;
- Required products at the Custom Union countries with developed oil and gas industry.



Project's financing

Total cost of the investment project is **4,4 mln USD**. OJSC Legmash Plant contributes 1.35 mln USD and investor contributes – 3.05 mln USD.



Finance indicators of project efficiency

Calculation horizon, years	12
Revenue, thsd USD	1 507
Period of reaching the project capacity, years	5
Simple pay back period, years	4,7
Dynamic pay back period, years	4,8
IRR, %	17,1







COMPANY INTRODUCTION

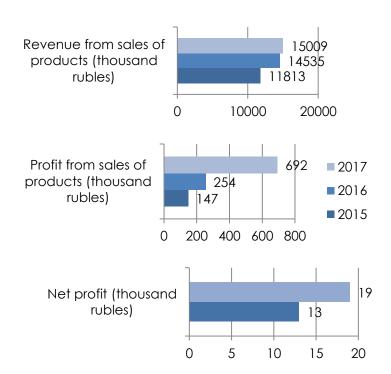
Open Joint-Stock Company Electroaparatura was established on December 24, 2002 in the Gomel city. Electroapparatura is a leading manufacturer of start-protecting equipment, special switching equipment and household appliances. For over 60 years, the company has been specializing in the production of electrical appliances, producing unique switching equipment and thermal relays.

The company today is a dynamically developing enterprise, constantly increasing the volume and quality of its products. The company widely uses the latest technology and a modern quality system. All products are certified in the Russian Federation, Ukraine and the Republic of Belarus. The strength of the enterprise is 520 people.



FINANCIAL INDICATORS

According to the results of the financial and economic activities. Elektroapparatura shows steady improvement in financial performance, SO revenue in 2017 from product sales increased by 27% with 2015. compared profit from product sales 2017 increased by 470% compared with 2015 and net profit in 2017 increased by 46% compared with 2016.





OWNERSHIP STRUCTURE





OUTPUT GOODS

- Stoves (gas, gas-electric, electric)
- Built-in appliances (gas table, electric oven)
- Cabinets fryers
- Electric Irons
- Low-voltage equipment (electromagnetic starters, electromagnetic contactors, contact prefix, relays, surge arresters)



GEOGRAPHIC PRESENCE







BENEFITS OF JSC ELEKTROAPARATURA

- Elektroaparatura is a resident of the Gomel-Raton FEZ.
- A special legal regime has been established on the territory of the Gomel-Raton FEZ, which includes special tax and customs regimes.
 - Recognizable brand.
- The region is characterized by an extensive network of roads for passenger and freight traffic with the countries of Europe and Asia. There is a railway line, Gomel Airport is located nearby.
- A certificate of compliance of the quality system of magnetic starters with the requirements of STB ISO 9001-2009 functions.
- Sales of manufactured products of Elwctroaparatura are carried out in foreign and domestic markets. The main export markets of the company include the Russian Federation, Ukraine, Kazakhstan and other member countries of the Eurasian Economic Union.



DESCRIPTION OF THE INVESTMENT PROJECT

The implementation of the investment project involves a partial update and modernization of the machine park with the acquisition of modern high-performance equipment of leading companies, the introduction of advanced technologies.

This will allow:

- to increase the production capacity of the enterprise;
- significantly increase production volumes;
- to master the manufacture of new types of products demanded in the market;
- significantly improve its quality at competitive prices.

Priorities in the formation of the production program are import substitution and export. One of the most important goals of the project is to increase production efficiency through technical re-equipment.

The project implementation will allow creating a flexible production capable of meeting the requirements of the market and offering it at least 2-3 units per annum of the middle class household appliances, a fundamentally new design, with sufficient functionality and not differing in their aesthetic characteristics from similar products from other manufacturers.



BENEFITS OF THE PROJECT

- Recognizable brand;
- The products are characterized by higher quality, similar to imported, lower prices, import substitution;
 - Increase of profitability due to cost reduction and increase in production;
 - Quick update of the product range for consumer demand.



PROJECT FINANCING

Total investment costs of the project will amount to \$ 11.2 million. Among them: own funds of JSC Electroapparatura- 5.92 million US dollars, investor's funds - 5.28 million US dollars.

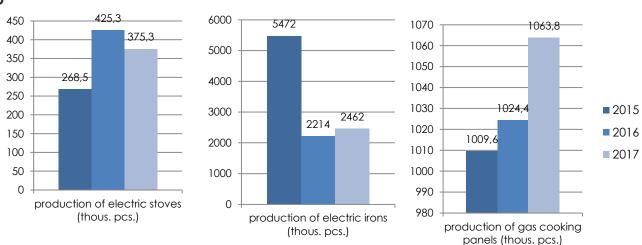


INDICATORS OF FINANCIAL EFFICIENCY OF THE PROJECT

Calculation horizon, years	8
Annual revenue, thousand, USD	20 170
The term of reaching the design capacity, year	2025
Simple payback period, years	6,6
Dynamic payback period, years	7
IRR, %	14,5



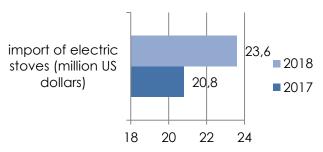
PRODUCTION OF STOVES AND IRONS IN BELARUS



The volume of production of electric stoves demonstrates a stable state within 370 thousand units per year. The volume of production of gas cooking panels shows steady growth over the years 2015-2017. The production of electric irons shows growth (the volume of production around 2.4 million units).

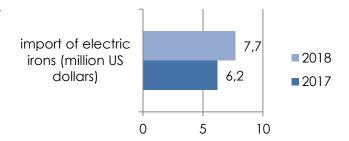


IMPORT INDICATORS OF ELECTRIC STOVES, IRONS



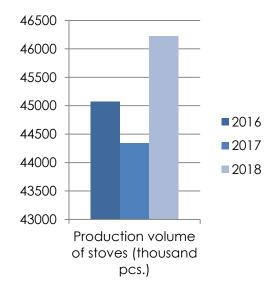
The increasing volume of imports of electric stoves demonstrates the steady popular demand of Belarus for these products (an increase of 13% compared with 2017).

The increasing volume of import of electric irons demonstrates the steady popular demand of Belarus for these products (an increase of 24% compared with 2017).

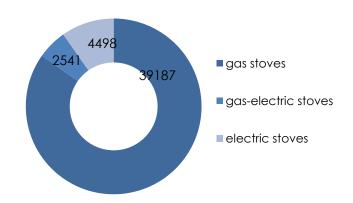




VOLUMES OF PRODUCTION JSC ELEKTROAPPARATURA



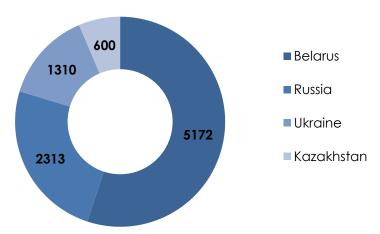
Production volume by types of products in 2018 (thousand pcs.)



Sales of stoves for export and domestic market in 2018 (thousand pcs.)



Proceeds from sales (thousand rubles)





CHARACTERISTICS OF THE DOMESTIC AND FOREIGN ELECTRICAL EQUIPMENT MARKET (STOVES, IRONS)

The current market volume as of 2017 is \$ 25 million US dollars; Planned domestic market share:

- household appliances 25%
- on low-voltage equipment 50%

Strategy of work in the domestic market:

- Low prices;
- Attractive service.

The profitability of product sales (%): 2.6 (in 2018).

Estimated distribution of sales in foreign markets - the EAEU countries (51%), incl. Belarus market - 48%, other countries - 1%.







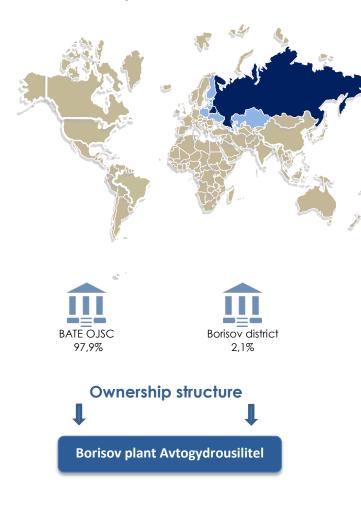
CONSTRUCTION OF MODERN PLANT FOR PRODUCTION STEERING UNIT FOR EQUIPMENT OF VEHICLES



ABOUT THE COMPANY

Open joint stock company Borisov plant Avtogydrousilitel was established on January 27, 2010 in Borisov, Minsk region. OJSC Borisov plant Avtogydrousilitel is a specialized enterprise which produces automotive steering components for a wide range of vehicles, provides an equipment of assembly conveyors of the largest automobile plants of the Republic of Belarus, the Russian Federation, Ukraine, such as OJSC MAZ, GAZ Group, LLC UAZ, OJSC PAZ, OJSC KAMAZ, OJSC AZ Ural, etc.

Distribution map



Advantages

- The region is characterized by an extensive network of roads for passenger and freight traffic with Europe and Asia. There is a railway line, nearby is the national airport Minsk.
- Established certified management quality system that meets the requirements of STB ISO 9001-2008
- Certificate of quality management system conformity that meets the requirements of STB ISO/TS 16949-2009.
- International standard ISO 9001, which covers not only the quality management system for automotive products, but also QMS for tractor components.
- Distribution of OJSC Borisov plant Avtogydrousilitel products are carried out on external and internal markets.
 The main export markets of the company include the Russian Federation and other member States of the Eurasian economic Union.

INVESTMENT PROJECT REVIEW

The main goal of this project is to create a modern energy-efficient plant with the high productivity, which is able to quickly adapt for market requirements and ensure high quality of products.

The implementation of this project will allow the plant to modernize existing production line with the establishing of capacities for the production of new products, including rack and pinion steering systems for cars, to implement modern flexible energy-saving technologies, to optimize using of production area, energy and logistics costs.



PROJECT'S ADVANTAGES

- Recognized brand;
- Specialized personnel;
- Supply chain of raw materials and components;
- Commodity distribution network;
- Unsaturated market of products offered for production in the Republic of Belarus;
- Access to the market of EAEU;
- Guaranteed volume of orders (from public and private enterprises);
- Possibility of using local raw materials.



PROJECT FINANCING

Total costs of the investment project is **42.4 mln USD**. OJSC Borisov plant Avtogydrousilitel contributes **19.3 mln USD**, governmental support – **21.1 mln USD**.



MARKET'S REVIEW:

Market volume in 2017 - 7.1 mln USD

Planned share of the domestic market - 100 %;

Domestic market strategy: low prices and high quality

Profitability of sales in 2017 - 5.2%

Distribution of products at foreign markets:

EAEU countries – **98,5%** with the share of Belarussian market – **21,3%** EU countries – **0,1%**



FINANCIAL EFFICIENCY

8	Calculation horizon, years
64 300	Annual revenue, thousand, USD
2023	Period of reaching the project capacity, year
5,3	Simple payback period, years
6,6	Dynamic payback period, years
8,1	NPV, million USD
33,5	IRR, %









CONSTRUCTION OF MODERN PLANT FOR PRODUCTION COMPONENTS FOR EQUIPMENT OF ENGINES THAT MEET THE REQUIREMENTS OF ENVIRONMENTAL STANDARD EURO-4/5 AND HIGHER, STAGE-3A AND HIGHER

About the company



Open joint stock company Borisov plant of aggregates was established on January 30, 2009 in Borisov, Minsk region. OJSC Borisov plant of aggregates is specialized enterprise for the production and distribution of components to diesel engines of tractors vehicles.

OJSC Borisov plant of aggregates produces:

- ✓ turbochargers,
- ✓ compressors,
- ✓ water and oil pumps,
- ✓ filters and other products for diesel engines of automotive, tractor, road construction and agricultural vehicles.



is

→ The range of products is more than 40 units

→ Number of employees approximately **1500**

PROPERTY STRUCTURE



The project's goal

National Agency of investment and privatization (NAIP) in cooperation with Mogilev regional executive committee are looking for a strategic investor for the purpose of modernization and development of the plant production capacity for the

organization of production competitive products for the equipment of engines that meet the environmental standard of Euro-4/5 and higher, Stage-3A and higher.

Prerequisites for the implementation of investment project is regular demand for domestic and foreign markets, as well as price factor.

Main consumers of the products:

OJSC YMZ

OJSC Minsk engines plant



Distribution of OJSC Borisov plant of aggregates products is planned to foreign and domestic markets. The main export markets of the company include the Russian Federation and other member States of the Eurasian economic Union.

Investment project key indicators:



Financing

TOTAL COST OF THE PROJECT IS 10,8 MLN USD

OJSC BORISOV PLANT OF AGGREGATES **CONTRIBUTES 3,9 MLN USD**

INVESTOR CONTRIBUTES 6,9 MLN USD



Financial efficiency

Calculation horizon, years	10
Annual revenue, thousand, USD	26 700
Period of reaching the project capacity, year	2021
Simple payback period, years	5,9
Dynamic payback period, years	7,1
NPV, million USD	1,52
IRR, %	12,51

SALES VOLUME DISTRIBUTION



Domestic market strategy:

- Low price;
- Governmental support.



Market's indicators:

- Market volume in 2017 10.1 mln USD;
- Planned share of the domestic market - 100 %;
- Profitability of sales in 2017 8.2%.

Indicators of investment attractiveness





Enterprise has an effective quality control system:

- → Established certified system of quality management corresponding to requirements of STB ISO 9001-2009.
- → Established certified management quality system that meets the requirements of EN ISO 9001:2008, ISO/TS 16949:2009.
- → Quality management system certificate that meets the requirements of STB ISO/TS 16949-2010.
- → Implementation of a quality management system that meets the requirements of international standard IATF 16949.

The region is characterized by an extensive network of roads for passenger and freight traffic with Europe and Asia. There is a railway line, nearby is the national airport Minsk.



Investment project advantages:

- → Recognized brand;
- → Specialized personnel;
- → Unsaturated domestic market:
- → Stable financial and economic indicators of the enterprise;
- → Availability of full-fledged production and engineering infrastructure, technical and technological reserves for modernization and further development of production;
 - → Distribution network:

- → Availability of supply chain of raw materials and components;
- → Possibility to expand production line and set up of additional facilities;
- → Wide range of products, working at its improvement;
- → Access to EAEU's market:
- → Guaranteed orders from enterprises (public and private);
- → Possibility of using local raw materials.







ESTABLISHING A STATE-OF-THE-ART PLANT TO MANUFACTURE QUALITY PARTS FOR CARS AND COMMERCIAL VEHICLES



ABOUT THE COMPANY



joint stock Open company Belkard was established on July 19, 2000 in Grodno.

Belkard is the largest producer automotive components for all types and modifications of cars.

OJCS Belkard produces:

- → cardan shafts and transmissions;
- → crosspieces, flanges and other components;
- → universal hinges;
- → gas dumpers and springs;
- → brake chambers steering rods.



Number of employees is 1784 people.

Distribution map:



2018, OJSC Belkard sold its products to the following countries:

- → Russia \$ 21.5 million USD;
- → Belarus \$ 10.6 million USD;
- → Ukraine 413 thousand USD:
- → Hungary 96.7 thousand USD:
- → Kazakhstan 59 thousand USD:
- → Romania 53 thousand dollars USD

OJSC Belkard distributes its products at foreign and domestic markets. include the Russian

The main export markets of the company Federation and EAEU countries, Ukraine, Hungary, Romania, Poland.

Property structure





State - 99,5 % Individuals – 0.5%





Belkard

OJSC BELKARD'S ADVANTAGES

→ OJSC Belkard is the resident of Grodnoinvest FEZ. It is located at the central part of Europe, on the border with the European Union.

The region is characterized by an extensive network of roads for passenger and freight traffic with Europe and Asia. There are railway tracks with the presence of Western and Eastern railway tracks, international airport.



The quality management system of the enterprise is certified for compliance with the of international requirements standards ISO 9001:2015, IATF 16949:2016.

→ The mass-produced products of OJSC Belkard are certified for compliance with the technical rules of the Customs Union TR CU 018/2011 On the safety of wheeled vehicles.

INVESTMENT PROJECT REVIEW

Implementation of the investment project involves setting up of production on the basis of operating workshop at OJSC Belkard (Grodno city) new driveshafts and gearboxes for cars with export potential.

It is planned to organize the production of cardan shafts and gearboxes with the latest innovative design solutions for technologies, built on flexible production modules, which include high-precision, modern CNC machining centers, equipment and automation of assembly processes of dumpers and gas springs.

→ Main consumer of products will be LLC UK GAZ Group (Russian Federation).

Total cost of investment project is 5.65 mln USD

OJSC Belkard contributes 3,6 mln USD Investor contributes 2,05 mln USD.

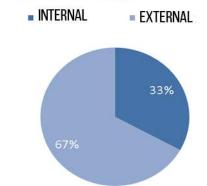
INVESTMENT PROJECT ADVANTAGES

- Availability of production and engineering infrastructure, technical and technological reserves for modernization and further development of production;
- Wide range of products, constant work on its improvement;
- Activity on promotion of products and expansion of markets;
- Investment project implementation's experience;
- Using of new technologies;
- Recognized high quality products;
- Approved scheme and communication logistics for supplying of production and sales of products;
- Possibility to expand production and set up an additional facilities;
- Stable financial and economic indicators of the enterprise;
- Availability of professional, qualified and experienced employees;
- Positive business reputation of the company.

MARKET REVIEW

Current market volume in 2017 is 7.87 million USD

MARKET'S SHARE



Strategy for domestic market:

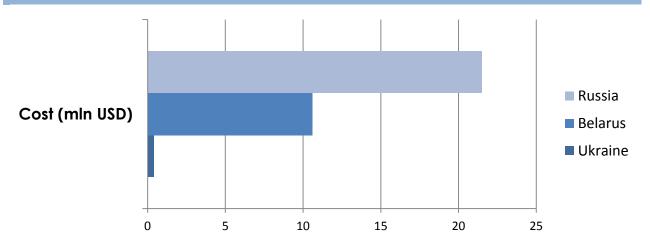
- → Low price;
- → High quality;
- → Professional service;
- → Governmental support;
- → Competitive products.

Return on sales: 10.3 % in 2018.

DISTRIBUTION OF SALES BY MAJOR REGIONS, %

EAEU Countries	EU Countries	Other countries
97,78	0,49	1,0

DISTRIBUTION OF PRODUCTS IN ORDER TO WORLD'S COUNTRIES



INDICATORS OF FINANCE EFFICIENCY



Calculation horizon, years	8
Annual revenue, thousand, USD	52 485,1
Project capacity reaching period, year	2021
Simple payback period, years	5
Dynamic payback period, years	5,8
NPV, thousand USD	703,8
IRR, %	20,2









PRODUCTION OF MACHINE AND BENCH VICE SETS, INTRODUCING MODERN TECHNOLOGIES



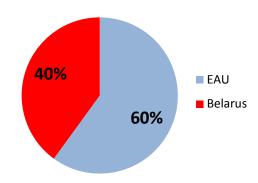
PROJECT SYNOPSIS

The Project's goal is to organize production of machine and bench vice sets, using modern metal processing technologies and equipment, jointly with the local experienced company.

The new technologies and equipment, which are going to be installed in the plant of the Partner Company, will help to improve the quality and increase the volume of production. The company has an efficient distribution and a large domestic and export shares of the market.

BZSP OJSC SALES (4,1 MLN USD, 2017)

60 years at the market BZSP OJSC



List of the Project products,

- Lathe chucks
- Machine vice sets including rotary
- Vice sets for turning processing
- Table swivel (including horizontally vertical), with manual and mechanized drives.
- Pneumatic cylinder rotating clamping, a hydraulic cylinder.
- Electromechanical head
- Electromechanical clamping head EMG
- Four position tool holders;

which will be produced:

- Tool holders with a cylindrical shank for automatic lathes.
- Supports for installation on lathes of Models 16R25P, 16K20, CA 562,
- HS 526UM, MK6056 and their modifications.
- Quickly disconnecting couplings
- Details and assemblies on the conveyor belt of the Minsk Tractor Plant for completing the front axle reducer and steering control of Belarus tractors

PROJECT FNANCIAL INDICATORS

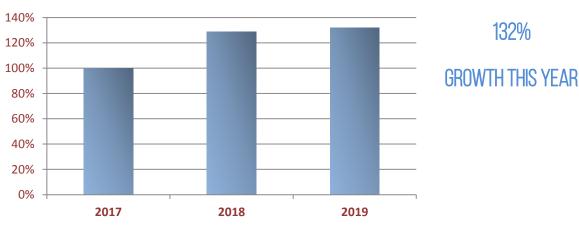
Investments, mln \$	1.3
Payback Period (PP), years	5
Modified Paypack Period, years	5
Internal Rate of Return (IRR), %	8,0

THE PROJECT PARTNER

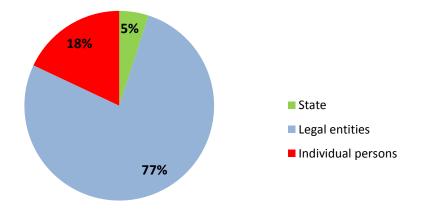
The Project Partner Company, Baranovichi Machine Tool Accessories Plant OJSC (BZSP OJSC), is the main Belarusian manufacturer of standard universal vice sets and tooling for metal cutting and processing machines of various types.

Due to its products reliability and durability the company has gained a high reputation among the leading machine-tool and machine-manufacturing enterprises of the CIS and Baltic countries.





BZSP OJSC PROPERTY STRUCTURE









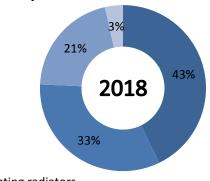


COMPANY OVERVIEW

JSC Lidselmash is one of the leading enterprises of Republic of Belarus in the field of mechanical engineering.

The company produces 51 models of agricultural machines – potato planters and potato diggers, tillage machines, drills, machines for harvesting of grasses and forages, forest machines, municipal vehicles.

Structure of production:

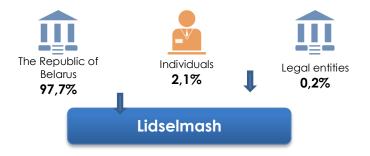


- Heating radiators
- Grain cleaning, drying and grain storage complexes
- Agricultural machines, others
- Other production

The Company specializes in the production of grain cleaning and drying complexes of high performance, machinery and equipment for agriculture and forestry, machinery and equipment for special purposes, heating steel panel radiator.



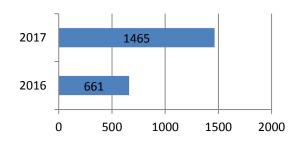
PROPERTY STRUCTURE





FINANCIAL PERFORMANCE INDICATORS

According to the results of financial and economic activities of JSC Lidselmash sale proceeds in 2017 has been increased by 121% compared to 2016.



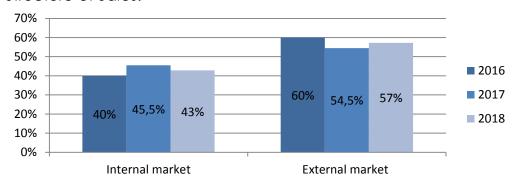
Sale Proceeds, thsd. BYN

GEOGRAPHY OF SALES

The company sales network covers more than 20 countries of the world. The main export markets of the Company are the Russian Federation, Kazakhstan, Ukraine, Georgia, Moldova, Armenia, Bulgaria, Mongolia, Pakistan, etc.



Structure of Sales:



COMPETITIVE ADVANTAGE OF JSC LIDSELMASH

- -Product quality aiming to meet and exceed industry standards;
- A wide range of products and ongoing diversification of offering by adding3new product lines;
 - -Long-standing experience, wide expertise, years of knowledge;
 - -Highly-skilled manufacturing personnel and technical staff;
 - -Flexible manufacturing system;
- Application of advanced and modern technologies ensuring production planning in a timely manner;
- -Products are provided with design documentation and technical specifications of construction and with relevant certificates of conformity;
 - -Proximity to major highways (state roadways);
- Adequate infrastructure (the company is equipped with electricity, water supply system, sewerage system and gas pipeline);
 - –Stable position in the market of the Republic of Belarus.



OVERVIEW OF THE INVESTMENT PROJECT

The implementation of the investment project involves the modernization of the existing production of JSC "Lidselmash". The key feature of the project is a purchase of automatic lines for the production of side corrugated walls of storage silos and for the production of roof elements of storage silos.

Aimed:

- -to increase manufacturing capacity;
- -to significantly increase volumes of production;
- -to manufacture products with a global demand;
- -to significantly improve the quality of products at competitive prices.

Import substitution and export promotion are among the key priorities of the Company.

Storage silos with corrugated walls are in high demand in the markets of Russia, Asia and Africa. Silos are intended for long-term storage of grain and seeds of grain ear crops, legumes, corn and rape of food and fodder, and also compound feeds without ventilation.

The implementation of the project will establish a production base that meets the requirements of the Belarusian and global market and will increase the volume of products sold by 36 %.



ADVANTAGES OF THE PROJECT

- State support to the company;
- Storage silos of this type are in demand in the markets of Russia, Asia and Africa;
 - Affordable price and easy maintenance of products;
 - Import reductions, getting additional profit and stable income;
 - Export volume increase;
 - Meeting the demand for this type of product in the Republic of Belarus;
 - Opportunity to enter the new sales markets.



PROJECT FINANCE

The total investment costs of the project will be **USD 5,2 mln**. Among them: own resources of JSC "Lidselmash" – USD 0.8 mln, investor resources – USD 4.4 mln



INDICATORS OF FINANCIAL EFFICIENCY OF THE PROJECT

Annual revenue, USD mln. 1

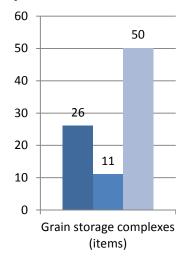
Period of reaching the project capacity, years 2

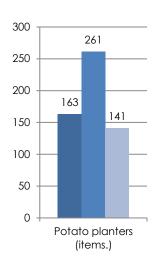
Payback Period, years 4

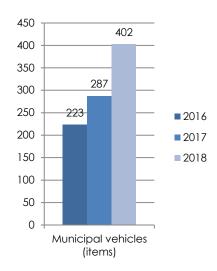
Discounted Payback Period, year



ENLARGED PRODUCTION NOMENCLATURE



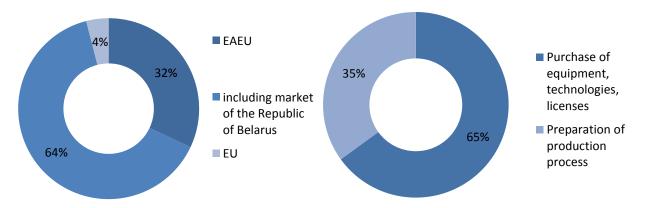




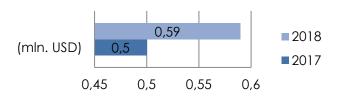
The volume of production of grain storage complexes and grain cleaning and drying complexes has been increased in 2018 by 354.5 %, which indicates a high demand for this type of product. In comparison with other products of the enterprise, production of silos for storage of grain is the fastest-growing product line.

ESTIMATED DISTRIBUTION OF SALES BY MAJOR REGIONS

INVESTMENT RESOURCES APPLICATION AREAS



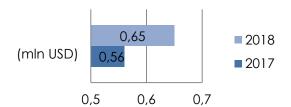
Export of ferrous metal products, including silos



The increasing volume of exports of grain storage silos illustrates the **high demand** for such products on the **global market**(growth–8,4% compared to 2017).

The increasing volume of imports of grain storage silos illustrates the steady demand for such products in **the Republic of Belarus** (growth– 10,9% compared to 2017).

Import of ferrous metal products, including silos





CHARACTERISTICS OF INTERNAL AND EXTERNAL STORAGE SILOS MARKET

Estimated share of the domestic market: 90 %. Strategic priorities for the domestic market:

- Low costs;
- High quality;
- Attractive service;
- State support.

The product profitability: 9% (in 2016). State regulation: licensing of activities.

Estimated distribution of sales in external markets: members of EAEU (32 %), including the market of Belarus – 64 %, other countries – 4 %.

Key competitors: My Silo –Turkey, Araj –Poland, Ferrum –Poland, Petcus – Germany, Мельинвест – Russia, Voronezhselmash– Russia, Selmashserivice– Russia and others.

Main consumers: and medium-sized farms, large agricultural cooperatives engaged in the cultivation and sale of grain crops.





INVESTMENT PROPOSAL ARTESIAN MINERAL WATER WELL



ABOUT THE COMPANY



JSC Vityaz-the largest industrial diversified enterprise of Republic of Belarus produces television household and medical equipment. As alternative types of production in walls of the enterprise fire equipment, furniture, building materials, special equipment and equipment are also made.

The company is a resident of the Free Economic Zone (FEZ) Vitebsk.

JSC "Vityaz" is a large, diversified enterprise. The company is located in five production sites, and covers an area of 515,5 thousand sq. m and 51.5 hectares of land.



Headcount

961 persons



100 % of the company is owned by the state

G

KEY BUSINESS ACTIVITIES

production of medical equipment;

production of digital and television household appliances;

- manufacturing machinery;
- Metalworking tool production;
- galvanic production;

manufacture of plastic products

- engineering design center product development and technology;
- energy production;
- manufacturing sandconcrete products;
- wood processing

KEY PROJECT CHARACTERISTICS

Objective of the project: organization of joint production of mineral water with high chemical parameters.

RESOURCE BASE

ARTESIAN WATER WELL

- Debth- 104 m
- Well production rate- 120 m3/
- It was put into operation in 2008

MINERAL WATER WELL

- Depth- 535 m
- Well production rate- 6 m3/h
- Degree of mineralization -15g/ dm3

WELL DESIGN

- Initial diameter-426 mm
- Switching diameters at depths:
 D1=426 mm in the range 0÷60m
 (with isolation of horizons at depths)
 D2=325 mm in the range 0÷125 m
 (with isolation of horizons at depths)
 D3=219 mm in the range 0÷300 m
- Final diameter-133 mm
- Filter type perforated tubular installed) (not
- Filter diameter 133 mm
- The length of the filter part 40 mm



FORM OF COOPERATION WITH THE INVESTOR



The company is ready to consider various forms of cooperation, which may include the creation of a joint venture or the use of other investment models

Total investment costs 3.5 million euros



As a result of the project it is planned to create

40 new jobs

Project performance indicators

Performance

Payback period

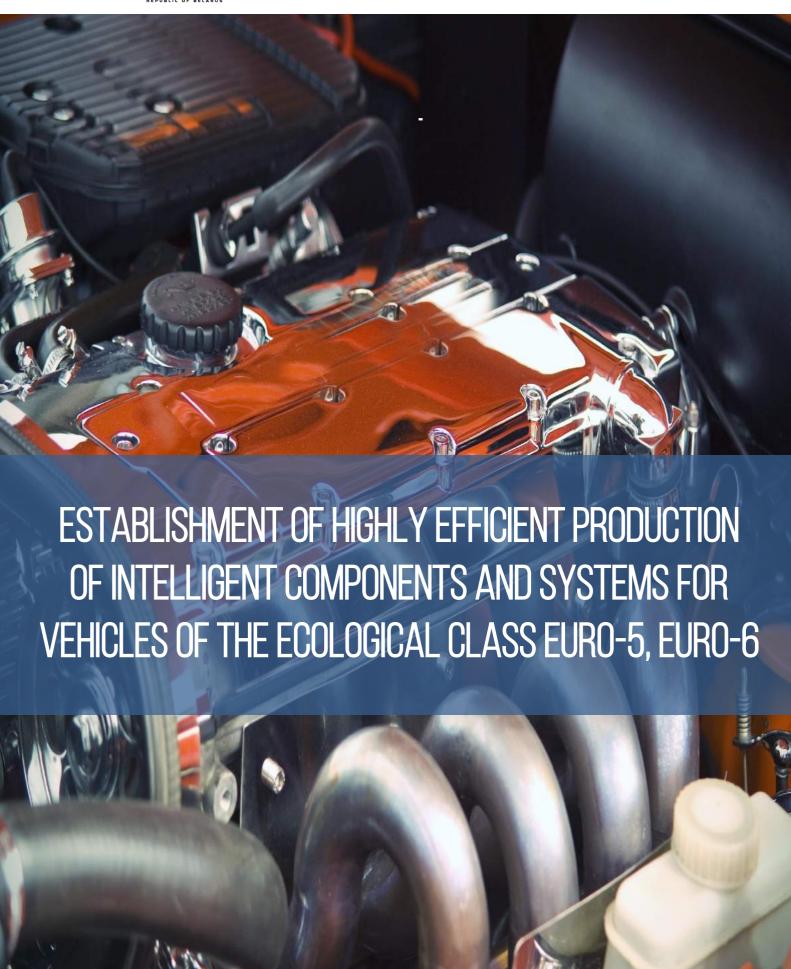
12,5 thsd1,5 l. bottles per hour

2,9 years









ABOUT PROJECT



The implementation of the investment project involves the development of manufacture of new products, installation of modern flexible automated assembly lines for pneumatic devices, sensors, and other automotive components, implementation of enterprise management information systems.

Directions for the development of production

smart sensors (including programmable) and execution units (pneumatic devices)

active security systems

orushless motors

To implement the project, it is necessary to purchase modern high-performance metal-cutting equipment (CNC lathes, vertical machining centers) and equipment

- for the assembly shop (a chamber furnace, an autoclave, a winding semiautomatic machine);
- for the plastic casting site (injection molding machines, crusher knife, vulcanizing press);
- for the production of collector and brushless motors.

The modern enterprise management information system will include:

- design and engineering of new products;
- production, supply and marketing management.

ABOUT THE COMPANY



Ekran JSC is one of the leading manufacturers of automotive tractor equipment (sensors, devices) and automotive electronics (anti-lock brake systems, ABS/ASR and electronic air suspension control systems) in the CIS-region.

The company provides warranty and post-warranty services for the organization's products, training for consumer specialists.

- → 100% of the company's shares are owned by BATE JSC (the managing company of Avtokomponenty Holding)
- → There is no production of analogues in Belarus.



- The basic set of intelligent brake Programmable pressure sensor an systems for commercial vehicle drive brakes has ample opportunities for expanding safety functions (lane departure warning, adaptive cruise control) and meets international standards
- Anti-lock braking system for trailers with anti-tipping function: trailer brake control module "MUT-P", electronic intelligent pressure sensor "DDEI", displacement sensor "DP-02" (with access to the CAN bus), connection cables and borrowed units from previously mastered ABS systems.
- A set of tools for testing electronic control units for MMZ diesel engines with Common Rail fuel equipment (which meet Euro-5, Euro-6 exhaust gas toxicity regulatory requirements) and a universal diagnostic complex for vehicles equipped with electronically-controlled components serve as universal diagnostic tools.

- intelligent sensor with digital output, designed for use as a part of pressure monitoring systems in motor-andtractor as well as special equipment.
- Brushless motors. Unlike collector, the resource of brushless electric motors is much higher (15000-25000 hours of continuous operation).

The application of an electronic control unit will optimize the consumed loads of the electric motor and reduce its current consumption under various operating conditions. Currently, **DP 70-130-4.5-24 O2 and DP 70-130-4.5-12 O2** are produced, which are used in various units (heaters, windshield wipers) of automotive tractors.

CHARACTERISTICS OF THE PRODUCT MARKETS



MAIN CONSUMERS

The main potential consumers of the developed auto-electronic systems and programmable pressure sensors are MAZ JSC, KAMAZ PTC, Ural AZ JSC and other manufacturers of heavy vehicles in the Republic of Belarus and the Russian Federation, as well as Ganja Auto Plant PC (Azerbaijan).

Equipment for testing electronic control units is planned to be supplied to engine manufacturers and engine service and testing centers in the Republic of Belarus (MMZ) and the Russian Federation (YMZ).

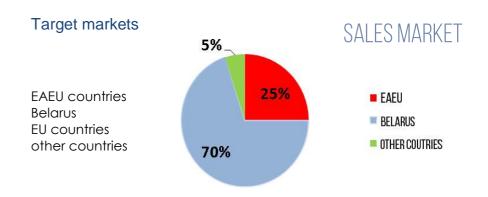
Consumers of collector and brushless electric motors: Prema JSC, Evistor JSC, Borisov Plant Avtogydrousilitel JSC, ShAAZ JSC (RF); consumers of a heater with a brushless motor: at the first stage – MAZ JSC, at the second stage – adaptation of the product for the vehicles of KAMAZ JSC, Ural AZ JSC, etc. PAZ LLC (RF) is the consumer of windscreen wipers.

MAIN COMPETIOTORS

The basic set of intelligent control systems for the brake drive of commercial vehicles, anti-lock braking system for trailers with anti-tipping function, a programmable pressure sensor have comparable technical and quality characteristics with respect to imported analogues: WABCO (Austria), Knorr-Bremse (Germany), Sensor Technic Wiedemann (Germany); at the same time, there are no domestic analogues.

A set of tools for testing electronic control units for MMZ diesel engines with Common Rail fuel equipment, a universal diagnostic complex for vehicles equipped with electronically controlled components have no domestic and foreign analogues.

Brushless motors are optimal in performance in comparison with the best foreign analogues: LETRIKA (Slovenia) and SPAL (Italy).



INFRASTRUCTURE



- Belarusian Railway line (distance from the site 8 km);
- main republican roads (distance from the site 15 km);
- other roads with improved surface (distance from the site 5 km);
- electricity network (voltage: 380, distance 5 km);
- water pipeline;
- land plot availability (area: 17.9 ha, purpose of use: for operation and maintenance of buildings and structures of production base);
- presence of constructions (area: 84 857,5 m²);
- storage warehouses, logistic terminals (area: 2954,6 m²).

PROJECT FINANCE



Total investment costs	6,090 mln. USD
Own resources	1,5 mln. USD
Investor's resources	4,59 mln. USD

INDICATORS OF FINANCIAL EFFICIENCY OF THE PROJECT



9	Time horizon, years
24,8	Annual revenue (without the VAT, after reaching the estimated capacity), mln USD
2022	Period for reaching the project capacity, years
5,9	Pay-back period, years
6,4	Dynamic pay-back period, years
0,8	NPV*, mln USD
10,5	IRR*, %
5,5	Discount rate, %

^{*} IRR and NPV are indicated as of the 7th year of project implementation













The aim of the project is to create a modern pilot site in order to develop a specialized industry research and engineering center based on the STC Ekran, which task is to develop military product as well as sensors, pneumatic vehical devices, control systems for vehicle units, within the framework of the Union State "Auto Electronics Program 2016-2020" and SSTP "Machinery manufacturing and engineering technologies".

Directions for the development

Universal diagnostic complex for dealers of MAZ JSC , KAMAZ PJSC, Ural AZ JSC, service stations A set of tools for testing electronic control units for diesel engines MM7 Military products for Russian consumers in the framework of the Russian defense

The following new technologies will be introduced at this pilot site:

- laser metal fusion followed by laser welding and machining;
- laser cutting followed by flexible and laser welding;
- laser welding and further machining;
- laser welding of alloyed and unalloyed steels with non-ferrous metals;
- manufacture of parts such as "pin", "axle", "rivet" from wire;
- manufacturing of parts on a 3D printer;
- manufacture of instrument panels.

To implement the project, it is necessary to purchase modern high-performance equipment: a laser cutting unit, a laser welding unit, a 3D printer, a 3D scanner, a vertical-milling five-axis CNC machining center, a CNC turning bar machine, and a complex for manufacturing pins from wire.

ADVANTAGES OF THE PROJECT



- The manufacturer has no competitors in Belarus;
- Products are characterized by higher quality, lower prices in comparison with imported ones;
- Convenient geographical location of the enterprise.

ABOUT THE COMPANY



Ekran JSC is one of the leading manufacturers of automotive tractor equipment (sensors, devices) and automotive electronics (anti-lock brake systems, ABS/ASR and electronic air suspension control systems) in the CIS-region.

The company provides warranty and post-warranty services for the organization's products, training for consumer's specialists.

→ 100% of the company's shares are owned by BATE JSC (the managing company of Avtokomponenty Holding) → There is no production of analogues in Belarus

PRODUCT DESCRIPTION



- Anti-lock braking system for trailers with anti-tipping function: trailer brake control module "MUT-P", intelligent pressure sensor "DDEI", displacement sensor "DP-02" (with access to the CAN bus), connection cables and borrowed units from previously mastered ABS systems.
- Control system of the directional stability for a heavy truck tractor: electronic control unit "EBK-SKU", acceleration sensor "DUE-01" steering wheel rotation sensor "DPR-1", connection cables and borrowed units from previously mastered ABS, ABS/ASR systems.
- A specialized high-voltage source "IVVP" is designed to provide highvoltage cathode power for the ring lasers used in navigation systems, which are installed on a missile, aircraft and ground (transportable) equipment.
- Flight director indicator "1273" is a combined indicator of control commands and position of the aircraft relative to a given flight path; it is used on some aircraft of the Russian Air Force and other countries.

CHARACTERISTICS OF THE PRODUCT MARKETS



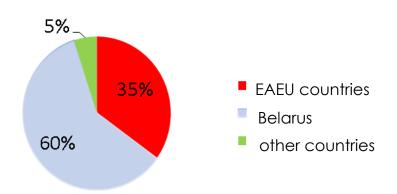
MAIN CONSUMERS

Potential consumers of the developed systems are MAZ JSC, KAMAZ PJSC, Ural AZ JSC and other manufacturers of motor vehicles in the Republic of Belarus and the Russian Federation. Consumers of special products ("IVVP", "1273") – specialized enterprises in the Russian Federation.

MAIN COMPETITORS

These auto-electronic systems have no analogues in the Republic of Belarus and the CIS countries. Manufacturers of similar systems are WABCO (Austria) and KNORR BREMSE (Germany).

TARGET MARKETS



INFRASTRUCTURE



- Belarusian Railway line (distance from the site 8 km);
- main republican roads (distance from the site 15 km);
- other roads with improved surface (distance from the site 5 km);
- electricity network (voltage: 380, distance 5 km);
- water pipeline;
- land plot availability (area: 17.9 ha, purpose of use: for operation and maintenance of buildings and structures of production base);
- presence of constructions (area: 84 857,5 m²);
- storage warehouses, logistic terminals (area: 2954,6 m²).



1,434 mln. USD	Total investment costs
0,301 mln. USD	Own resources
1,133 mln. USD	Investor's resources

INDICATORS OF FINANCIAL EFFICIENCY OF THE PROJECT



Time horizon, years	5
Annual revenue (without the VAT, after reaching the estimated capacity), mln USD	17,5
Period for reaching the project capacity, years	2021
Pay-back period, years	3,4
Dynamic pay-back period, years	3,5
NPV, mln USD	0,3
IRR, %	22,1
Discount rate, %	5,75
Base period / year	2019









ABOUT THE COMPANY

Open joint stock company **Kobrin tool plant SITOMO** was created on 9-th of December 1960. The company is characterized by high level of production, great engineering potential accumulated over many years of activity, which allows to produce high quality and easy to use tools. The products are made from special chromium and chromium vanadium steel by using semi-hot extrusion and hot stamping. For the final processing are used broaching, rolling and calibration. In addition, the products are subjected to special heat treatment and various types of electroplating which protect them from corrosion.

The activity of engineering services of the plant is constantly aimed at improving the products. Currently, plant production is being prepared for the start of production of some new types of goods that not previously manufactured. In the near future is planned to expand the parametric range of some types of wrench and develop the production of new configuration tool sets.

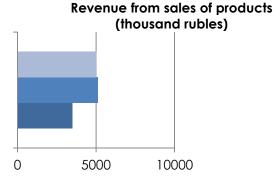
Competitiveness of the production of SITOMO Plant is caused not only by its high quality, but also by using of the various forms of work aimed at satisfaction of demand of customers: flexible approach to providing discounts, formation of shipments under the specific order, improvement of contract work with clients. The number of employees is 224 people.



MAIN ACTIVITY

- manufacture, sharpening planer, curly knives for woodworking, saws and others
- manufacture knives to chaff-cutter, industrial grinder
- grinding, lead screw, heads of engines and cylinders
- the production of complex parts on CNC machines, the production of the table, shaft, milling head for the jointing machine
- production of special end face wrench, taps from M5 and above
- brazed carbide inserts VC and TC cutters
- heat treatment of parts
- production and restoration of spare parts (shafts, studs, hardware of non-standard sizes, anchor bolts, gears, slats, bushings, couplings, etc.)
- doing of various grinding operations
- repair of machines and other equipment, gearboxes, conveyors
- welding operations
- production of gates, fences, vases, crosses, corners, as well as the production of boilers, feeders, gardening equipment, boxes and trays
- plastering, painting, roofing, cladding, concrete and carpentry works





According to the results of financial and economic activities in 2016-2018 OJSC Kobrin tool plant SITOMO demonstrates stable financial results. Revenue from sales of products in 2017 increased by 47% compared to 2016, the profit from products sales in 2018 increased by 13500% compared

to 2016. Despite the presence of negative indicator of the enterprise net profit, however, during 2016-2018 there was steady reducing of the net profit negative indicator. Net profit of the company in 2018 increased by 500% compared to 2016.



PROPERTY STRUCTURE



Kobrin tool plant SITOMO



PRODUCTS:

- All kinds of wrenches
- Set of wrenches
- Set of tools
- Pliers and scissors
- Hammers and chisels
- Other tools



GEOGRAPHICAL PRESENCE

Belarus, Russia, Ukraine, Kazakhstan and UE Countries





OJSC KOBRIN TOOL PLANT SITOMO ADVANTAGES:

- Recognizable brand
- Qualified personnel
- The region is characterized by extensive network of roads for passenger and freight traffic with Europe and Asia
- Railway line is nearby
- Proximity of Brest and the border of the EU
- Realization of OJSC Kobrin tool plant SITOMO products to the external and internal markets. The main export markets of the company include Russian Federation, Ukraine, Kazakhstan, as well as some EU countries
- Guaranteed sales of products to large public and private consumers.
 Among them should be noted industrial and agriculture enterprises, as well as retail and car services
- Sustainable partnerships with well-known public and private companies of Belarus and Russia, in particular, OJSC MTZ, OJSC MAZ, OJSC BELAZ, OJSC Amkodor, OJSC Belaruskaliy, OJSC Autodiesel (Russian Federation), Belpotrebsouz, LLC OMA, OJSC Belhoztorg, LLC Moskit (Russian Federation), LLC TD Kamyshin tools (Russian Federation)



INVESTMENT PROJECT REVIEW

Implementation of the investment project involves setting up at the forging workshop a separate area with forging and stamping equipment of high capacity for the development of forgings production, weighing more than **1.5 kg** for engineering and construction industries.

Joint implementation of the investment project with the participation of investor will increase sales, reduce costs, improve the quality and competitiveness of products, solve the problem of import substitution, increase export to foreign markets by high-quality products and allow to expand production of new range of complex machine parts configuration.

Implementation of the investment project will provide:

to increase production capacity of the plant

significantly increase volume of production

to produce new, demanded in the market types of production

significantly increase its quality while maintaining competitive prices



PROJECT ADVANTAGES

- Recognizable brand
- Highly qualified specialists
- Guaranteed volumes of orders
- Manufactured products are characterized by higher quality, similar to import, lower prices and import substitution
- Increase profitability of the plant by reducing costs and increasing production
- Possibility of establishing joint company with modernization of production capacities on the reconstructed object
- Benefits during the project implementation
- Stable position at the domestic market
- Reliable quality management system



PROJECT FINANCING

Total cost of investment project is 700 th. USD



STAGES AND PERIOD OF PROJECT IMPLEMENTATION

Investment project is being planned to implement from 2017 to 2030 years

The first stage

Delivery of experimental batches of the automobile circles of OJSC BMZ and forgings, produced on the basis of OJSC Kobrin tool plant SITOMO.

The second stage

After consolidation of OJSC Kobrin tool plant SITOMO as a reliable manufacturer of forgings, choosing of necessary equipment list for the complete processing of the product. Development of investment project feasibility study in the organization of full production cycle.

The third stage

Organization of new goods production with complete processing. Expansion of forging production with the implementation of automated stamping systems for the manufacture of parts weighing more than **1.3 kg**, equipment for processing and assembly of finale samples.



RAW MATERIALS SUPPLYING

Supplying of the plant is expected by means of rolled products of the new small-grade wire mill of OJSC Belarusian metallurgical plant.

Round long steel bars with diameter 20 \div 80 mm, rounds in coils with diameters 20 \div 50 mm, rod diameter 5,5 \div 22 mm:

- rolled section g/K of continuous cast bearing steel;
- made of high quality and alloy structural steel;
- made of high quality carbon steel and alloy structural steel;
- made of high quality carbon structural steel after hot rolling and normalization;
- made of high quality carbon and alloy structural steel.

JSC BMZ produce the following range of steels for automotive components:

Alloy steels:

- medium 42Cr4Mo2, 40Cr4 B, 40Cr4 C
- low carbon 16MnCrS5, 815M17, 14CrNi6.

Carbon steel:

- medium 45C8, 35C8, 37C15
- low-carbon 15C8, etc.



CHARACTERISTICS OF THE MARKETS PLANNED FOR PRODUCTION DISTRIBUTION

Planned for production goods – machine parts and forging

Consumers: industrial and agriculture enterprises, retail, car services

Characteristics of the domestic market: Current market's volume in 2017 is 21.8 mln USD

Domestic market share: 33%.

Strategy at the domestic market:

- Lower price
- Higher quality
- More attractive service
- Market orientation to industrial enterprises and corporate clients;
 retail is additional segment
- Increase share of forgings and specialized tool kits

Profitability in 2017 is 0.2 %

External markets review

Presumed distribution of products at external markets:

- EEU countries 43 %
- Belarusian market 33 %
- EU countries 1 %



MOGILEVLIFTMASH JSC







ESTABLISHMENT OF A
MANUFACTURE FOR SPECIAL
CASTING METHODS



MOGILEVLIFTMASH JSC

Joint Stock Company Mogilevliftmash (MOGILEVLIFTMASH JSC) is the only company in the Republic of Belarus, which is engaged in the production of elevators, as well as of a wide range of elevator equipment. The company is constantly expanding the range of products. The model range includes more than 130 models of elevators.

Mogilevliftmash JSC has got the certification of quality management system (QMS) of engineering, production and maintenance of lifts on a compliance with requirements of STB ISO 9001-2009 in the National System for Conformity Assessment of the Republic of Belarus and DIN EN ISO 9001:2008 in German system of accreditation.



Company location: 42 Mira Ave., Mogilev



100 % of the company's shares are state-owned.



Mogilevliftmash JSC is the managing company of the Mogilevliftmash Holding.

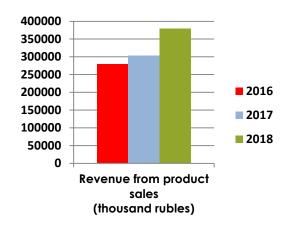
The Holding includes the following companies:

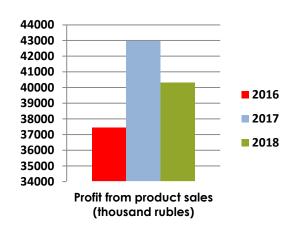
- Mogilevliftmash JSC;
- Mogilevsky zavod Electrodvigatel JSC;
- Zenit JSC;
- Plant VETRAZ JSC

Products manufactured by Mogilevliftmash JSC:

- passenger, hospital and freight elevators, with load capacity from 100 to 6300 kg;
- elevators of non-standard modifications;
- platforms of various types for physically weakened individuals;
- escalators and travelators:
- construction hoists;
- low forest choppers (mulching cutters);
- consumer goods.

FINANCIAL PERFORMANCE INDICATORS







According to the results of financial and economic activities for 2016-2018, Mogilevliftmash JSC demonstrated stable financial performance. Sale proceeds in 2018 have been increased by 135% compared to 2016.

DEALER SYSTEM RUSSIA KAZAKHSTAN **UKRAINE MOLDOVA** TURKMENISTAN KYRGYZ REPUBLIC LITHUANIA LATVIA MONGOLIA **ESTONIA** AFGHANISTAN **TAJIKISTAN AZERBAIJAN** POLAND **GEORGIA**

COMPETITIVE ADVANTAGE OF. MOGILEVLIFTMASH JSC

- Mogilevliftmash JSC is a resident of the Mogilev FEZ.
- special legal regime has been established on the territory of the Mogilev FEZ, which also includes special tax and customs regimes.
- The region is characterized by an extensive road network for passenger and freight traffic with countries of Europe and Asia. Mogilev Airport is located nearby; there is also a railway line.
- About 80% of production Mogilevliftmash JSC is exported. It is in demand in more than 20 countries, including Russia,

Belgium.

Kazakhstan, Poland, Bulgaria, Romania, Georgia, Syria, Mongolia, Germany,



OVERVIEW OF THE INVESTMENT PROJECT

The implementation of the investment project involves the establishment of a manufacture for special casting methods and improvement of the surrounding area at 41 passage Slavgorodskiy, Mogilev.



THE PURPOSE OF THE PROJECT

The establishment of a competitive modern foundry, which is able to meet the own needs of Mogilevliftmash JSC in castings and casting-repair, as well as to fulfill external orders for manufacturing of steel and iron castings.



THE PROPOSED STRUCTURE OF THE MANUFACTURE WITH SPECIAL CASTING METHODS

- casting section for gasified models;
- section for manufacture of cast-iron goods;
- section for manufacture of reinforced concrete goods.



ADVANTAGES OF THE PROJECT

- the investment object is prepared for construction and installation works;
- availability of all required infrastructure;
- recognizable brand;
- increase in profitability due to cost reduction and increase in production volume;
- the possibility of establishment of joint production with the modernization of production facilities on the reconstructed area.
- obtainment of long-term tax benefits;
- stable position in the domestic market;
- reliable quality control system.



PROJECT FINANCE

Total investment costs of the project amount to 9 million USD.



INDICATORS OF FINANCIAL EFFICIENCY OF THE PROJECT

Time horizon, years	8
Time to reach estimated capacity, years	2
Pay-back period, years	6 years 5 months
Dynamic pay-back period, years	8 years 7 months
NPV, ths. bel. rubles	1237,7
IRR. %	12.62



MAIN COMPETITORS IN THE REPUBLIC OF BELARUS

- UPE Univarsal-Lit, Soligorsk
- Idea LLC, Minsk
- Spetslit LLC, Mogilev
- Plant Legmash JSC



MAIN COMPETITORS IN THE WORLD

- Karacharov Mechanical Plant JSC, Russian Federation;
- Shcherbinsky Elevator Construction Plant JSC, Russian Federation;
- Serpukhov Elevator Building Plant LLC, Russian Federation;
- Otis Elevator Company, United States of America.



ESTIMATED DISTRIBUTION OF SALES IN FOREIGN MARKETS, %:

EAEU countries	Belarus	EU countries	Other countries
87,2	17,8	0,5	12,3



POSSIBLE FORMS OF INVESTOR PARTICIPATION IN THE PROJECT

- Contribution to the authorized fund of a new enterprise
- Acquisition of shares (stakes in the equity capital) of existing enterprise
- Acquisition of the enterprise as an asset complex
- Additional issue of shares for sale to the investor









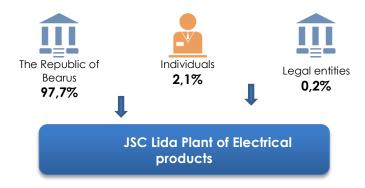
COMPANY OVERVIEW

JSC Lida Plant of Electrical products is a modern company with its own production facilities. The company is one of the largest producers in the industrial lightning market of the Republic of Belarus.

The Company specializes in development, production and sale of industrial lighting products. Currently, the key priority of the Company is the development of energy-efficient lighting systems based on LED technologies.



PROPERTY STRUCTURE

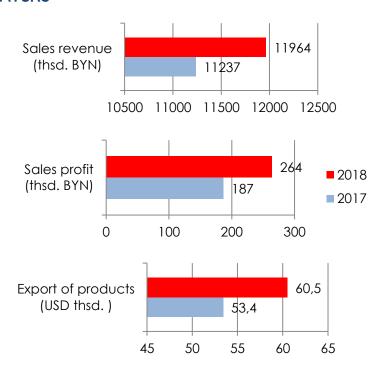




FINANCIAL PERFORMANCE INDICATORS

According to the results of financial and economic activities of the Company, it demonstrates a steady improvement in financial performance.

Sales revenue in 2018 has been increased by 6.5% compared with the 2017 year, sales profit in 2018 has been increased by 41.5% compared with the 2017 year, and exports in 2018 has been increased by 13.2% compared with the 2017 year.

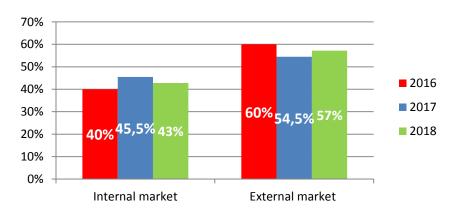


GEOGRAPHY OF SALES

The company sales network covers more than 20 countries of the world. The main export markets of the Company are the Russian Federation, Kazakhstan, Ukraine, Georgia, Moldova, Armenia, Bulgaria, Mongolia, Pakistan, etc.



Structure of Sales:





COMPETITIVE ADVANTAGE OF JSC LIDA PLANT OF ELECTRICAL PRODUCTS

- Product quality aiming to meet and
 exceed industry standards;
- A wide range of products and ongoing diversification of offering by adding new product lines;
- Long-standing experience, wide expertise, years of knowledge;
- Flexible manufacturing system;
- Application of advanced and modern technologies ensuring production planning in a timely manner;
- Products are provided with design documentation and technical specifications of construction and with relevant certificates of conformity;
- A full set of licenses and certificates for the manufacturing of industrial lighting products and accredited in the territory of the Eurasian Customs Union laboratory;
- Access to EAEU market;
- Proximity to major highways (road& rail transport);
- Adequate infrastructure (the Company is equipped with electricity, water supply system, sewerage system and pipeline);
- Highly-skilled personnel;
- Compact production facilities with all relevant infrastructure in the center of Lida:
- Stable position in the market of the Republic of Belarus.



OVERVIEW OF THE INVESTMENT PROJECT

The implementation of the investment project aims to launch the production of LED luminaries.

Aimed:

- to increase manufacturing capacity;
- to significantly increase volumes of production;
- to manufacture products according to the market demand;
- to significantly improve the quality of products at competitive prices.

Import substitution and export promotion are among the key priorities of the Company.

The products of JSC Lida Plant of Electrical products are supplied across the Republic of Belarus, exported to the members of CIS and other countries. LED luminaries are in high demand globally.

The implementation of the project will allow to expand and modernize the production, aimed to meet the requirements of the Belarusian and global market and will increase the volume of products sold by 20 %.

The implementation of the project will allow to expand and modernize production that meets the requirements of the Belarusian and global market, as well as to increase product sales volume by 20 %.



ADVANTAGES OF THE PROJECT

- State support to the Company;
- Import reductions, getting additional profit and stable income;
- Growth of export volume;
- Meeting the demand for this type of the product in the Republic of Belarus;
- Opportunity to enter the new sales markets.



PROJECT FINANCE

The total investment costs of the project will be **USD 1 mln**.

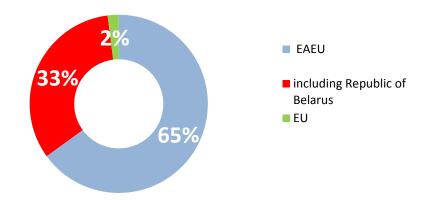


INDICATORS OF FINANCIAL EFFICIENCY OF THE PROJECT

Period of reaching the project capacity, years	2
Payback Period, years	4
Discounted Period, years	5
Period of Calculation, years	10



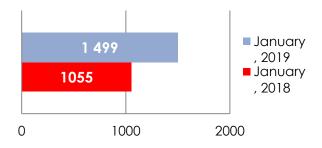
Expected distribution of sales by major regions





IMPORT INDICATORS

Import of the lightning equipment, USD thds.

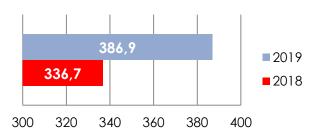


The increasing volume of imports of luminaries illustrates **high demand** for such products in the **Republic of Belarus** (growth– **42%** compared to January, 2018).

This is due to the growth of import from China, as they are competitive in price.

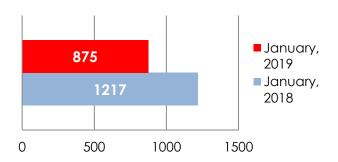
In quantitative terms, the import of luminaries increased by **14.9** % compared to January 2018. This indicates the lack of saturation of the market of led light sources in the Republic of Belarus.

Import of lightning equipment, USD thds.



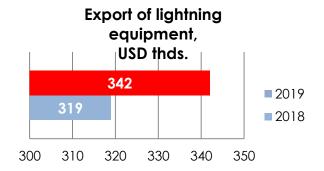


Export of lightning equipment, USD thds.



Exports of these products in monetary terms decreased in the Republic of Belarus (decrease in monetary terms by **28.1** % compared to January 2018). This is caused by a decrease in the cost of production, aimed at stimulation of sales.

Export of luminaries increased by **7.2 %** in quantitative terms compared to January 2018.





CHARACTERISTICS OF INTERNAL AND EXTERNAL MARKET OF LUMINARIES

Estimated share of the domestic market: 50 %.

Operating Profit Margin: 18%.

Strategic priorities for the domestic market:

- Low costs;
- High quality;
- Attractive service;
- State support.

Estimated distribution of sales in external markets: - of members of EAEU (65 %), including the market of Belarus - 33 %, other countries - 2 %.

Key competitors: Philips – the Netherlands, CAMELION –China, Acuity Brands – USA.

Main consumers: large builders, construction companies, retail customers.









DEVELOPMENT OF PRODUCTIVE CAPACITIES FOR THE PRODUCTION OF HIGH-TECH TEST AND HYDRAULIC EQUIPMENT



ABOUT THE COMPANY



Open join-stock company Gomel Special Design and Technical Bureau of Hydraulic and Pneumatic Control Systems (GSKTB GA JSC) is an engineering enterprise, which main business is the creation and

supply of hydraulic drives and electro-hydraulic control systems "on a turn-key basis", as well as the development of hydraulic equipment, which is used for the assembly of mobile and stationary hydraulic machines, including metal-cutting and woodworking machines, foundry and press-forging equipment, agricultural, road-building and forestry machines, automated lines and special presses.

The main feature of the GSKTB GA JSC products is that they have a high knowledge-intensity.



The staff of the Company currently includes **225** employees.



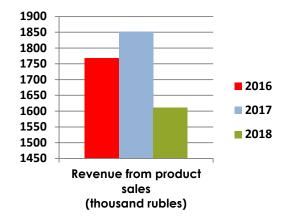
100 % of the enterprise is state owned.

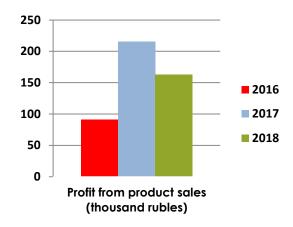
MAIN ACTIVITIES

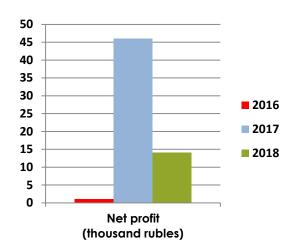
- Creation and integration of complex control systems, including automated process control systems;
- Development of hydraulic equipment for other manufacturers;
- Development and production of special hydraulic equipment, including complex special and unique elements of hydraulic systems;
- Development and production of hydraulic and electronic subsystems and components for equipping electro-hydraulic and hydraulic systems;

- Creation of diagnostic systems and test equipment;
- Conducting research work in the field of hydrostatic power drive and control systems;
- Creation and production of non-standard equipment, mechanic means and hydraulic tools:
- Development and production of hydraulic equipment with proportional electric control;
- Training and education of staff
- Service and support.

FINANCIAL PERFORMANCE







According to the results of financial and economic activities for **2016-2018**, GSKTB GA JSC demonstrated stable financial performance. There was an increase in revenue from sales in 2017 by **5** % compared to 2016, profit from sales in 2017 by **2.3** times compared to 2016, and net profit in 2017 by **46** times compared to 2016.

FLAGSHIP PRODUCTS

- Auxiliary hydraulic equipment
- Hydraulic throttles and flow controllers
- Hydromachines
- Hydraulic distributor
- Non-standard equipment for locomotive depots

- Hydroblocks
- Special equipment
- Hydraulic pressure valves
- Hydraulic drives and hydrostations
- Electro-hydraulic systems

GEOGRAPHIC PRESENCE

The main foreign markets are Russia, Kazakhstan, Ukraine, Georgia, Moldova, Armenia, Bulgaria, Mongolia, Pakistan, etc.





COMPETITIVE ADVANTAGES OF GSKTB GA JSC

- •GSKTB GA JSC is the resident of Gomel-Raton FEZ.
- A special legal regime has been established on the territory of the Gomel-Raton FEZ, which includes special tax and customs regimes.
- Guaranteed sales of products to large consumers. Consumers in the Republic of Belarus are machine-tool enterprises, as well as manufacturers of agricultural machinery and heavy vehicles, such BelAZ OJSC. as Lidaaroprommash OJSC, **RUE** Gomselmash, MAZ OJSC, RUE Belarusneft, MTZ OJSC, Belarusian Railway Locomotive and Wagon depots.

- Conformity certificate STB ISO9001-2015.
- The sale of GSKTB GA JSC products is carried out on external and domestic markets. Among the major export markets of the company are the Russian Federation, Ukraine, Kazakhstan, Moldova, and the Baltic countries.
- •The region is characterized by an extensive road network for passenger and freight traffic with countries of Europe and Asia. Gomel Airport is located nearby, there is also a railway line.
- Recognizable brand.

DESCRIPTION OF THE INVESTMENT PROJECT

The development of the specialized production of the hydraulic equipment, test and calibration benches through the implementation of construction project: "Reconstruction of the part of specialized warehouses building to workshop for the production of the hydraulic and pneumatic equipment at 3, Ingenerny per. Gomel.

TECHNICAL AND ECONOMIC INDICES OF THE PROJECT:

Total number of workers	40 personnel				
Number of shifts	2 shifts				
Total area	1495,0 m2 including buildings of administrative and domestic purposes - 298,0 m2				
Estimated cost of construction	from 0.8 to 1.0 million USD				
Erected buildings	one-story, two-span building, with the adjoining two-stor building of administrative and domestic purposes				
Maximum size in the axes	39,0 m x 32,6 m, height of building to the bottom of farms 8,0 m				
Frame	metal frame				
Roof	gable roof				
Heat supply source	TPP-2 Severnaya, Gomel				
Water supply source	water supply network of the enterprise, drainage - the external sewage network of the enterprise. External communication networks are located at a distance no more than 50 m from the enterprise.				
Electricity supply	electric substation with the required output				

TECHNICAL DATA ACCORDING THE PLAN:

The area covers in the conventional boundaries	0,36 ha
Built-up area	1349,3 m2

The list of technological equipment is determined by the customer and the investor. There are two overhead cranes with a lifting capacity of 3.2 t

ABOUT THE PROJECT

Implementation of the investment project will allow:

- to expand the production capacity of the enterprise;
- to increase significantly the volume of production;
- to master manufacture of new, demanded in the market types of production;
- to improve significantly its quality while maintaining competitive prices.



THE ADVANTAGE OF THE PROJECT

- the investment object is prepared for construction and installation works;
- obtainment of long-term tax benefits;
- reliable quality control system;
- increase in profitability due to cost reduction and increase in production volume;
- products are characterized by higher quality, lower prices similar to imported ones;
- stable position in the domestic market;
- the possibility of creating joint production with the modernization of production facilities on the reconstructed area.

PROJECT FINANCING

Total investment costs will amount to 760 ths. USD. Among them: own funds of GSKTB GA JSC - 30 ths. USD, investor funds – 730 ths. USD.

PRELIMINARY INDICATORS OF PROJECT EFFICIENCY:

time horizon, year	7
Annual revenue, ths. USD	2 000
Time to reach rated capacity, year	2023
Pay-back period, year	4,4
Dynamic pay-back period, year	5,3
NPV, USD	17,48
IRR, %	16,72



Characteristics of the products to be produced:

- Hydrostations;
- Hydraulic power units and hydraulic pumps for industrial applications;
- Test and calibration benches and equipments;
- Complete hydraulic drive systems.

Main consumers:

Belarusian and foreign enterprises of machine-building industry, including: machine-tool manufacture, agricultural machinery industry, motor car construction, Belarusian Railways and RO Agroservice.

CHARACTERISTICS OF THE DOMESTIC MARKET:

Current market size, as of 2018 – 1,2 mln. USD

The planned share of the domestic market: 30%

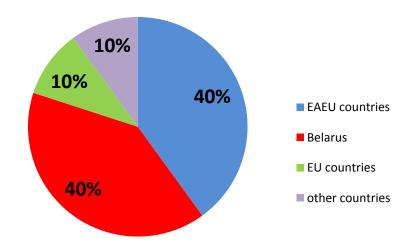
Strategy for domestic market:

- creation and development of the production of advanced high-tech products;
- improvement of production technologies in order to reduce costs and improve product quality.

Profitability of sales in 2018 - 9,3%

CHARACTERISTICS OF FOREIGN MARKETS

Estimated distribution of sales in foreign markets





OJSC METP named in honor of V.Kozlov is a large diversified enterprise for the production of electrical equipment. The enterprise is the flagship of the national electrical industry, is one of the five largest world manufacturers of distribution transformers, has its own research and design school, has wide fame and a well-deserved brand.

The main objective of the investment project is the creation of a joint venture for the production of cast windings for non oil transformers in order to reduce the risks from barrage regulation of the domestic market of the Customs union, generate additional profit by reducing costs and shortening manufacturing time.

Minsk Electrotechnical Plant named in honor of V. KOZLOV

Type of ownership Areas of

Open Joint-Stock Company

Activity

Production and supply of power distribution transformers, integral transformer substations with a voltage up to 35 kV with a capacity up to 3,200 kVA, low-voltage electrical equipment, low-power transformers, other types of electrical and other products

Staffing

2 924 employees

Sales policy

Sales activities are carried out both in the domestic market (the Republic of Belarus - about 15% in the total volume) and the external market (the CIS countries, non-CIS countries - about 85% in the total sales volume). The main market for sales of products is the Russian Federation (more than 90% of total export)

Certification

An ISO 9001 product quality management system has been introduced. An "Action Plan for improving the quality and reliability of products" is developed and implemented annually. Regular incoming inspection of components and materials, as well as field supervision of manufactured products, is carried out.

Competitiveness Policy

Full satisfaction of customer requirements in terms of technical characteristics, reduction of material consumption and cost of products compared to analogues with a high level of quality and reliability.

The share of innovative products in total sales in 2019 is expected to reach 26%.

Existing infrastructure

- own railway line
- republican roads (9km from the factory)
- direct access to improved paved roads



ABOUT THE PROJECT

IN ORDER TO IMPROVE COMPETITIVENESS, TO EXPAND SALES MARKETS, TO SATISFY CONSUMER DEMAND IN FULL THE COMPANY IS CONTINUOUSLY WORKING TO IMPROVE THE TECHNICAL LEVEL, QUALITY AND OUTPUT PRODUCT. NEW PRODUCTS ARE BEING DEVELOPED AND INTRODUCED.

THE PROJECT GOAL

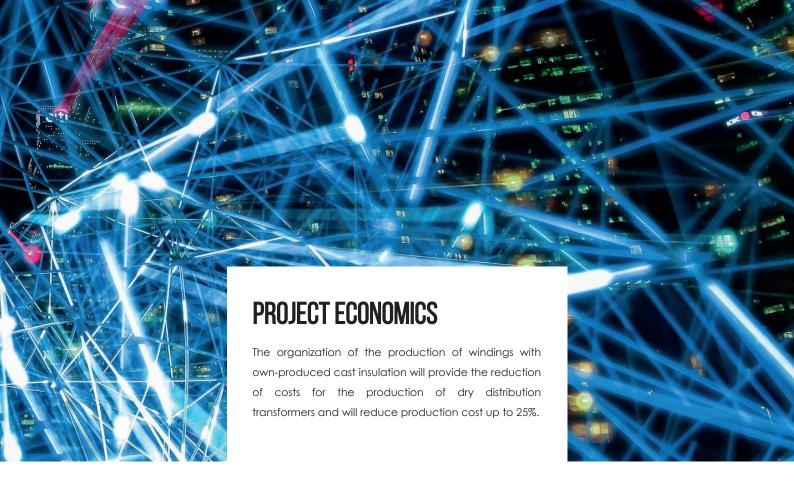
Establishment of a joint venture for the production of cast-insulated windings for dry distribution transformers with a capacity from 25 to 3,150 kVA with a voltage up to 35 kV in the amount of \approx 800 pcs./ year with a cost of \approx 4.0 million euros with further increase in production up to 1,500 pcs./ year , reduction of production cost up to 25 %.

INVESTMENT AMOUNT

3.5 million USD/ 3 million EUR

PROJECT REQUIREMENTS

- Purchase and integration of an equipment system for potting and polymerizing transformer windings;
- Production and testing of transformer samples with ownproduced coils with a capacity of 250; 400; 630; 1000; 1,250 kVA.
- Introduction of preheating and polymerization furnace, insulation cutting section, material storage area
- Mastering the production and testing of transformer samples with own-produced coils with a capacity of 1,600; 2,500; 3,150 kVA.



PROJECT RESULTS

- refusal of purchased imported windings by reducing the following factors: resource supply risk; commercial risks (price increase, unforeseen expenses during the supply process, change in exchange rates), as well as the share of imported components in the finished product;
- risk reduction from barrage regulation of the internal market of the customs union;
- reduction in the production time of dry distribution transformers;
- obtaining additional profit by reducing costs;
- increase the competitiveness of products by reducing prices.



SALES ANALYSIS

In the world market, the demand for dry transformers is growing, primarily for cast transformers. Due to the simplicity of installation and maintenance, low operating costs, environmental friendliness and high fire safety, this type of equipment is increasingly used, therefore, the number of completed projects with their application is growing every year.

Power dry three-phase transformers with geafol cast insulation TS(D)GL, TS(D)ZGL(f)11 are manufactured at JSC METP named in honor of V.KOZLOV since 1996 and has established itself both in the domestic market and in the UIS markets as a reliable and high-quality equipment, as evidenced by the lack of complaints and complaints from end users, as well as the growth of demand and sales volumes.

Main scope of transformers

- electric power facilities with their own complex of urban electric networks, thermal power plants, hydroelectric power stations, state district power stations, nuclear power plants;
- industrial enterprises;
- mining, non-ferrous, ferrous metallurgy;
- oil and gas production and processing industry.

REPUBLIC OF BELARUS

The market of the Republic of Belarus is significant for the enterprise. JSC METZ IM.V. I. KOZLOVA is the only manufacturer of dry transformers such as TSGL, TS(D)ZGL(f) and completely covers the need for these transformers in the domestic market. The share of dry transformers in the total volume of shipped products in 2015 amounted to 10.7% and increased by 2.5 percentage points compared to 2014.

The largest share in the total volume of shipment is Minsk (38.8%), the region has the most favorable conditions in terms of infusion of financial resources and investments.

Supply of transformers TSGL, TS(D) ZGL(f) was carried out both on the domestic and foreign markets, with the share of equipment exported at the end of 2015 80.2%. In the domestic market, the share of dry transformers shipment reached 19.8%.

The basic consumers of production of the enterprise in Belarus in 2015 was the company's of energy complex, nuclear energy, construction companies, companies serving the railway, industrial organization, agricultural factories, etc. the largest of them: the structural unit of GPO OJSC Belaruskali, JSC. Belenergo, Belselelectrosetstroy PC SPMK-66, JSC KATEK, JSC Grodnozhilstroy, JSC Mapid, Gomeltransneft Druzhba, JSC Belgorkhimprom, CJSC RUELTA, etc.



RUSSIAN FEDERATION

The Russian Federation is the main market for transformers TC(D) GL, C(D)ZGL(f)11, the share of shipment to the region in the total shipment of dry transformers is 72.7%.

The estimated annual demand of the Russian market of dry transformers is 6.5-7 thousand units.

It should be noted that the following situation can be seen on this segment:

- 1) the demand for dry transformers during the year is uneven, i.e. the lowest volume of demand is at the beginning of the year 10-15% of the annual volume, and by the end of the year the rush demand up to 40-45% of the annual volume,
- 2) there are constant changes in preferences on the part of end users, in particular, in recent years there has been a shift in demand consumptionin the side of transformers of the 2nd, 3rd dimensions, and this trend will continue in the near future, as well as increased requests for:

The share of dry transformers in the total volume of shipped products to the Russian market is on average 9-10%.

- dry transformers with cast insulation of atypical power 3150 kVA; 2000 kVA; 25 kVA -63 kVA;
- dry transformers that meet the safety requirements of nuclear power plants;
- supply of separation transformers,
- supply of dry transformers with copper windings (such as SGB, ABB);
- supply of dry transformers with forced cooling system.







MODERNIZATION OF THE PLANT FOR THE PURPOSE OF METALWORK REPLACEMENT TOOL PRODUCTION, CORRESPONDING TO MODERN CONSUMER PROPERTIES



ABOUT THE COMPANY

Open joint stock company Kobrin tool plant SITOMO was created on 9-th of December 1960. The company is characterized by high level of production, great engineering potential accumulated over many years of activity, which allows to produce high quality and easy to use tools. The products are made from special chromium and chromium vanadium steel by using semi-hot extrusion and hot stamping. For the final processing are used broaching, rolling and calibration. In addition, the products are subjected to special heat treatment and various types of electroplating which protect them from corrosion.

The activity of engineering services of the plant is constantly aimed at improving the products. Currently, plant production is being prepared for the start of production of some new types of goods that not previously manufactured. In the near future is planned to expand the parametric range of some types of wrench and develop the production of new configuration tool sets.

Competitiveness of the production of SITOMO Plant is caused not only by its high quality, but also by using of the various forms of work aimed at satisfaction of demand of customers: flexible approach to providing discounts, formation of shipments under the specific order, improvement of contract work with clients. The number of employees is 224 people.



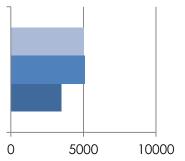
MAIN ACTIVITY

- manufacture, sharpening planer, curly knives for woodworking, saws and others
- manufacture knives to chaff-cutter, industrial grinder
- grinding, lead screw, heads of engines and cylinders
- the production of complex parts on CNC machines, the production of the table, shaft, milling head for the jointing machine
- production of special end face wrench, taps from M5 and above
- brazed carbide inserts VC and TC cutters
- heat treatment of parts
- production and restoration of spare parts (shafts, studs, hardware of non-standard sizes, anchor bolts, gears, slats, bushings, couplings, etc.)
- doing of various grinding operations
- repair of machines and other equipment, gearboxes, conveyors
- welding operations
- production of gates, fences, vases, crosses, corners, as well as the production of boilers, feeders, gardening equipment, boxes and trays
- plastering, painting, roofing, cladding, concrete and carpentry works



FINANCE INDICATORS REVIEW

Revenue from sales of products (thousand rubles)



According to the results of financial and economic activities in 2016-2018 OJSC Kobrin Tool Plant SITOMO demonstrates stable financial results. Revenue from sales of products in 2017 increased by 47% compared to 2016, the profit from products sales in 2018 increased by 13500% compared to 2016. Despite the presence of negative

indicator of the enterprise net profit, however, during 2016-2018 there was steady reducing of the net profit negative indicator. Net profit of the company in 2018 increased by 500% compared to 2016.



PROPERTY STRUCTURE



OJSC KOBRIN TOOL PLANT SITOMO



PRODUCTS:

- All kinds of wrenches
- Set of wrenches
- Set of tools
- Pliers and scissors
- Hammers and chisels
- Other tools



GEOGRAPHICAL PRESENCE

Belarus, Russia, Ukraine, Kazakhstan and EU Countries





OJSC KOBRIN TOOL PLANT SITOMO ADVANTAGES:

- Recognizable brand
- Qualified personnel
- The region is characterized by extensive network of roads for passenger and freight traffic with Europe and Asia
- Railway line is nearby
- Proximity of Brest and the border of the EU
- Realization of OJSC Kobrin tool plant SITOMO products to the external and internal markets. The main export markets of the company include Russian Federation, Ukraine, Kazakhstan, as well as some EU countries
- Guaranteed sales of products to large public and private consumers.
 Among them should be noted industrial and agriculture enterprises, as well as retail and car services
- Sustainable partnerships with well-known public and private companies of Belarus and Russia, in particular, OJSC MTZ, OJSC MAZ, OJSC BELAZ, OJSC Amkodor, OJSC Belaruskaliy, OJSC Autodiesel (Russian Federation), Belpotrebsouz, LLC OMA, OJSC Belhoztorg, LLC Moskit (Russian Federation), LLC TD Kamyshin tools (Russian Federation)



Implementation of the investment project involves the technical reequipment of the enterprise production line, deployment of new technologies and development of new products production in order to increase the supply of metalwork replacement tool to the domestic and external markets.

Joint implementation of the investment project with the participation of the investor will increase sales, reduce costs, improve the quality and competitiveness of products, solve the problem of import substitution and increase export to foreign markets by high-quality products.

Implementation of the investment project will provide:

- to increase production capacity of the plant
- to significantly increase volume of production
- to produce new, demanded in the market types of production
- significantly increase its quality while maintaining competitive prices



PROJECT ADVANTAGES

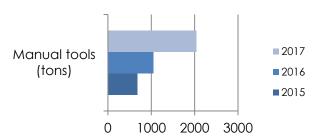
- Recognizable brand
- Highly qualified specialists
- Guaranteed volumes of orders
- Manufactured products are characterized by higher quality, similar to import, lower prices and import substitution
- Increase profitability of the plant by reducing costs and increasing production
- Possibility of establishing joint company with modernization of production capacities on the reconstructed object
- Benefits during the project implementation
- Stable position at the domestic market
- Reliable quality management system



PROJECT FINANCING

Total cost of investment project is 1.5 mln USD





The increasing volume of manual tools imports demonstrates the steady demand of Belarussian individuals and legal entities for this type of product (growth – 300% compared to 2015).



Planned for production goods – metalwork replacement tool
Consumers: industrial and agriculture enterprises, retail, car services
Characteristics of the domestic market: Current market's volume in 2017 is 21.8
mln USD

Domestic market share: 33%.

Strategy at the domestic market:

- Lower price
- Higher quality
- More attractive service
- Market orientation to industrial enterprises and corporate clients; retail is additional segment
- Increase share of forgings and specialized tool kits

Profitability in 2017 is 0.2 %



Presumed distribution of products at external markets:

EEU countries – 43 % Belarusian market – 33 % EU countries – 1 %



DEVELOPMENT AND LAUNCHING INTO MANUFACTURE OF THE EBS, ABS, ESP SYSTEMS, OTHER SYSTEMS OF ASSISTANCE FOR TRUCKS AND BUSES

COMPANY INTRODUCTION

Holding BelOMO is a diversified association specializing in the development and production of high-quality optical-electronic, laser and optical-mechanical products that meet world-class standards and requirements.

This investment proposal relates to the company MMW named after S.I. Vavilov-managing company of BelOMO holding, JSC. The public corporation has a large production capacity, focused on special-purpose production lines, such as foundry, mechanical, optical, processing of polymeric materials, stamping shops, electroplating and paint and varnish shops, assembly shops and tool shops.

OWNERSHIP STRUCTURE



GEOGRAPHIC PRESENCE



DESCRIPTION OF THE INVESTMENT PROJECT

The goal of the project is the development and serial production of security systems for freight road vehicles with the sale of automotive components to traditional consumers through the modernization of technological conversions for the production of air brake actuators.

The nomenclature of proposed products: complete sets of EBS, ABS, ESP systems for trucks and buses. Driver assistance systems.

The form of investor participation: the creation of joint production (the investor's share in the authorized capital during the implementation of the planned form of participation may be 30-49%).



BENEFITS OF THE PROJECT

- developed brand of the enterprise (the enterprise is known both in the Republic of Belarus and in the EAEU countries);
- specialized staff (highly qualified specialists work for the enterprise);
- well-established supply chain of raw materials and components (years of experience with suppliers);
- guaranteed volume of orders (PJSC KAMAZ, Managing Company GAZ Group, BelAvtoMAZ, Automobile Factory Ural);
- the presence of valid patents, permits (QMS certified for compliance with the requirements of GOST R ISO / TU 16949);
- the absence of similar industries in the Republic of Belarus.



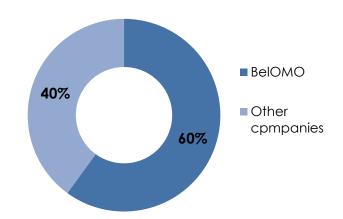
PROJECT FINANCING

The total investment costs of the project will be \$ 25 million. Of them, own funds of to the company MMW named after S.I. Vavilov- managing company of BelOMO holding, JSC - 10 million US dollars, investor funds - 15 million US dollars.



Implementation of EBS, ABS, ESP systems by Belarusian manufacturers, their adoption into the brake system of PBX is an urgent task for the Republic of Belarus.

Planned share of domestic market



The investment project is aimed at reducing the share of imported EBS, ABS, ESP systems for trucks and buses.

The implementation of the investment project will make it possible to take at least 60% of the security systems market of trucks and buses in the Republic of Belarus.

60% - BelOMO

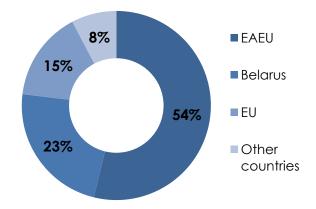
40% - other companies

Domestic Market Strategy

- lower prices
- quality corresponding to foreign analogues
- more attractive service

Despite the fact that the share of Belarus in the total volume of deliveries of finished products will be 23%, the main

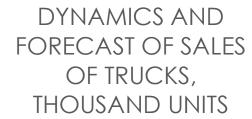
Estimated distribution of sales by major regions



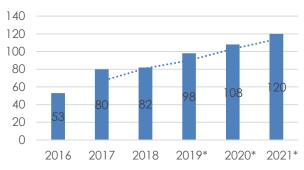
market sales of products will be the EAEU camp (Russia, Kazakhstan). About 15% of production is planned to be sent to the EU countries; the rest of the countries will account for about 8%.

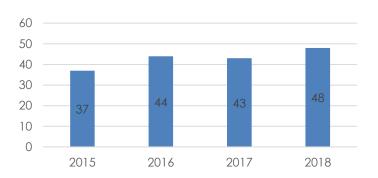
The global trend is the growth of the truck and bus market. In parallel, there is also an increase in the market of automotive components.

In the EAEU market in January 2019, the growth in demand for trucks accelerated compared to the same period last year and reached 6.6%. It is expected that by the end of 2019, the market will show a moderate growth within 5%.



BUS PRODUCTION DYNAMICS, THOUSAND UNITS

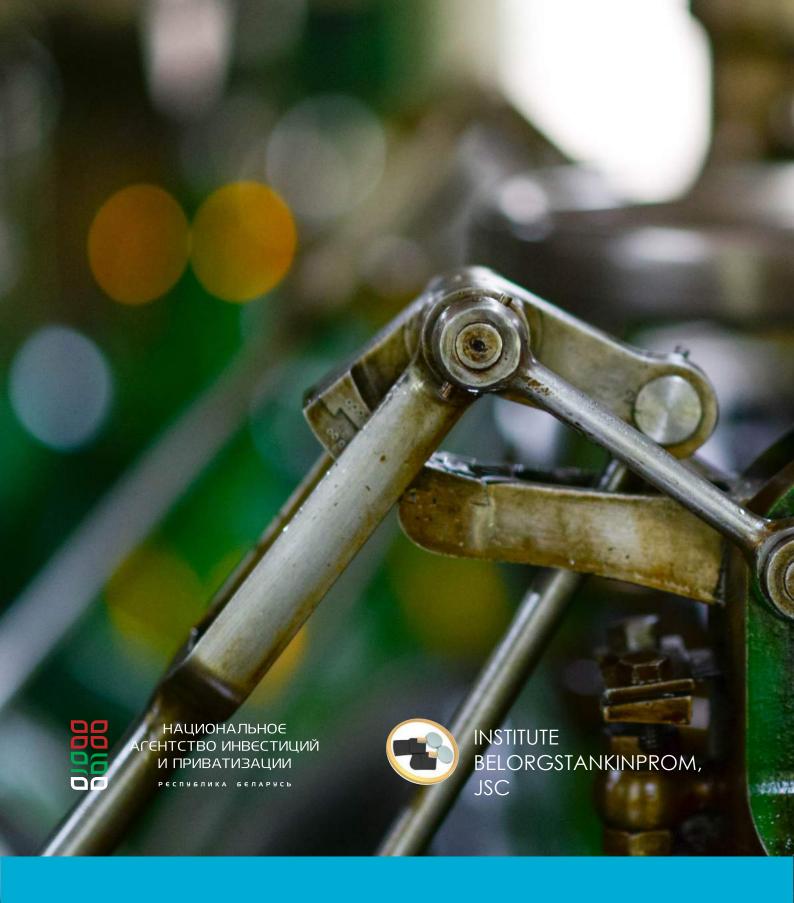




The growth in sales of trucks and buses in the EAEU countries has a positive effect on the growth of the auto parts market.

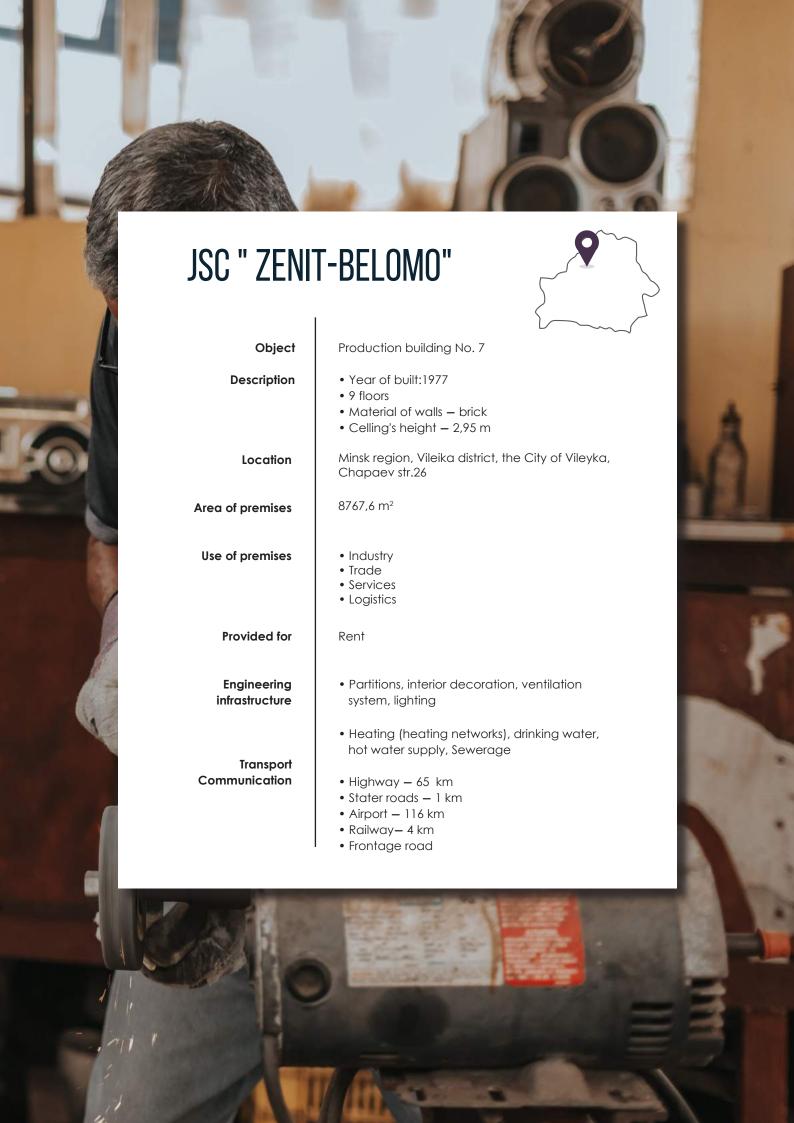
The volume of the market of auto parts of the EAEU countries is about **19 billion US dollars.** At the same time, currently the volume of domestic production is only 30%, the volume of imported products is 70%.

Meanwhile, the segment of brake system components is about 9% of the volume of the auto parts market and is estimated at \$ 1.7 billion.



INVESTMENT PROPOSAL OJSC MMZ NAMED AFTER S. I. VAVILOV MANAGEMENT COMPANY OF BELOMO HOLDING»

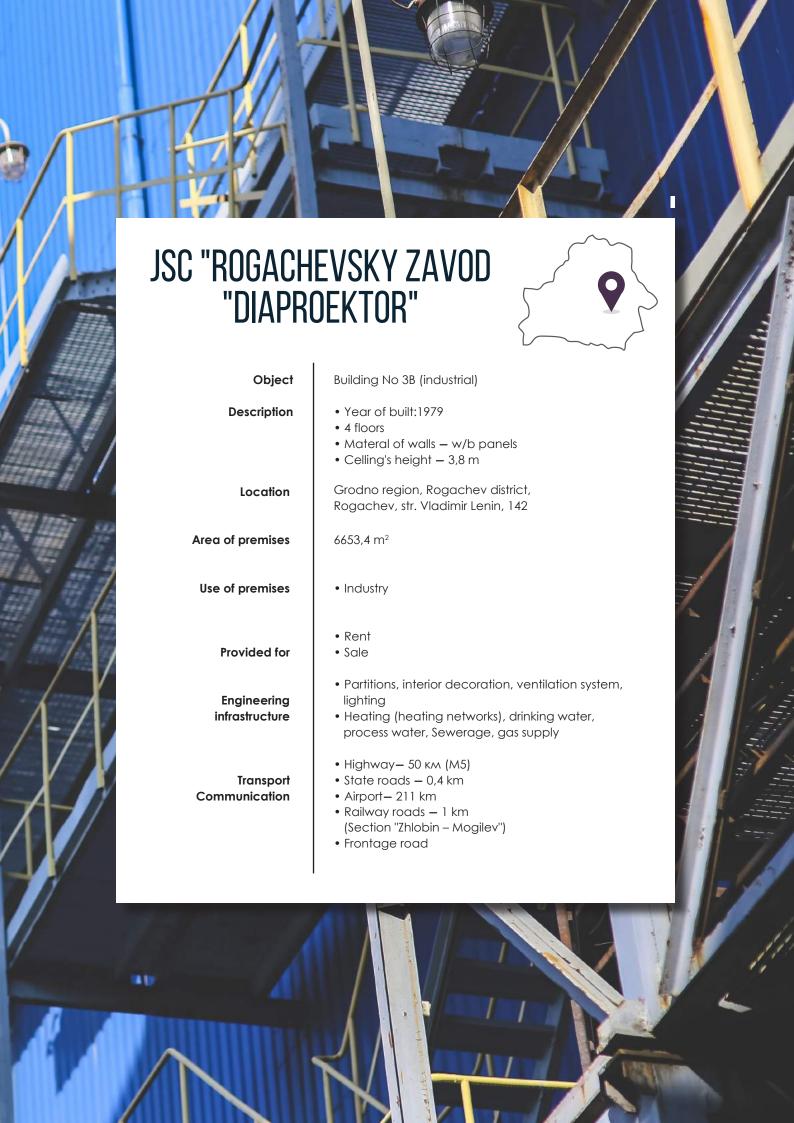


















BRIEF REVIEW OF THE PROJECT

Goal of the investment proposal is organization of high-tech production of medical steam sterilizers and laboratory equipment in association with partner-company, which has an effective domestic (Belarus) and foreign (Russia, Kazakhstan and Ukraine) distribution network.

Implementation of this project supposes to organize the production of steam sterilizers of various capacities up to 650 liters, improve the quality, increase the production capacity, implement new technologies and technological equipment. New technological equipment will be installed at the partner-company's plant, which will be located in the free economic zone.



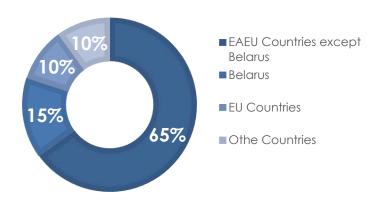
PRODUCTS DESCRIPTION

Name and description: steam sterilizers with volume from 10 to 650 liters and other laboratory equipment.

Main consumers: public and private medical and preventive institutions, epidemiological laboratories, pharmacies, research and other medical institutions, laboratories of food, confectionery, biochemical industry of Belarus, Russia, Ukraine and Kazakhstan.



DISTRIBUTION MARKETS



Main competitors (similar production producers):

- Tyumen plant of medical equipment and tools;
- CJSC TRANS-Signal (Nizhny Novgorod);
- Kasimov instrument-making plant.

Distribution markets of the investment project are Belarus and other countries of the former USSR.

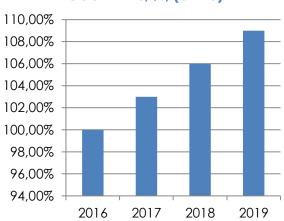
According to UN Comtrade, Russia's imports of medical and surgical or laboratory sterilizers amounted to 34,373 mln USD in 2018. Belarus imported 2,981 mln USD in 2018, Uzbekistan - 3,382 mln USD, Ukraine - 3,382 mln USD, Kazakhstan - 2,911 mln USD. Total volume of medical sterilizers imports in above mentioned countries in 2018 amounted to 47,029 mln USD. The share of the steam sterilizers cost is more than 50% of the total cost and constantly growing.

International market prefers steam sterilizers because their temperature and other regimes are more gentle during the sterilization of high-tech medical as well as other instruments and accessories, during the production of which plastics and other materials less resistant than metals are used. Trends of sterilizers using in the countries of the former Soviet Union are similar.

IMPORT OF MEDICAL STERILIZERS AT THE FORMER USSR COUNTRIES, MLN USD, 2018



GROWING OF USING STEAM STERILIZERS AT THE EAEU COUNTRIES, %, (UNITS)









FINANCE INDICATORS

Total cost	2 mln USD
Investor's contribution	1 mln USD
Calculation horizon, years	4
Annual revenue (without VAT) after reached the production capacity	10 mln USD
Period of reaching the project capacity, year	4
Simple pay back period, years	2,7
Dynamic pay back period, years	4
Internal rate of return (IRR),%	16,5



ABOUT THE COMPANY

OJSC Vityaz is the largest diversified industrial enterprise of the Republic of Belarus – producers of TV, home appliances and medical equipment. As alternative types of production enterprise produces fire equipment, furniture, construction materials and special equipment.

The company is resident of the Free Economic Zone (FEZ) Vitebsk.

OJSC Vityaz is large, diversified enterprise. The company is located at five production sites, covers area of 515.5 thousand sq. m. and 51.5 hectares of land plot.

The company has developed technological base, hi-tech production with own advance tool and mechanical base, highly skilled administrative, technical and working personnel.

Company's production is presented by more than 11 types of activity:

- production of medical equipment;
- production of digital television and household appliances;
- production of special equipment;
- metalworking and tool production;
- galvanic production;
- manufacture of plastic products;
- technological design, research and technology development center;
- energy production;
- production of sand and concrete products;
- woodprocessing.

DOMESTIC AND EXPORT SELLS OF MEDICAL STRERILIZERS BY OJSC VITYAZ, THSD USD, 2018



LIST OF MEDICAL EQUIPMENT PRODUCED BY OJSC VITYAZ

- Air and steam sterilizers
- Air recirculator
- Quantum therapy devices

AIR AND STEAM STERILIZERS PRODUCTION BY OJSC VITYAZ, 2018, THSD USD

AIR AND STEAM STERILIZERS PRODUCTION BY OJSC VITYAZ, 2018, THSD UNITS





PRODUCTION OF MEDICAL STERILIZERS (INCLUDE STEAM) BY OJSC VITYAZ IN 2017-2019

	Air and others sterilizers		Steam st	erilizers
	Quantities	Thsd. \$,	Quantities	Thsd. \$,
2017	1467	347,65	48	36,55
2018	1373	382,25	56	107,25
1-st quarter 2019	504	127	10	7,5

INTERNAL AND EXTERNAL SALES OF MEDICAL STERILIZERS BY OJSC VITYAZ IN 2017-2019

	2017		2018		1-st quarter 2019	
	Quantities	Thsd. \$,	Quantities	Thsd. \$,	Quantities	Thsd. \$,
Belarus	319	144,65	654	228,65	148	49,95
Russia	1151	236,9	597	127,25	461	97,15
Kazakhstan	15	3,6	25	6,45	25	6,7
Ukraine			136	36,5		
Total:	1485	385,15	1412	398,85	634	153,8

NATIONAL AGENCY OF INVESTMENT AND PRIVATIZATION

The agency is ready to help foreign investors interested in doing business in Belarus:

- Provision of information on investment opportunities, preferential regimes and represented benefits, industries, legislation
- Submission of current information on investment projects
- Selection and presentation of information on options for land and premises
- Search for potential partners for the implementation of the investment project, organization of meetings, negotiations with potential partners for establishing cooperation

- Providing a platform for negotiations and support of the investor during negotiations
- Organization of visits to the Republic of Belarus (development of a program of stay, assistance in obtaining a visa)
- Representing the interests of the investor in negotiations with government representatives on the implementation of investment projects, as well as on improving doing business in the Republic of Belarus
- Subsequent support





NATIONAL AGENCY OF INVESTMENT AND PRIVATIZATION

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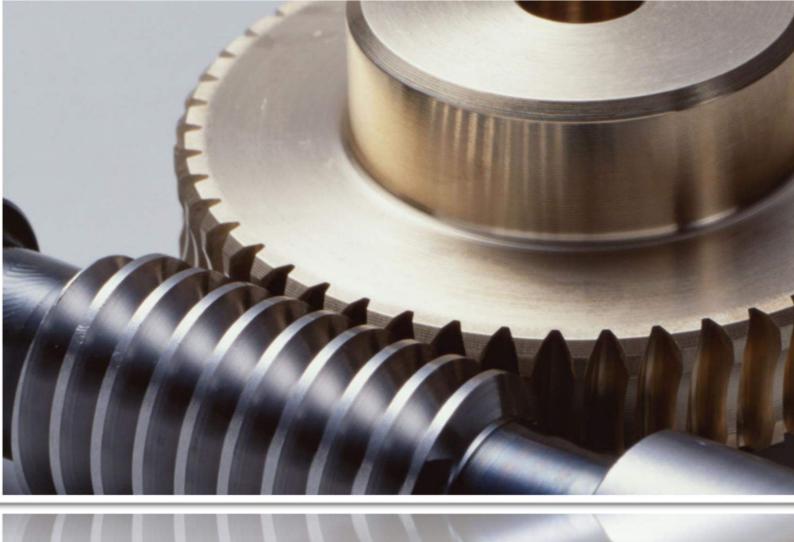
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IMPORTANT POINT

This document has been prepared for informational purposes only. It is provided to assist the recipients of the document in their decision on whether to further examine the proposed transaction.

All information contained in the document can be further clarified and supplemented by the National Agency of Investment and Privatization.



TECHNICAL MODERNIZATION OF EXISTING PRODUCTION FACILITY







About the company



Today the main production activity of the plant together with serially produced range of different products such as flat grinding and milling machines is production of special grinding machines for specific operations in small-scale, serial and mass production. A new promising direction at the domestic machine-tool industry has been developed: production of highly automated equipment with technological flexibility and accuracy, regardless of workers qualification, which allowed to solve the problems of modern production, each of them is an original product, which embodied modern design and technological solutions



Technological possibilities



The plant does a full range of works providing production such as foundry, machining, thermal, galvanic and assembly works, including:

Turning

- maximum diameter of workpiece: above the frame 630 mm, below the supports 350 mm
- maximum processing length is 2800 mm

Milling

- maximum width of the workpiece is 1800 mm
- maximum length of the workpiece is 6000 mm

Horizontal boring

- dimensions of the working table is 1600x1800 mm
- maximum vertical displacement is 1500 mm
- maximum longitudinal displacement is 2000 mm
- maximum transverse displacement is 1500 mm

Drilling processing

- maximum drilling diameter: steel 50 mm, cast iron 63 mm
- range of the thread cutting: steel 45 to M52x5, cast iron SCH20 to M64x4
- possibility of threading with non-standard pitch.





Round grinding

- the largest diameter of the workpiece is 340 mm
- the greatest distance between the centers is 1400 mm

Internal grinding

- maximum diameter of the part to be installed is 360 mm
- maximum grinding length 700 mm.

Longitudinal grinding

the largest dimensions of the workpiece: height is 1250 mm, width is 1450 mm, length is 4000 mm, the distance between the racks is 1540 mm

Profile grinding (cylindrical parts)

- the largest diameter of the processing part is 390 mm
- the maximum length of the processing part is 500 mm

Gear cutting. Cylindrical gears

the maximum diameters of the processing part is 350 mm – maximum module 6

Gear grinding. Cylindrical gears

- the maximum diameter of the processing part is 40-320 mm
- the module of the processing part is 0,5-4 mm
- the number of cogs of the processing part is 12-200

Electroplating

Chemical oxidation

- the maximum load dimensions is 1100x500x600 mm
- the maximum weight is 200 kg

Galvanizing (small parts of fasteners and hardware)

- the maximum part weight is 0.1 kg
- the maximum drum load is 20 kg



Cast iron (gray cast iron SCH20)

-the maximum weight of the casting in the clay sand mold is 1,5t.

Laser processing

Laser cutting of sheet metal

- the maximum thickness of the processing sheet is 20 mm
- the maximum dimensions of the processing sheet is 1500x3000 mm

Laser marking (round and flat parts)

- the maximum diameter of the round part is 180 mm
- the maximum size of the flat part is 250x250 mm

Gas-plasma processing

Plasma cutting of sheet metal

- the maximum thickness of the processing sheet is 30 mm
- -- the maximum dimensions of the processing sheet is 1500x3000 mm

Gas cutting of sheet metal

- the maximum thickness of the processing sheet is 90 mm
- the maximum dimensions of the processing sheet is 1500x3000 mm

Bending

Sheet metal bending

- the maximum thickness of the processing sheet is 5 mm;
- the maximum length of the processing sheet is 3000 mm

Painting processing of sheet, base and body parts, welded structures





Management quality system













Infrastructure

Railway and road accessibility:

- √ branch of the Belarusian railway: 3 km
- √ republican roads: 13 km
- ✓ other roads with improved surface: 1 km

Accessibility of infrastructure:

- ✓ electricity (voltage: 10 kV, distance in km: 8.3)
- plumbing (artesian well, fence from the river Orshitsa for technical purpose)

Land plot and production areas:

- availability of land plot (area 13.7 hectares, purpose: production of metal-cutting equipment)
- availability of buildings (square: 60 511 m2, purpose: production and administrative buildings, warehouses and domestic premises)

Other infrastructure:

 storage warehouses, logistics terminals (square: 8087 m2, description: warehouses of opened and closed type, garages, sewage treatment station, boiler room)



Technical modernization of existing production facility

Investment proposal review

The strategic goal of OJSC Machine tool plant Krasniy Borets is the prospective development of the enterprise, which are: creating conditions for technical re-equipment of production, expanding the range as well as increasing the competitiveness of products, reducing costs and guarantee profits.



- Strengthening enterprise's market position by means of competitive products production
- Improvement of financial and economic indicators of the enterprise
- Increasing salary of the employees



Period of project implementation 2019–2030



Project advantages:

Implementation of the project allows:

- ✓ Create by the end of 2030 at OJSC Machine tool plant Krasniy Borets production capacities with planned volumes;
- ✓ Expand the scope of cooperation with domestic enterprises who are consumers of special technological equipment;
- Provide consumers by high quality products that meet the requirements of European standards;
- ✓ Provide production growth rates at least 110 % per year;
- ✓ Provide profitability of sales not less than 5.0 %;
- ✓ Achieve salary growth by 2030 at least 1100 USD.

Project financing

Investment project cost is 15 mln BYN.

Source of investment is own funds





CONTACTS

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Investment opportunity







the largest producer in the CIS (pneumo)of brake devices and mechanisms for trucks, buses, agricultural and trailer equipment.





Quality System

The plant has implemented and successfully used a quality management system in accordance with the requirements of STB ISO 9001-2015, STB ISO/TS 16949-2010.







Infrastructure

Railway and road access:

- To the railway road: 1 km
- To the state roads: 5 km.

Communications services:

- Electrical grid (voltage: 0.4 kV; 10 kV, distance: 3.49 km).
- 1 water pipeline.
- 1 gas pipeline.

Land plots and production areas:

• Land plot – 11 hectares, built-up area – 7 hectares.

Other Infrastructure:

• Finished goods warehouse (the area of 1583 m2); possibility of further expansion of production and installation of additional capacities.

Investment Project:



Development of a model range of support and coupling devices for MAZ and KAMAZ tractors and products for agricultural machinery

Introduction into production of the scale of import-substituting and export-oriented products for conveyors of OJSC MAZ - UKH BELAVTOMAZ, JSC Peterburgsky Traktorny Zavod, Rostselmash Group.



Project implementation period



2020-2026

Project objectives:

Product diversification, increase in sales.

The advantages of the project:

- √ import-substituting production;
- ✓ production of export-oriented products

Project financing

Total investment costs of the project 2 690 000 USD

Sources:

Own funds: 800 000 USD

Long-term loans: 1 890 000 USD

The purchase of universal CNC equipment will reduce the time of transition to the production of new parts in a small product life cycle, as well as to continue the re-equipment of production facilities.

Investment Project:



Development of semi-automatic receiver production line

The development of a semi-automatic line for the production of receivers aimed:

- to improve the quality of manufactured products through the introduction of more advanced welding technologies in the argon environment;
- o reduce the number of key workers by automating the workplace;
- o to automate the workpiece displacement between workstations;
- reduce the time between changeovers by using PLC settings with saved settings;
- replace the "harmful" profession of the welder with the operator of welding units with PU;
- o to increase production at the expense of more efficient equipment.



Project implementation period



2021-2027

Project objectives:

Production of competitive products, reducing costs, increasing profitability

The advantages of the project:

- √ import-substituting production;
- ✓ production of export-oriented products.

Project financing

Total investment costs of the project: 1 450 000 USD

Sources:

Own funds: 435 000 USD

Long term loans: 1 015 000 USD

The purchase of this equipment will reduce the number of workers and maintenance personnel required for the production of existing volumes of products, as well as increase production capacity twice.



OJSC TAIM

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The introduction of modern technology in the serial production of furniture on a metal frame









Olsa JSC is a leader in the production of high-quality folding furniture for camping, garden, terraces, home. Furniture of the OLSA trademark combines European design, reliability, comfort and ease of use and allows you to organize a pleasant and comfortable stay in the garden, at home, on the beach and in nature.





Railways and motor drive ways:

- Belarusian Railway line (distance from the site, 7 km);
- ✓ state motor roads (distance from the site, 5 km);
- ✓ other roads with improved surface.

Communications:

- electricity network;
- ✓ water pipeline;
- ✓ gas pipeline.

Land plot and manufacturing facilities:

- ✓ land plot availability (area: 13.6 ha, purpose of use: maintenance and use of industrial premises);
- ✓ presence of constructions (area: 101 978 m², purpose of use: industrial, warehouse, administrative buildings).

Other infrastructure:

- √ warehouses, logistics terminals (area: 9849 m²);
- possibility of production expansion and installation of additional production.



Quality Management System





All products manufactured by the company meet the requirements of technical regulations of the Customs Union TR CU 025/2012, which is confirmed by declarations and certificates of conformity.



The introduction of modern technology in the serial production of furniture on a metal frame

According to the results of marketing research, there is an increase in demand for furniture on a metal frame in the markets of the CIS countries and Europe. In global retail chains of the DIY format (Leroy Merlin, OBI), the home improvement and home design format (IKEA, JYSK), similar products shipped from China are being replaced with products manufactured in the Republic of Belarus, Olsa JSC.

To meet the market demand, expand the geography of supplies and maintain a leading position in the market, an innovative project has been developed, which involves the introduction of modern technologies that have no analogues in the Republic of Belarus, as well as a comprehensive modernization of the existing production capacity of the enterprise for the production of furniture on the metal frame.



Project Implementation Period 2019–2021



Advantages of the Project

- ✓ creation of a new high-performance production.
- ✓ the introduction of modern technologies of material processing (plastic deformation of the metal using the method of reduction, rolling, and pushing; the separation of the metal using laser, pipe batch processing).
- ✓ increase in production and sales of products, export potential of the enterprise and product competitiveness.



Project finance

Total investment costs:

4966,01 ths. USD

Source:

- Own resources 1523,97 ths. USD
- State financing 3021,0 ths. USD
- Long-term loans 421,04 ths. USD





Olsa JSC

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Establishing a modern metal-cutting and auxiliary tools production with the implementation of innovative technological processes





About the company



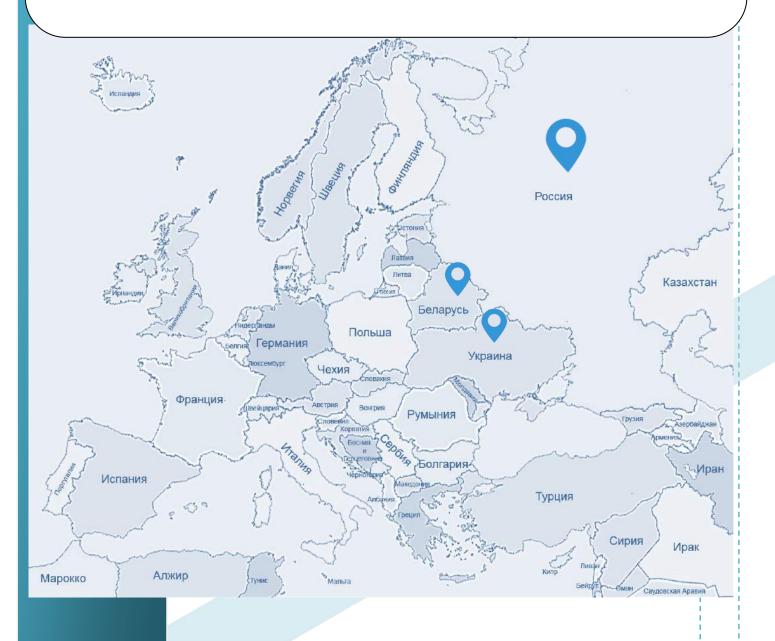
OJSC Orsha Tool Plant is one of the most developed producers in the Republic of Belarus of auxiliary, clamping and cutting tools for metal processing machine-tools.



Consumers



Many of industrial enterprises of machine-tool and machine-building industries, road and rail transport, energy and agro-industrial complex in Belarus, the Russian Federation and other countries are regular consumers of the plant's products. Distribution is carried out under direct supply contracts and through the distribution network abroad, which covers industrialized regions in the European part of the Russian Federation, Ukraine and other CIS countries.





Management quality system

The plant has implemented the quality management system for the production of cutting and auxiliary tools and it is certified for compliance with the requirements of STB ISO 9001-2015.

Certificate of conformity which is registered in the Register of the National system of conformity of the Republic of Belarus № BY/112 05.01.005 07992.





НАША ПРИОРИТЕТНАЯ ЦЕЛЬ:

режущий и вспомогательный инструмент постоянно в ряду лучших на просторах СНГ

Политика руководства

ОТКРЫТОГО АКЦИОНЕРНОГО ОБЩЕСТВА "ОРШАНСКИЙ ИНСТРУМЕНТАЛЬНЫЙ ЗАВОД" В ОБЛАСТИ КАЧЕСТВА

ОАО «ОИЗ» - устойчиво развивающаяся и постоянно обновляющаяся организация, учитывающая изменения, тенденции и риски, связанные с внутренними и внешними факторами, такими как персонал, поставщики и потребители, которые влияют на способность достигать ожидаемых результатов.

Руководство предприятия ставит своей основной задачей соответствовать назначению и контексту организации и поддерживать ее стратегическое направление достижением высокого уровня удовлетворенности внешних и внутренних заинтересованных сторон качеством выпускаемой продукции, как основы жизнестойкости коллектива и гарантии завоевания рынков сбыта.

Руководство предприятия обязуется обеспечить выпуск режущего и вспомогательного инструмента высокого качества по ценам, обеспечивающим стабильную прибыль коллективу и доверие покупателей, для чего применять следующие средства:

- обеспечение функционирования и постоянного совершенствования системы менеджента качества, соответствующей требованиям стандарта СТБ ISO 9001-2015;
- непрерывное совершенствование технологии производства режущего и вспомогательного инструмента, обновление средств метрологического контроля и управления технологическими процессами;
- снижение технологических потерь при производстве режущего и вспомогательно-
- взаимовыгодное сопрудничество с потребителями, выполнение их заказов и поставка продукции точно в сроки, предусмотренные договорами;
- вовлечение всего персонала предприятия в процесс обеспечения качества ремущего и вспомогательного инструмента;
- саздание системы обязательного и непрерывного повышения уровня знаний и профессиональной квалификации специалистов и рабочих;
- выполнение законодательных и других обязательных применимых требований.

Руководство завода берет на сах ответт венность за реализацию Политики в области качества и обязуется проводить ее в жизнь.

ПИРЕКТОР ЗАВОДА

В.В. МАНКЕВИЧ



Infrastructure

Railway and road access:

- Branch of the Belarusian railway: 1 km.
- Republic-wide roads: 15 km.
- Other roads with improved surface: 0.1 km.

Availability of communications:

- · Electrical grid;
- Plumbing;
- Gas-pipe.

Land plot and production areas:

- · Availability of land plot.
- Availability of building (area: 100 thousand m², may use as: production building, administrative building, housing support services, garage, energy complex, dining room, domestic building).

Other infrastructure:

- Storage warehouses, logistic terminals.
- Possibility of further expansion of production and setting up of additional capacities.
- Possibility to create the necessary infrastructure at the expense of the budget.



Establishing a modern metal-cutting and auxiliary tools production with the implementation of innovative technological processes



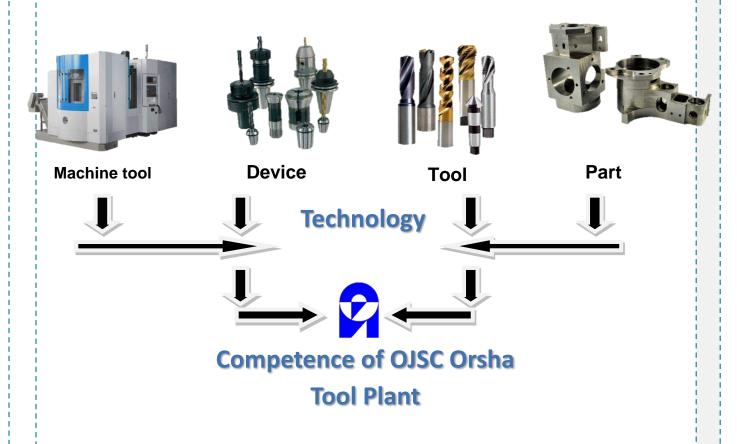
Investment project's review

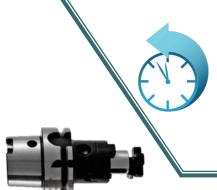
For the first time in Belarus is planned to organize mass production of the tool system on the basis of the HSK cone.

On the basis of OJSC Orsha Tool Plant plans to produce HSK cones of six types: "A", "B", "C", "D", "E" and "F". The range of sizes is HSK 32-HSK100.

It is planned to create structures of metal-cutting tools with wear-resistant coatings and with internal coolant supply; combined (special) tools that provide for one technological pass processing of several surfaces. Increase of productivity and tools' reliability.

- Increased tools life up to 300 %.
- Significant improvement of tools productivity and durability.
- Possibility of processing at high cutting speeds, for the maximum using of existing machine cluster industry possibilities.
- Increased specific metal removal, reduced processing time and high quality of parts..





Period of project's realization 2018-2023



Project's goal

Establishing a modern metal-cutting and auxiliary tools production with the implementation of innovative technological processes

Project's financing

Cost of the project is 22.83 mln USD







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Development and organization of production of gas-diesel engines with power up to 2.000 hp.







JSC Managing company of the Holding Minsk Motor Plant is the main producer of modern diesel engines among the CIS countries, takes the leading position on release of 3-, 4-, 6-cylinder in-line diesel engines. The enterprise serially lets out more than 60 modifications of engines with a capacity from 10 to 330 HP which are intended for installation on agricultural, road-building and municipal equipment, on cars and buses, vessels, on power installations (diesel-generator stations, stationary and mobile compressor stations) with adaptation on consumers' demand.





- The largest diesel engine manufacturer in Eastern Europe.
- More than 5 million engines manufactured
- The holding includes 5 plants, 4.9 thousand highly qualified employees
- Export of products is carried out in 35 countries
- Equipment with engines of Minsk Motor Plant is operated in more than 150 countries

Companies of the Holding:



MINSK MOTOR PLANT

HOLDING MANAGING COMPANY, OJSC



Zhytkovichy Engine Plant, OJSC



Lida Casting and Mechanical Plant, OJSC



Gomel Starting Engines Plant, OJSC



Experimental Plant of Technological Equipment,
OJSC



Quality Management



In line with the requirements of STB ISO 9001-2015, a quality management system for the design, development and production of engines was developed and implemented as a means of ensuring the implementation of the "Quality Policy" adopted by the management of Minsk Motor Plant Holding Managing Company JSC

On the basis of the quality management system that meets the requirements of STB ISO 9001-2009, the organization has developed, implemented and certified a QMS in relation to the design, development, production of parts for engines (245-1004021-L SB - piston) in accordance with the requirements of STB ISO/TS 16949-2010





Railways and motor drive ways:

- Belarusian Railway line;
- · state motor roads.

Communications:

- electricity network;
- · water pipeline;
- gas pipeline.

Land plot and manufacturing facilities:

- land plot availability (area: 34.4 ha);
- presence of constructions (area: 8.1 ha).

Other infrastructure:

warehouses, logistics terminals (area: 24.5 ths. m²).



About project



Development and organization of production of gas-diesel engines with power up to 2000 hp.





The project aims to create a basis for the development of domestic "heavy" engine-building.









Project implementation period



2019 - 2025

Цель проекта:

The project aims to create a basis for the development of domestic "heavy" engine-building.

Project finance

Total investment amount

85.0 - 87.0 mln.€

Source:

- Own resources
- Long-term loans
- · Investor's resources
- · State financing

The project will provide BELAZ JSC and manufacturers of diesel generator sets (power up to 1 MW) with powerful engines of domestic production.



MINSK MOTOR PLANT HOLDING MANAGING COMPANY, JSC



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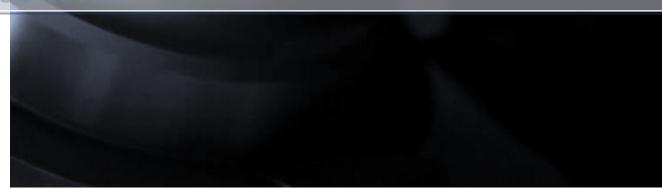


NATIONAL AGENCY OF INVESTMENT AND PRIVATIZATION

> INSTITUTE BELORGSTANKINPROM



Development and implementation of a new range of precise stamping mechanical presses production with the rated force up to 2500 tons



About the company



Today OJSC Kuzlitmash is represented by more than highly skilled workers and engineers, 56.6 700 thousand square meters of production space, 580 units metal-cutting equipment, of ensuring the implementation of turning, boring, drilling, flat, round, and intra-grinding, milling and gear milling, slotting cutting and sharpening works. At the enterprise there also galvanic, instrumentals, electrotechnical are production as well as equipment for heat treatment of nodes and spare parts.

OJSC Kuzlitmash is machine-tool enterprise of Belarus. It is well known in the CIS countries as producer of press forging and foundry equipment.



Technological possibilities



The technical parameters of the equipment planned for the development correspond to the currently achieved world's leading producers quality of similar equipment, which makes it possible to predict the future export potential (from five finished units per year, as well as machine kits).



The equipment produced by OJSC Kuzlitmash is used in the workshops of numerous enterprises of the CIS countries industries, including such well-known as OJSC BELAZ, Minsk, Gorky and Ural automobile plants, Minsk, Volgograd, Chelyabinsk and Lipetsk tractor plants, Nizhny Tagil boiler and radiator plant, George and Krolevetsky armature plants, Gomel and Saransk foundries, etc., also forging equipment is supplied to enterprises of Russia, Ukraine, Kazakhstan, the Baltic States, India, etc.



Infrastructure



Railway and road access:

- ✓ Branch of the Belarusian Railway
- State motor roads



Availability of communications:

- ✓ Power grid length of 10 000 meters with the capacity of 2.5 MW
- √ Water supply 2 800 meters
- √ Gas pipeline 1 800 meters

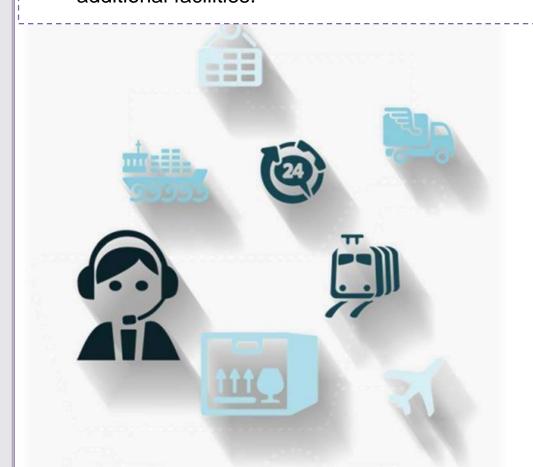
Land plot and production areas:

- ✓ Availability of land plot 17.8 ha
- Availability of buildings 12 units



Other infrastructure:

- ✓ Storage warehouses.
- Possibility to expand production and set up of additional facilities.



Development and implementation of a new range of precise stamping mechanical presses production with the rated force up to 2500 tons

Investment project's review





Project's goal

- Organization of high-tech products production;
- ✓ Production of products with high export potential (up to 80 % of the production is planned to export);
- Production of absolutely new equipment for the national market that was not previously developed and produced.

Project's relevance

The relevance of the project and interest of OJSC "Kuzlitmash" in its successful implementation is due to economic and market factors, such as:

- Possibility of setting up a unique modern production of high-tech products, which has no analogues in the Republic of Belarus;
- ✓ Organization of import-substituting production;
- Developing of a high export potential.

Planned products:

Closed single-crank trimming presses;









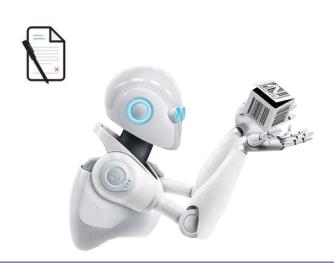
Crank hot-stamping presses.

Period of implementation 2020–2022

Project's advantages

Innovative nature of the project.

In the case of the successful project implementation, will be obtained new or significantly different products from previously used in domestic engineering.



Implementation of the project will be facilitated to the implementation at the enterprise a number of innovations aimed at technical re-equipment and retrofitting production with new and modernized technological equipment capable consistently ensuring the entire production evels from procurement operations shipment of finished products with high quality.





Contacts

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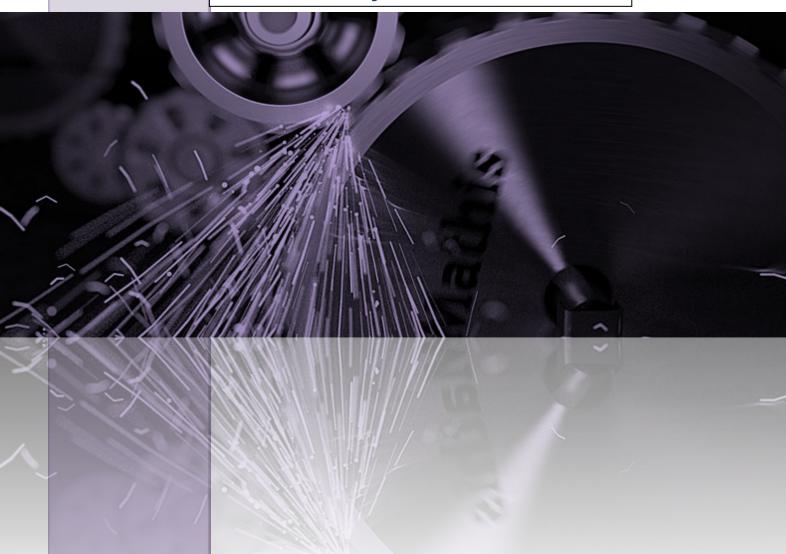
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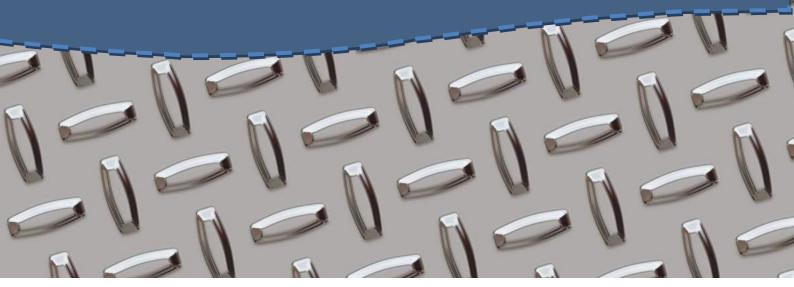




Company Overview



One of the largest producers of heavy-duty trucks, passenger vehicles, crane equipment and trailers in Eastern Europe.







Quality System



DIN EN ISO 9001:2008 in the design, development, production and maintenance of vehicles and buses with the trademark "MAZ»



ISO 9001:2008
in the design of production and maintenance of trucks



CTE ISO/TS 16949-2010 in the design and manufacture of steel casting

Key areas of technical development

JSC MAZ - managing company of the holding BELAVTOMAZ

Investment cost: 347,7 mln \$

Development of the bus plant

Investment Cost: 45,5 mln \$



Development of production of crane and trailer equipment

Investment cost: 15,7 mln \$

Key areas of technical developmentJSC MAZ - managing company of the holding BELAVTOMAZ

Investment Cost: 347,7 mln \$

Development of cabins production

Investment Cost: 142,0 mln \$



Development of press production

Investment Cost: 52,5 mln \$



Development of welding production

Investment Cost: 34,8 mln \$



Development of painting production

Investment Cost: 55,0 mln \$



Key areas of technical developmentJSC MAZ - managing company of the holding BELAVTOMAZ

Investment Cost: 347,7 mln \$

Development of new automotive components

Investment Cost: 53,3 mln \$

Development of the front axels Investment Cost: 7,6 mln \$

Development of the rear axels Investment Cost: 15,9 mln \$

Development of single-speed transfer cases

Investment Cost: 12,2 mln \$

Development of front wheels' rotary fits production

Investment Cost: 17,6 mln \$

Key areas of technical developmentJSC MAZ - managing company of the holding BELAVTOMAZ

Investment Cost: 347,7mln \$

Reconstruction of foundry Investment Cost: 91,2 mln \$



Modernization of grey cast iron unit

Investment Cost: 50,8 mln \$

Modernization of high-strength cast iron unit

Investment Cost: 15,5 mln \$

Modernization of steel unit No.2

Investment Cost: 24,9 mln \$





Key areas of technical development JSC MAZ - managing company of the holding BELAVTOMAZ

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Implementation of ring-rolling production and production of dump trucks rims with loading capacity of 130 - 450 tons on the base of OJSC Automatic Control Devices Plant



OJSC Automatic Control Devices Plant is flexible machine-building production on the basis of universal technologies multi-profile with production. The plant has a reserve production capacities, highly qualified specialists and workers capable both to increase production volumes, and to expand the range of products of metal processing, plastic molding on injection molding machines and aluminum injection molding.

About the company











HIGH-TECH EQUIPMENT

HIGHLY QUALIFIED SPECIALISTS

THE FLEXIBILITY OF PRODUCTION

THE HIGHEST STANDARDS



Technological possibilities



The plant is flexible machine-building production on the basis of universal technologies with multi-profile production

- Planetary reducer (brand RP-7) produced for mixing drums volume of 6 and 7 cubic meters, which is designed to transmit power from the hydraulic motor to the drum mixer truck. It consists of three stages of the planetary series.
- Components for motor vehicles that have been certified to ISO 9001. Control lamps unit BKL 3803, lamp control models 12.3803 and 24.3803 that are designed for monitoring and signaling about the errors of systems and devices of motor vehicles, buses, tractors and earthmovers machines. Unlike analogues, plant's units are made with symbols on the lumen, and LEDs are used as the emitter.
- Coupling fittings for overhead power lines. It is applied for use in the construction of overhead power lines and outdoor switchgear substations 35-1500 Kilovolts.
- Spare parts for various agricultural machines. Among them blocks of hubs RSM 10.01.15.520B and RSM 10B.01.15.520 for combines "DON-1500A and 1500B", spare parts for plows DP "Minojtovsky repair plant" Grodno region, etc.
- Mass-market goods, which include student furniture. There are student tables and chairs, computer tables, set of folding furniture and so on. The plant is equipped by modern machines which allow to produce wooden windows, doors and other similar products which passed certification.





Infrastructure

The plant has well-developed engineering and technical infrastructure, equipped by appropriate access to roads for automobile and rail transport, providing communication with suppliers of raw materials, as well as shipment of products

Railway and road access:

- Branch of the Belarusian railway
- State motor roads

Availability of communications:

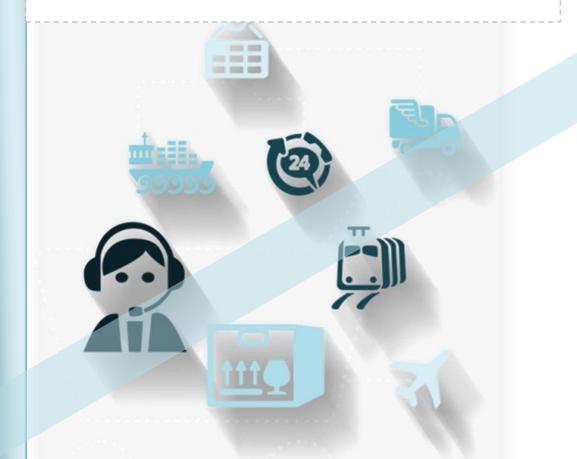
- ✓ Power grid
- ✓ Water supply
- Gas pipeline

Land plot and production areas:

Availability of land plot

Other infrastructure:

- Storage warehouses and logistics terminals
- Possibility to expand production and set up of additional facilities.



Implementation of ring-rolling production and production of dump trucks rims with loading capacity of 130 - 450 tons on the base of OJSC Automatic Control Devices Plant



Investment project's review

Implementation of ring-rolling technology will allow improving the quality, providing high accuracy of parts production which having shape of ring, to obtain minimum allowances for mechanical processing, metal saving, as well as to carry out import substitution of the above mention products.



Project's goal

- Production of high-tech products;
- Production of export-orienteered products;
- Organization of import-substituted production (solving the problem of dependence from importing of ring blanks);
- Providing of quarry's machines by required quality units for the improving of its competitiveness





Period of implementation

2019-2022

Project's advantages



Innovative nature of the project.

Planned for implementation products and technological solutions are brand new for the domestic engineering



Implementation of ring-rolling technology will allow improving the quality, providing high accuracy of parts production which having shape of ring, to obtain minimum allowances for mechanical processing, metal saving, as well as to carry out import substitution of the above mention products.

Project's financing





CONTACTS

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Bobruiskagromash plant today is the largest producer of agricultural machines and devices in the CIS and Baltic countries. The trademark of the company is known in France, Poland, Finland, Denmark, Sweden, Germany, Canada, Argentina and other countries of Europe, Central and South America. The machines also export to Hungary, Bulgaria, Romania, Serbia, Moldova, Slovakia, Czech Republic, Lithuania, Latvia, etc. The most popular machines at the markets of these countries are machines for harvesting fodder.

Bobruiskagromash Holding was established in 2012. According to the resolution of the Council of Ministers of October 19, 2012 № 948, OJSC Bobruiskagromash became the managing holding company Bobruiskagromash and renamed into OJSC Managing Company of Bobruiskagromash Holding.

The holding includes the following companies:

- OJSC Bobruiskselmash,
- OJSC Orshaagroprommash,
- OJSC Technolit Polotsk,
- OJSC Molodechno machine tool plant,
- OJSC Science institute Stromavtolinia.

Technological possibilities



Production potential:

-PROCURING-PRESS PRODUCTION:

The holding offers equipment for cutting sheet metal thickness up to 25 mm (crank guillotine shears, plasma cutting devices controlled by software "Proxima"), hydraulic turret punch press CNC MTX FLEX— 12 250/30-2500, circular saws, crank presses 40-1000 tons, minting presses up to 1600 tons, hydraulic presses up to 160 tons, bending presses CNC with power from 135-350 tons with the length of bending up to 6200 мм,.

The workshop is equipped by lifting mechanisms, cranes from 10 to 30 tons.

- ASSEMBLY-WELDING PRODUCTION:

Semi-automatic welding in CO2 environment, automatic welding under flux layer, contact welding, argon welding.

For the production of tanks continuous winding of spiral-seam pipe of rolled steel with thickness of 5 mm with automatic welding technology is used. For providing production technology of goods in the workshop are available stands, technological lines, tilter, slip, conveyors.

The workshop is equipped with lifting mechanisms, cranes up to 10 tons.

EUQIPMENT — 1348 units



- MECHANICAL-PROCESSING PRODUCTION:

Mechanical-processing equipment, mounted in the workshops of the enterprise, allows producing all types of mechanical processing with high accuracy:

- turning of parts up to Ø 400 mm and up to 1000 mm length in CNC turning centers made by "Tong Tai", up to Ø 1000 mm and up to 5000 mm length at universal machines;
- milling, drilling, boring parts and assemblies with dimensions of Ø1000xH1000 mm and weight of 1200 kg on horizontal machining center with CNC NB-630 made by "Tong Tai"
- cutting of conical gears to module 8, diameter up to 320 mm;
- cutting of cylindrical gears up to module 20, diameter up to 2000 mm;
- grinding of shafts in automatic cycle by using active controls up to Ø 200xL2000 mm at grinding machines with CNC.

- ASSEMBLY PRODUCTION:

Production is made by using assembly lines with appropriate technological equipment and slipway assembly.

Available:

- Machine MS9717D-2B for dynamic balancing of assembling and welding units with dimensions of up to 3000 mm and weight from 10 to 500 kg;
- Stands for assembly of disc wheels: max wheel diameter is 1500 mm, max width of ready wheel is 800 mm, rim diameter is from 14 to 26 inch;
- Test stands for machines and components in the production process

- PAINTING PRODUCTION:

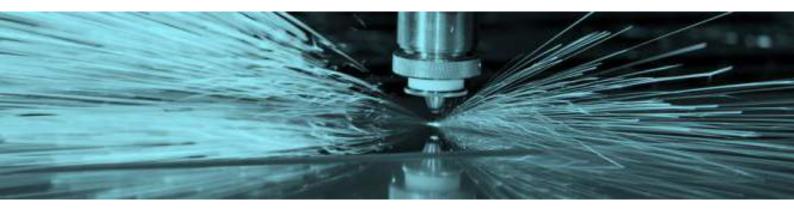
Painting of parts and sub-assemblies are carried out by specialized spraying systems including paint lines for large products as well as at the device of tubeless pneumatic painting. For painting of products TNP are used large airless sprayer. The final processing of the assembled products are made in the paint chambers of the passing type with the subsequent drying and marking of products. Painting of products are made by fast drying paint. The galvanic department allows to do at a special electroplating lines hard chrome plating, zinc plating with chromate conversion coating, oxidation.

Production workshops are equipped with cranes with lifting capacity from 5 to 30 tons.

Open storage areas are equipped with cranes with lifting capacity up to 32 tons.

Transportation of materials is carried out by forklifts, tractors, cars, there is a railway line, transportation is carried out by a diesel locomotive.

The block of auxiliary workshops includes: tool, repair and mechanical, electrical, power plant, woodworking production as well as block of treatment facilities, station for regasification of liquid propane-butane into the gaseous phase.





Management quality system

For the purpose of improving the forms and methods of quality management in 2018 together with updating of required documents for certified quality system the plant converted to the new version of the standard STB ISO 9001-2015.





Infrastructure

Availability of utilities:

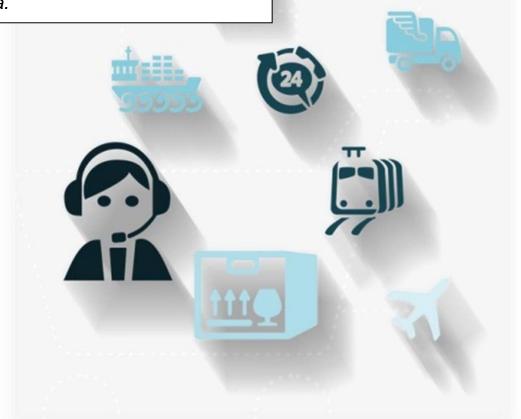
- ✓ Power grid (380 V).
- ✓ Plumbing.

Land plot and production areas:

- ✓ Availability of land plot (square is 5 ha).
- ✓ Availability of buildings (square is 4000 м², may use as production building).

Other infrastructure:

- ✓ Warehouses, (square is 300 м²).
- Possibility to expand production and set up of additional facilities.
- Total square of the plant is 59,99 ha.
- Total square of indoor building is 29,00 ha.
 - > Production 16,80 ha.
 - > Administrative 3,80 ha.
 - > Warehouses 1,10 ha.



Technical re-equipment of running systems production and transmission elements of agricultural machines by using of modern technologies



Investment project review

Implementation of the project assumes setting up high-performance equipment complex for the production of parts and components for the equipment of agricultural machines running systems.

It is allow to provide production of running systems and transmission elements of all existing and promising agricultural machines produced by OJSC Managing Company of Bobruiskagromash Holding and it is promising for the development of the **industry**.





Project financing

Total cost of the project

- 3 131 000 USD

Sources:

- Plant's assets 826 429 USD
- Governmental support 307 904 USD
- Other: Off-budget centralized investment fund of the Ministry of Industry of the Republic of Belarus – 1 996 667 USD





To create the production of working devices for tillage and sowing machines at the base of OJSC Bobruiskselmash



Investment project review

The main idea of the project is to justify the investment, required by OJSC Bobruiskselmash, to create a competitive production of working devices for tillage and sowing machines with annual production plan of 300 thousand units with technical characteristics corresponding to the best world samples to meet the needs of agriculture sector of the Republic of Belarus and distribute at least half of its to export.







Period of realization Beginning - 2021



Project's advantages

Implementation of the project allows:

- ✓ to create the production of competitive, import-substituting and exportoriented products;
- √ to create new jobs (22);
- ✓ to increase the profitability of the company up to 54%;
- ✓ to strengthen the position of the company at the market;
- ✓ to increase tax revenues and non-tax payments to budget and extra budgetary funds;
- ✓ the level of value added per person in a newly created plant will be 139,5 thousand USD, which is higher than the average European level of 60 thousand USD;
- √ revenue per employee is 263,6 thousand USD;
- ✓ to create favorable prospects for the further development of the company.





Contacts

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Technical re-equipment of the plant in order to expand the range of produced technical equipment

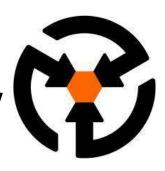


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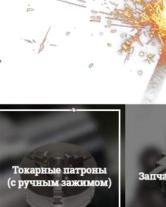




About the company



OJSC "Grodno plant of lathe chucks BelTAPAZ produces self-centering lathe chucks which are used for installation on universal turning, revolving, internal cylindrical grinding machines, dividing heads and various accessories. The company produces more than 120 modifications of 2, 3, 4, 6 of jaw chucks with an external diameter from 80 to 500 mm.













Consumers



OJSC BeITAPAZ distributes its products both in the domestic and foreign markets. Delivery of production is made to all largest enterprises of machine-tool and tool branch of mechanical engineering of the Republic of Belarus as well as to enterprises Federation, of the Russian Kazakhstan, Moldova, Latvia and Lithuania. OJSC BelTAPAZ distributes products not only to consumers, but also through the distribution network.





Management quality system

The management quality system of design and production of lathe chucks in accordance with the requirements of STB ISO 9001-2015 is certified at the OJSC BelTAPAZ. There is the certificate of conformity № BY / 112 05.01, 021 06956.











Infrastructure

Railway and road transport accessibility:

✓ Public motor roads;

Availability of utilities:

- ✓ Power grid: 380/220 V
- ✓ Plumbing;

Land plot and production areas:

- Availability of land plot:
 - Square: 72 639 m², may use for: production area for main and auxiliary workshops; on the production areas are located production and administrative buildings, warehouses, compressor station and garage
- Availability of buildings:

Production area: 29 493,9 m²; main workshops: 19 408,13 m²; auxiliary workshops: 10 085,77 m²; administrative building 8 238,7 m².

Other infrastructure:

- Warehouses, logistic terminals;
- Possibility to expand production and set up of additional facilities.



Technical re-equipment of the plant in order to expand the range of produced technical equipment

Investment project review

Development strategy of OJSC BelTAPAZ for 2016-2030 involves the phased implementation of works on technical re-equipment of the enterprise, improving the competitiveness of products, reducing its cost, material and energy consumption, solving employees problems, improving the organizational structure and other measures aimed at providing of production profitability activities at open market.



Considering the specialization of the company, the production technology is focused on large-scale production and is equipped with the high-performance equipment: special machines, automatic machines and semi-automatic machines, aggregate machines. This technology has positive side – it provides high productivity and quality of products. The negative side is the lack of flexibility and focus on specific type of product.

That is why technical re-equipment of the plant is aimed at expansion of technical capabilities by acquiring metal processing equipment of multifunction application and wide technological opportunities, such as machining centers and CNC machines of various processing methods. The newly purchased equipment is planned to be used both in the production of already produced products in order to improve quality and increase production capacity as well as development of new products.

Technical re-equipment of the plant is supposed to be performed by doing the following: replace physically and morally outdated equipment and to produce qualitative and competitive products.



Period of implementation 2016–2020

Project financing

Total cost of the project is 861 600 USD 2019 – 2020

Sources:

- o The plant's assets 151 900 USD
- o Bank's credit 216 100 USD
- Extra budgetary fund 281 400 USD











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Comprehensive modernization and technical re-equipment of VISTAN JSC for the production of modern high-performance gear-cutting and centerless grinding equipment





About Company

VISTAN JSC is one of the oldest machine-tool enterprises in the Republic of Belarus.

Centerless grinding machines of VISTAN JSC are well known to consumers. Thousands of machines successfully operate in almost all industries, both within the CIS region and beyond.





Technological capabilities

The production program of the machine-tool plant VISTAN is focused on technological support of automotive, electrical, aerospace and other leading branches of mechanical engineering.

A high level of technical equipment and organization of production, strict technological discipline, implementation of the latest achievements domestic and foreign machine-tool industry ensure that the company manufactures competitive machineand which modern tools equipment, meet international standards.





Infrastructure

Railways and motor drive ways:

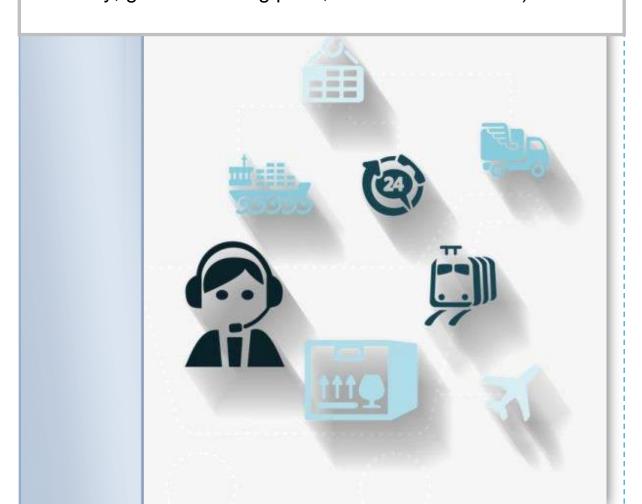
- ✓ Belarusian Railway line (distance from the site, 1.5 km).
- ✓ State motor roads:
- Other roads with improved surface.

Communications:

- electricity network;
- ✓ water pipeline;
- ✓ gas pipeline.

Land plot and manufacturing facilities:

- ✓ land plot availability (area: 11,1036 ha, purpose of use: industrial estate);
- ✓ presence of constructions (area: 57272 m², industrial buildings: 36947 m² (factory workshops, compressor facility, gas-distributing point, electrical substation).





About project

This investment project is aimed at the modernization and technical re-equipment of production facilities of VISTAN JSC through the acquisition of modern highly efficient equipment for the production of innovative products for the Republic of Belarus





Project implementation period 2019-2024



Advantages of the Project

- organization of the technological process that provides an average level of added value per worker, similar to the average level of added value per worker for the corresponding type of economic activity in the European Union;
- implementation of new technologies and manufacture of products new to the Republic of Belarus.

Project finance

Total investment costs: 7116,4 ths. USD

- Own resources 2466,4 ths. USD
- State financing 4650,0 ths. USD



Contact Information

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Establishment a flexible manufacturing system for machining case-shaped and revolving parts of mining dump trucks with a payload of 90 tones to 360 tones at the 17th bay of the programmed machine shop









BELAZ OJSC is a managing company of BELAZ Holding and the main world manufacturer of mining dump trucks of heavy-duty and super-size load capacity, as well as the other heavy vehicles, being used in mining and construction branches of industry.

BELAZ is the only enterprise in the world use gathering-conveyer for production of it's dump trucks.



Consumers

Main customers of BELAZ products are CIS mining companies, mainly from Russia and Ukraine. In the Republic of Belarus the market for mining dump trucks of 30-55 tons payload capacity is limited in their usage only by few extractive companies, in which quarries we carry out trial runs of our equipment. The supplies of dump trucks are maintained mostly to the markets of far-abroad countries.



















Technology options

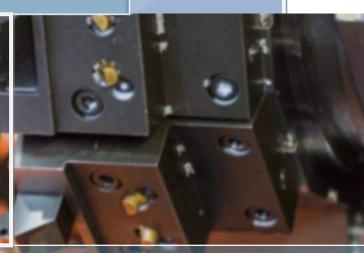


The manufacturing machinery improvement contributed to the technology options extending:

Machine processing

Wide range of equipment allows us to handle a range of items (nodes) from hydraulics to the rear axle dump truck with payload capacity 450 tons:

- turning-and-boring processing of components with the diameter up to 3200 mm;
- milling and boring processing of large parts up to 2500 mm wide and up to 10 000 mm long
- turning processing of parts with dimeter up to 1500 mm and length up to 2500 mm.



Tool-and-dieproduction



As part of the program for the development of tool-and-die production in the tool shop, the installation of a line for the manufacture of axial tools from tool steels and hard alloy has been completed.

The line includes nine pieces of equipment, which is designed for the manufacture and regrinding of the cutting axial tool of highspeed steel and hard alloy. The introduction of this equipment will allow to produce axial metal-cutting tools (for example, cutters, drills, taps, etc.) in a shorter time and of higher quality.

Technology options



Welding and blank production

The production capacity of the enterprise allows to cut all materials used in production, including profile rolled steel of all gage, round bars and pipes with a diameter up to 500 mm and non-ferrous materials, cardboard, paronite, acrylic, etc.

For this purpose, CNC units are operated: gas, plasma, laser and waterjet cutting.

Thermovoltaic processing

Annealing, isothermal annealing, normalization with tempering are carried out in gas furnaces with pull-out hearth.

Final heat treatment operations and chemical-thermal processes: cementation - hardening (oil) - low tempering, performed on the line of chamber furnaces.

Gas nitriding is performed both in mine furnaces and in the ion-plasma nitriding plant

Electroplating processes are used to improve the corrosion resistance of parts (galvanizing, phosphating) and improve the wear resistance of parts (hard chromium plating).

Paint spray processing

Technology of dyeing of the collected dump trucks (staining of collected trucks of especially heavy-duty and special technique at the world level, improving the quality of BELAZ products through the development and implementation of technology with use of modern paint materials and application of advanced technical solutions).

Introduction and usage of powder coating technology has improved the quality of protective and decorative coatings of some parts and components of the plumage of dump trucks, consumer goods, increasing the utilization of paints.



Amenities



Railway and motor transport infrastructure:

- ✓ Own railway branch.
- ✓ Branch of Belarussian Railway.
- Republican roads.

Supply lines:

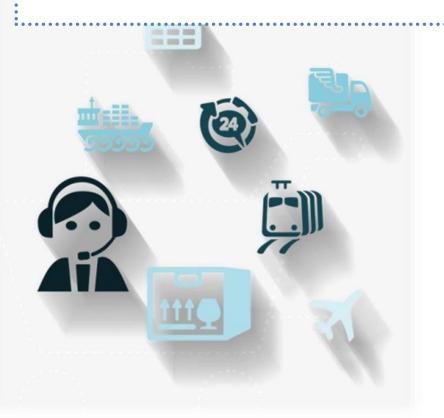
- ✓ Power line 81 360 m, capacity 40 MW.
- ✓ Water pipe 87 644 m
- ✓ Gas pipe line 5 493 m

Land plot and manufacturing facilities:

- ✓ Land plot 112,28 ha
- ✓ Buildings 151 units

Other infrastructure:

- ✓ Storage warehouse, logistic terminal.
- Expanding production and installing additional facilities are possible





Conformity certificate QMS STB ISO 9001-2015









Conformity certificate QMS DIN EN ISO 9001:2015









Conformity certificate on production





Establishment a flexible manufacturing system for machining case-shaped and revolving parts of mining dump trucks with a payload of 90 tones to 360 tones at the 17th bay of the programmed machine shop



Investment project review

Flexible manufacturing system is a high-tech complex on the basis of various production equipment (machines, tools, equipment, adaptations for giving and fixing of preparations, measuring devices, mechanisms of control and transportation of ready details etc.) which work is completely automated and controlled by electronic systems. The entire production cycle of parts, from the loading of blanks with pallets in the machine and unloading of finished parts is carried out almost without the participation of workers.



- Increase productivity and reduce labor costs for production;
- ✓ Replacement of critical worn-out equipment;
- ✓ Automation of load-unload parts for machining equipment;
- Possibility to organize additional shifts and work during weekends that do not require the presence of personnel;
- Escape stops of the process equipment relevant to the reconfiguration and preparation machines;
- ✓ Release of additional production facilities and maintenance personnel;
- Improving the efficiency of control and accounting of all technological processes;
- Forming of technological flexibility that will contribute to rapid transition to new products and timely response to the market situation;
- Improving the organization and quality of working conditions, and safety of production



Project period 2019–2023



Advantages of the project

- ✓ Automation of loading and unloading of technological equipment.
- ✓ Vacation of additional production areas and maintenance personnel.
- ✓ Improving the efficiency of control and accounting of all technological processes.
- ✓ Forming of technological flexibility that will contribute for rapid transition to new products and timely response to the market situation.
- ✓ Improving the organization and quality of working conditions, and safety of production.



Project financing

Total investment amount

(approximate): 100.0 mln USD

Source: long-term loans



















Preliminary benchmarking study of a flexible manufacturing system introduction

Nº	Indicator	Current production	Flexible manufacturing system
1	Planned production quantity equipment, units - drilling, milling and boring, units - Boring-and-turning, units.	55 25 30	33 8 25
2	The complexity of the processing of pre-planned 138 parts, standard hours	212 693.16	165 917.33
3	Work in automatic mode in the third shift	-	Yes
4	The required number of production workers, pers When working in 2 shifts, pers when working in 3 shifts, pers.	28x2=56 28x3=84	16 18
5	The need to take into account the changeover time of production equipment	Yes	No

Expected suppliers of a flexible manufacturing system











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INVESTMENT PROPOSAL

Gomel Foundry Plant Tsentrolit JSC





About Company



Open Joint-Stock Company Gomel Foundry Plant Tsentrolit is the largest enterprise in Belarus that specializes in the production of cast products from gray and ductile iron (GOST 1412-85 and GOST 7293-85).



Infrastructure



Railways and motor drive ways:

- company's own branch railway: 3 km;
- Belarusian Railway line (distance from the site, 1 km);
- state motor roads (distance, 0.5 km);
- other roads with improved surface (distance, 0.1 km).

Communications:

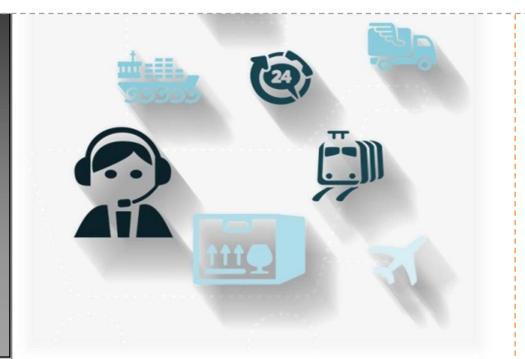
- electricity network (voltage: 220-6000);
- water pipeline;
- gas pipeline 2732 m.

Land plot and manufacturing facilities:

- land plot availability (area: 38,9 ha);
- presence of constructions (area: 13,3 ha).

Прочая инфраструктура:

- warehouses, logistics terminals (area: 2300 m²);
- possibility of production expansion and installation of additional production capacities.



Production



The main production is located in separate buildings: foundry workshop, workshop for castings chipping and cleaning, as well as machining, workshop for the storage and preparation of charge and molding materials.

The buildings are interconnected by various communications, thereby preserving the integrity of the production process.

foundry workshop

(melting and special casting shop; large, medium and small casting shop) with a total area of 35.7 ths. m²

cleaning workshop

(cleaning shops for large, medium, small casting and melting, experimental-mechanical shop, finished goods warehouse) with a total area of 26.59 ths. m²

Furnace charge and molding compounds workshop with a total area of 10.37 ths. m²

Large casting workshop

It consists of 2 sections – large and medium casting shops. Large castings with a mass of 1000 to 19000 kg are produced at the large casting site (sizes of flasks in the light are 7500x1900x1200/600; 5500x3500x350/1000; 4000x1500x100/45; 4500x2000x600/600; 4000x3000x600/470; 2000x3000x600/600).

The site consists of a mixture preparation, molding and core shops. The core shop is equipped with a continuous vortex mixer with a capacity of 12 tons/hour. A continuous mixer "Spartan" (OMEGA, Great Britain) with a productivity of 60 tons/hour is used to prepare the molding mixture.

To carry out technological operations, the workshop is equipped with bridge cranes with a lifting capacity of up to 50 tons.

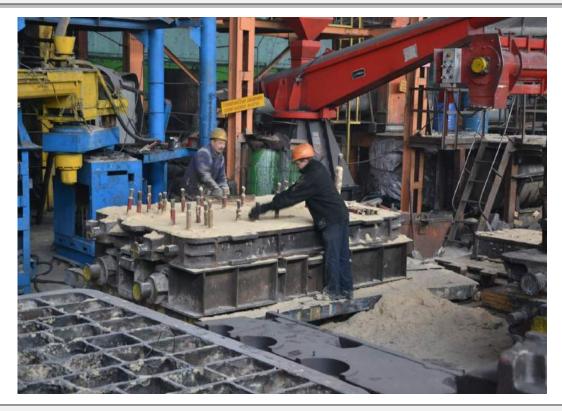
At the beginning of 2019, a q=20 ton radio-controlled manipulator mechanism was installed. Due to the fact that the device is equipped with adjustable eyes, on which the manipulator mechanisms are located, it can be used for manipulating (lifting, turning over) flasks of various sizes.



manipulator The allows lowering mechanism and raising the half-molds precisely positioning them at the place of assembly of the molds as the operator works "from the ground". The use of the manipulator on a radio control reduced the percentage of rejects and improved working conditions in increased labor general: productivity, personnel safety.

Cutting and surface finish of the castings is carried out using cleaning complexes and pneumatic grinding machines. Castings are cleaned in the shot blasting chamber (mod. 374C).

If necessary, heat treatment is carried out in a gas chamber furnace (dimensions of the chamber are 6.9x3x2.4 m, the maximum furnace charge is up to 30 tons).



Mechanical processing of external surfaces is carried out on the machines of the following models:

- longitudinally milling machine mod.6620U;
- longitudinally milling machine mod.6U312;



- longitudinally planing machine mod. 7216G;
- longitudinally milling machine mod.6610;
- radial drilling machine mod. 2M55;
- radial drilling machine mod. 2S550A;
- drilling machine mod. 2A576;
- radial drilling machines mod.2N57, mod. 2M57.

The medium casting shop allows castings with a mass of 100 to 1500 kg to be manufactured on molding machines (models 234M and 235M) in flasks with a clear size of 1200x1600x350/500, 1400x2000x350/500/600 mm.

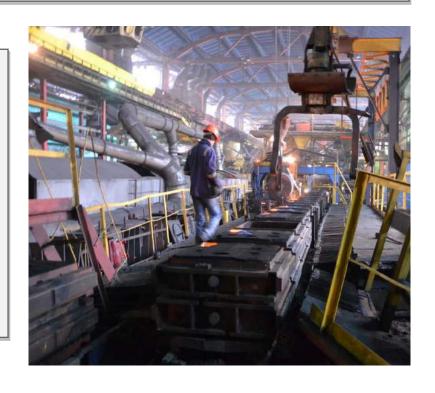
The site has molding, sand core, mixing, hydraulic, transport, equipment; casting stripping complexes; shot blasting chambers; welding equipment.

The small casting shop produces castings by weight from 1 to 100 kg. The workshop has developed more than 1000 kinds of products. 20% of the nomenclature is castings. During the assembly process of their molds, 3 to 5 rods are used, which is not specific for the production of small castings on automatic lines.

The small casting workshop uses two automatic molding lines.

An automatic pulse molding line (ALIF) is used for the manufacture of castings weighing from 20 to 100 kg in flasks with a clear size of 700x960x300 mm.

The HUNTER automatic molding line with a lump size of 760x820x270 / 300 mm allows castings from 2 to 70 kg to be obtained.





The core sections of the workshop provide the production of sand cores by rapid tooling, both during heating and in the Hardening Tar-Sand Process.



Section of shell casting (dimensions 330x225 mm, 450x330 mm; mass of castings up to 7kg).

Shell molds are made on two molding machines mod. 51713. The dimensions of the pattern bottom are 400x524 mm; the material of the models is gray cast iron. The heating temperature is 220-250 °C.

Core automatic machines (mod. 4749, mod. 29111 and mod. 29113) are used for the manufacture of hot-plated rods. A distinctive feature of their work is that the mixture is supplied in the core box under the influence of sand-air flow (sandblasting method), and curing occurs by heating the core box to a temperature of 250-300 °C. In the core machine (mod. 4749) box heating is electric, but in mod. 29111 and mod. 29113 it is carried out by gas burners. Core boxes are made with average overall dimensions of 440x225x120 mm.

The melting and special casting shop produces its own products: continuously cast billets, steel bars, cast iron annular weights.

The production of gray cast iron is carried out in induction cast-iron-melting crucible furnaces of industrial frequency "ICh-10" and medium-frequency furnaces EGP-3000S.

During casting molds in workshops of medium and large castings, out-of-furnace modification with a flux-cored wire is carried out using a tribrach apparatus.



For heat treatment, two "SDO" electric furnaces with a rolling hearth, three heating zones and a charge size of 4 and 8 tons are used.

Continuously cast billets are made by continuous horizontal casting of cast iron grades "SCh20", "SCh25", "SCh30" GOST 1412-85 and "VCh50" GOST 7293-85. The cross-sectional size of gray cast iron blanks is Ø30- Ø230 mm. The size of blanks from ductile iron – Ø50-Ø170 mm (maximum overall dimensions of a figured profile – 180x160 mm).

The production of continuously cast billets is carried out at the Horizontal Continuous Casting Machine model A-126 with a maximum capacity of 2 tons/hour.

The consumer goods workshop manufactures road fittings (hatches of various modifications), furnace molding (single-burner stoves, blind plates, cast ovens, gate valves).



The woodworking workshop is equipped with all necessary equipment for the manufacture of wooden products of any complexity, consumer goods, as well as one-time individual orders (windows, doors, sawing wood).



In 2018, "ROBOTIKSAN 5 AXEN" milling woodworking machine, which is designed for processing wood, chipboard, MDF and plywood, was introduced in the workshop. This machine is used for the manufacture of complex wooden patterns.



The main advantage of the 5-coordinate machine is the absence of a human factor in the production of parts, because the sequence of work is carried out according to the written program in stages:

- drawing a 3D model of the product;
- development of the path of movement of the cutting tool (2 types draft and finishing);
- entering the written program into the memory of the machine and the use of the postprocessor.

The acquisition of this woodworking machine allowed:

- to reduce the manufacturing time of pattern equipment for workshop №1.3;
- · to reduce the cost of manufactured pattern and core equipment;
- · to reduce the launch time of pattern equipment in production;
- to increase labor productivity; expand the range of products;
- to process the most diverse elements.

Mechanical repair shop produces non-standard equipment for the needs of the enterprise and third parties. The tool site produces metal pattern equipment of various sizes and degrees of difficulty for steel scrap up to 10,000 tons per year. The workshop has more than 100 units of universal equipment, including the AJAN KFCNC400 CNC machine.

The charge and molding materials workshop has sections for drying sand and clay, regeneration of spent mixtures, and storage of charge materials.

2 dryers with a total capacity of 53,000 tons per year are operated on the drying section of molding sand. There are silos for storing 13,000 tons of dry sand. Bentonite is dried in a drum dryer with a capacity of 3,500 tons per year. The workshop includes a scrap base, a pile section for the breakage of pig-iron scrap up to 30,000 tons per year, and a set of equipment for gas cutting.

On the site for boiling molten glass from silicate block there are 4 autoclaves with a total capacity of 4,000 tons liquid glass per year. There is also equipment for the preparation clay of and binders, for the regeneration of spent molding compounds, preparation for the and dosage of charge components.



Production machinery of Gomel Foundry Plant Tsentrolit JSC

Includes:

- 272 units of metal cutting equipment;
- 35 forging units;
- 77 units of foundry and other equipment.

The share of equipment with age of over 20 years is 44.2% of the total number of pieces of equipment.

The share of equipment with age from 15 years to 20 years is 18.6% of the total number of units; from 10 years to 15 years – 23.5%; and 7.7% – equipment under the age of 5 years.

The existing production facilities for the production of iron castings in mixed operation are used at 88%.

The share of costs for the purchase of machinery, equipment, vehicles in the total volume of investments in fixed assets is forecasted at 87.6% in 2019.



Implementation of the automatic molding line with the dimensions of casting flasks 1200x1200x350 mm and productivity 80 t/h

At present, Gomel Foundry Plant Tsentrolit JSC uses an automatic pulse-forming line ALIF with a maximum clod size of 760x900x350mm and actual output 32 pieces/hour.

Implementation of the automatic molding line with the dimensions of casting flasks 1200x1200x350 mm and productivity 80 t/h will allow:

- to reduce the cost of casting;
- > to reduce the reject level;
- > to increase production.

Project implementation period

2025-2030

Project finance

Total investment costs:

3.2 mln. USD

Source:

Investor's resources - 3.2 mln. USD

Modernization of the oxygen station of workshop № 10 through the installation of new equipment for the production of liquid oxygen

To obtain oxygen from atmospheric air, Gomel Foundry Plant Tsentrolit JSC has an oxygen station.

There are two compressor units: 402-VP-4/220 with a power consumption of 68 kW and 2VM2.5-5/221 with a power consumption of 75 kW.

Project implementation period

2020-2023

Project finance

Total investment costs:

98 ths. USD

Source:

Own resources - 98 ths. USD



Modernization of the compressor section of workshop №10 through the installation of the reciprocating compressor 2VM4-27/9

The introduction of the compressor **2BM4-27/9**, with a capacity of 144 kW will allow to provide saving of electrical energy due to the withdrawal from operation of 2 compressors VC-100/8 with a total capacity of 159 kW. The simplicity of the design of the reciprocating compressor **2VM4-27/9** will enable the possibility of self-service, as well as will reduce the amount of consumables.

Project implementation period

2022-2023

Project finance

Total investment costs:

49 ths. USD

Source:

Own resources - 49 ths. USD



Modernization of induction electric furnaces in workshop №5

The electric induction furnaces "NYT-10" and "NYTM-6" are significantly worn out and have been in operation for over 35 years. Considering that the electric furnaces of the enterprise consume a significant share of the plant's energy consumption, measures to save electricity through the modernization of Gomel Foundry Plant Tsentrolit JSC can provide significant energy savings with high economic efficiency of projects.

Project implementation period

2022-2023

Project finance

Total investment costs:

1.3 mln. USD

Source:

Own resources – 1.3 mln. USD



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INVESTMENT OPPORTUNITY
Launching the high-performance assembly production of electrical measuring devices in JSC VZEP for 2017-2020





Company Overview

JSC VZEP is one of the most high-tech enterprises, whose history is connected with the originating and development of the device engineering industry in the Republic of Belarus.

For more than six decades, the plant has been producing and supplying domestic and foreign markets with products designed for normal and special operating conditions.

The devices of the plant are used in transport and aviation, in industrial enterprises and in residential buildings, in thermal and hydroelectric power plants.





The territory of JSC Russian VSEP - 4,7947 ha Production area - 35940 sq. m.





Technological capability

Production of JSC VZEP is equipped with the modern technological equipment, the technology of SMD-mounting on printed circuit boards by means of highperformance automatic machines is applied that allows to provide the high level of quality of devices.





Existing production facilities are updated, new high-performance equipment is purchased, modern advanced technological processes are introduced, innovative products are mastered and prepared for production.

Technological stages

- pressing reactoplastics materials;
- casting and processing of thermoplastic materials;
- stamping the flat, three-dimensional;
- mechanical treatment;
- galvanization;
- coating application of paints;
- assembly production;
- automated assembly of printed circuit boards;
- application of moisture-proof coatings.



Railway and road access:

✓ State roads: 14 km.

Availability of communications:

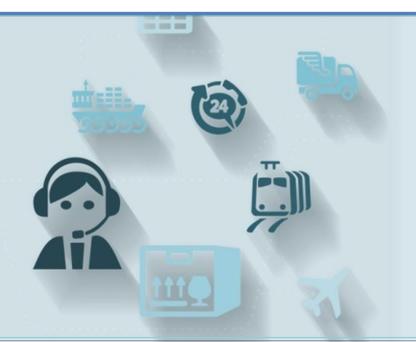
- Electricity
- Water pipeline
- Gas pipeline

Land plot and production area:

- ✓ Land plot (area: 5,8811 hectares, purpose: location of real estate, communications).
- Constructions (size: 58246,03 sq.m, purpose:industrial buildings, 2 dormitories, dining room, isolated rooms.

Other infrastructure:

- Warehouses, logistics terminals (area: 6324,2 m3, description: general warehouses).
- An option to expand the product line and increase the production capacity.







Certificate of conformity IATF 16949:2016



Certificate of conformity ISO 9001:2015



Certificate of conformity STB ISO 9001-2015

INVESTMENT OPPORTUNITY:

Launching the high-performance assembly production of electrical measuring devices in JSC VZEP for 2017-2020

Overview of the Investment Project



Technical re-equipment of existing production, automation of existing processes in order to improve quality, reduce production costs and maintain competitiveness in existing markets and the conquest of new ones.



The PURPOSE

Launching the high-performance assembly production of electrical measuring devices in line with the European standards.

PREREQUISITES

JSC VZEP is a leading enterprise in the Republic of Belarus for the development and production of electrical measuring devices used in automotive engineering, aviation, energy, housing and industrial enterprises.

OBJECTIVES

Technical re-equipment of existing production, automation of existing processes in order to improve quality, reduce production costs and maintain competitiveness in existing markets and the conquest of new ones.

THE ADVANTAGES OF THE PROJECT

Technical re-equipment of existing production, automation of existing processes in order to improve quality, reduce production costs and maintain competitiveness in existing markets and entering the new ones.





Project financing

Total investment costs of the project:

3689 thsd. USD

Source:

Own funds— 1 280 thsd. USD Long-term loans— 2 409 thsd. USD



CONTACTS



JSC VZEP

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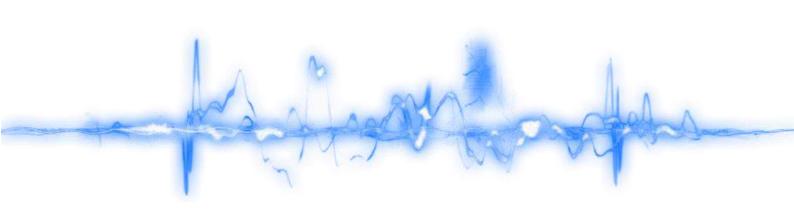


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INVESTMENT OPPORTUNITY SETTING UP NEW PRODUCTION FACILITIES ON THE BASE OF JSC "BELFA"

JSC "BELFA"

Location

Zhlobin, Gomel region

Structure of property

- Republic of Belarus- 65,92 %
- Private individuals 32,23 %
- Legal entities- 1,95 %
- 6,7 mln USD (6,01 mln EUR)

Statutory fund

Main business areas

- · Manufacture of knitted and crocheted fabrics
- Heat production
- Manufacture of garments
- Production of nonwoven textile materials

Availible for rent and sale facilities

The area of unused industrial, office and auxiliary premises - 60 386,1 m ²

Availible for rent, sale and setting up new productions

Location: Zhlobin, Gomel region

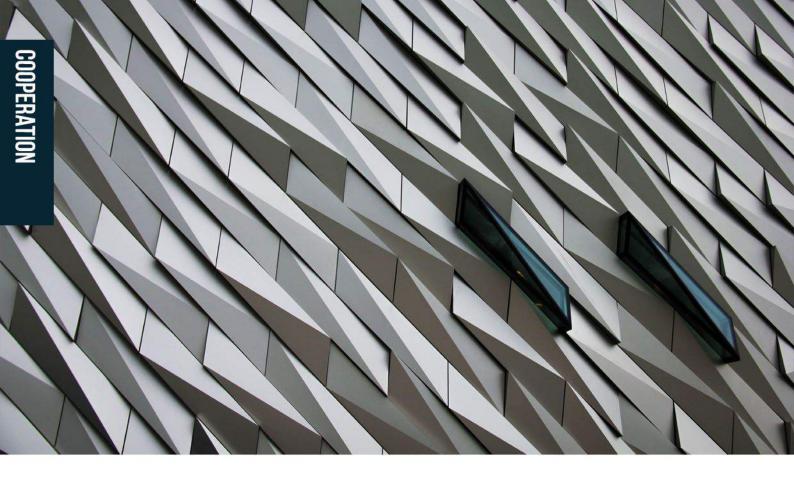
There is an access road, railway tracks, public transport is organised

Sale proceeds in 2018

8, 882 mln USD (8,88 mln EUR)

Competitive advantage

- · High quality and wide range of products
- Proximity to the raw material base (92 % of the total base - from the Republic of Belarus)
- Access to the railway road with a ramp



AREAS OF COOPERATION

JSC BELFA IS INTERESTED IN SEARCH OF POTENTIAL PARTNERS FOR THE ORGANIZATION OF NEW PRODUCTIONS

Organization of production facilities for sewing the following goods:

 decorative purpose (bedspreads, plaids and capes),

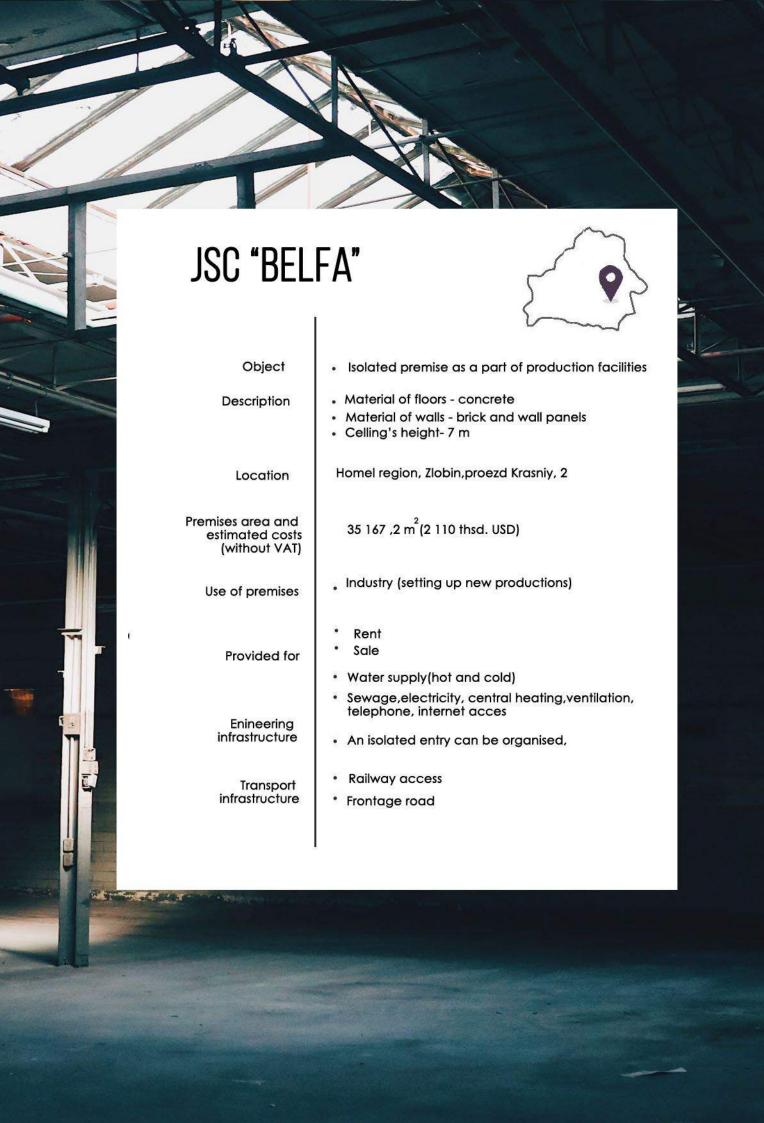
 outerwear for children and adults (jackets, jackets, vests, capes, scarves),

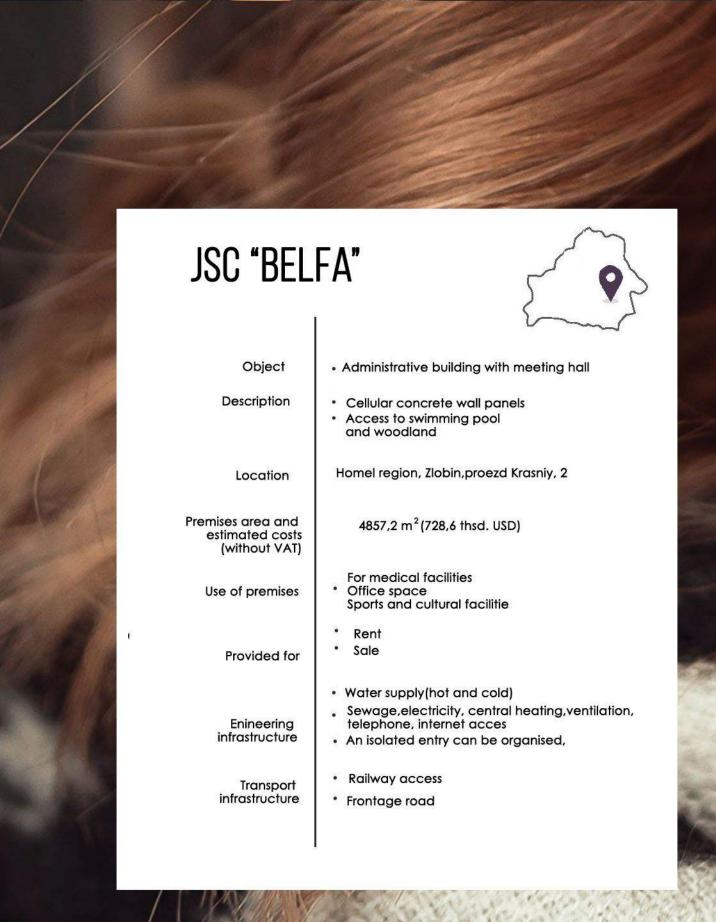
decorative rugs (with wool, animal images),

 bedding of various sizes with wool attachment (blankets, pillows, mattress covers)

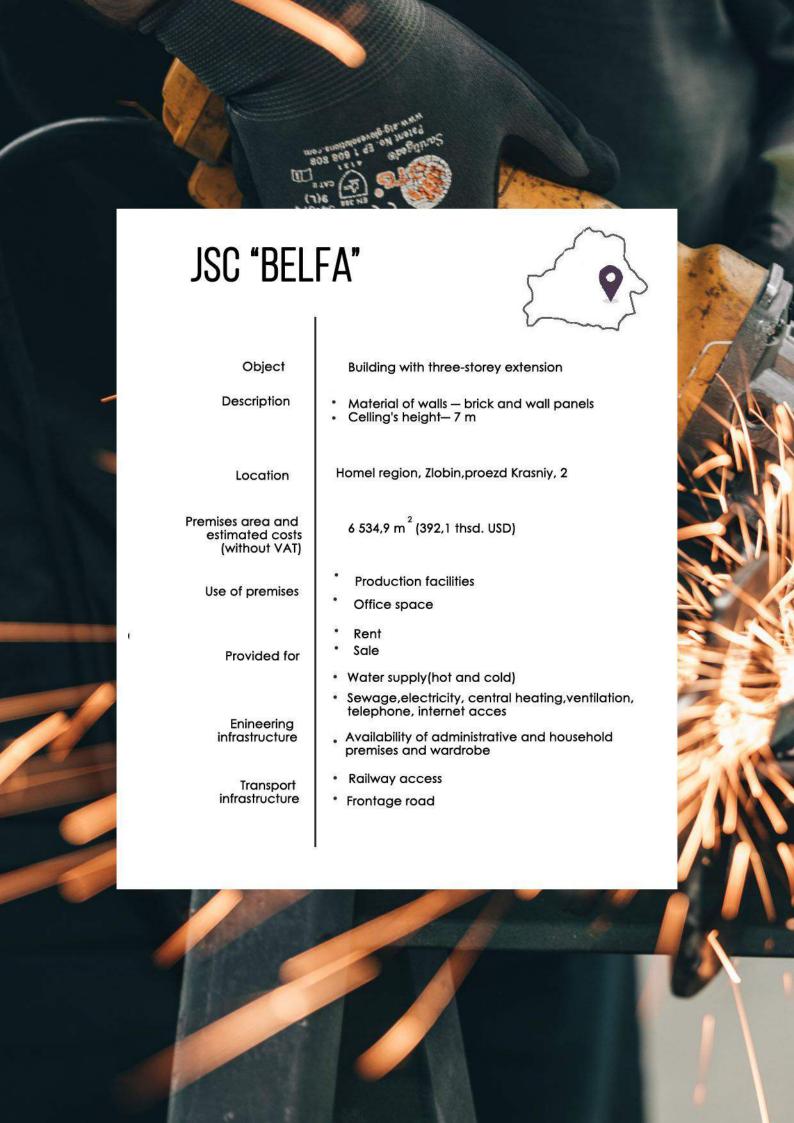
 costumes for adults and children (including hats masks or without them),



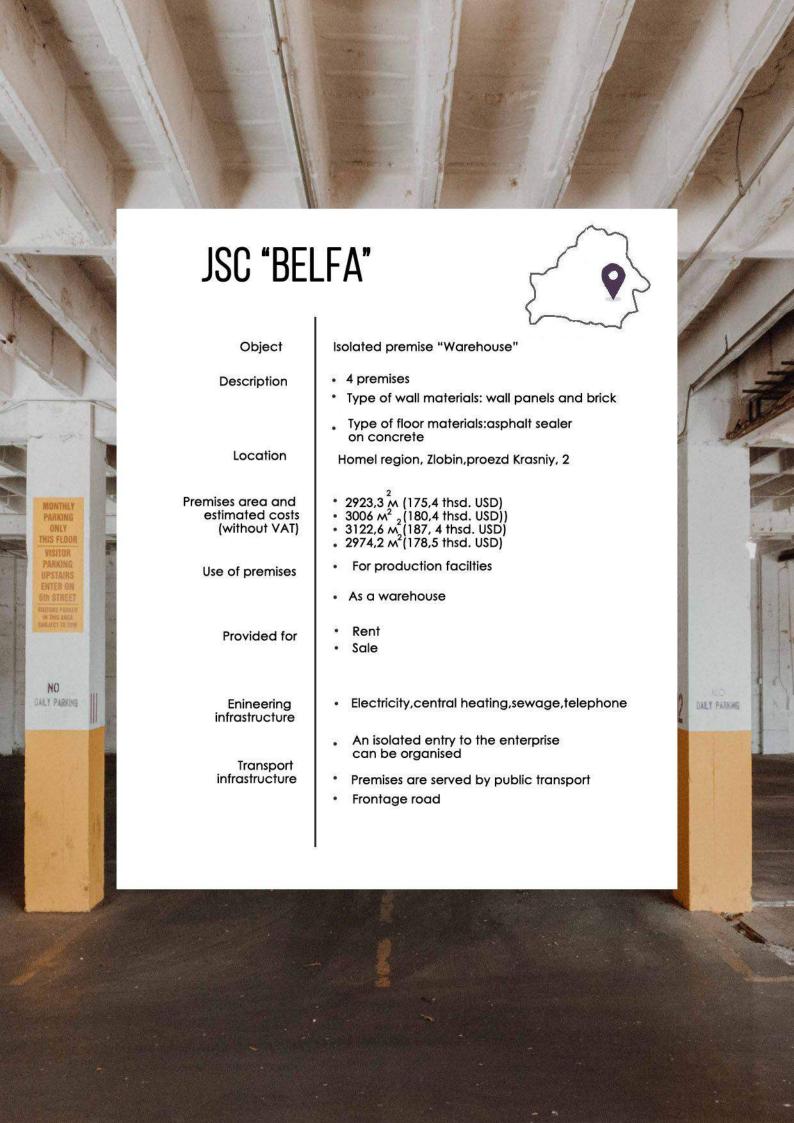
















ABOUT PROJECT

PURCHASE OF STATE OWNED SHARES OF JSC "KUPALINKA" - ONE OF THE LEADING MANUFACTURER OF KNITWEAR IN THE REPUBLIC OF BELARUS -IS PROPOSED FOR CONSIDERATION

PROPOSED TRANSACTION ()



FUTHER STEPS **(2)**



The Government of the Republic of Belarus is interested in the partnership of JSC "Kupalinka" with a strategic investor in order to further develop the Company.

It is proposed to consider such a form of cooperation as the purchase of shares owned by the state.

The purpose of this document is to present the Company to potentially interested investors.

The recipients - are invited to sign a confidentiality agreement to obtain more detailed information about the Company.

JSC "KUPALINKA''

Location

Soligorsk, Minsk region, (130 km from Minsk)

Property structure

Republic of Belarus - **84,46**% Individuals- **15,54**%

Main activity

Production of:

- · outerwear for adults and children,
- underwear for men, women and children, other types of clothing and accessories,

Such services as knitting, cutting, tailoring of knitted products are provided

Raw materials

25% -of the total demand in fabrics is fulfilled by JSC "KUPALINKA", dyeing is carried out under a tolling base by Belarusian manufacturers (OJSC "Svitanak", JSC "8 March");

75% -purchased in painted and printed form on the foreign market (Estonia, Turkey, Poland)

Sales in 2018

8, 108 thsd. USD (7.301 thsd.EUR)

Personnel

HEADCOUNT

AVERAGE MONTHLY SALARY

Average monthly salary (data on 01.01.2019)





JSC "KUPALINKA"

The total volume of shipped products amounted to

Collection of JSC "KUPALINKA" includes more than 1000 models

CAD software contributes to the monthly renewal of up to 30% of the assortment.

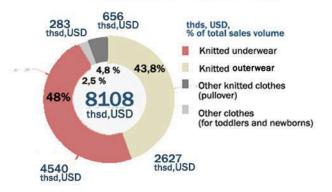
Constantly updated drawings and colors of knitted fabrics.

For the 9 months of 2018, the growth rate of exports of goods was recorded 138,5%;

Profitability: 5,8%

the growth rate of output in actual prices was 125,3%

VOLUME AND STRUCTURE OF SALES



VOLUME OF PRODUCTS RELEASED IN 2018



GEOGRAPHY OF SALES



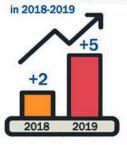
JSC "KUPALINKA"

DEVELOPED COMMERCIAL DISTRIBUTION NETWORK

- Effective comercial distribution network, both in Belarus and abroad, measures are being taken for its further development
- In 2019, it is planned to further expand the retail network in Minsk and the regions,
- Activities are carried out on ongoing basis to find suitable retail space



DYNAMIC OF STORE OPENINGS



DEVELOPMENT OF DISTRIBUTION NETWORK



















NATIONAL AGENCY OF INVESTMENT AND PRIVATIZATION

REPUBLIC OF BELARUS





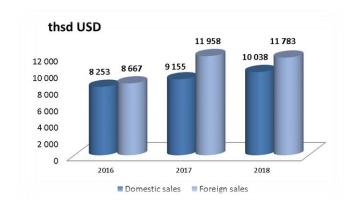


OJSC "LENTA"

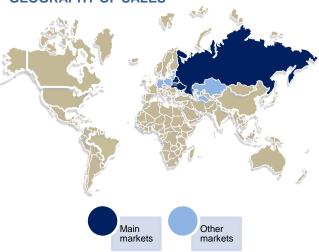
State institution "National Agency of Investments and Privatization" (NAIP) with support of the World Bank is implementing the project of attracting strategic investors to Belarusian light industry enterprises and invites you to consider investing in OJSC "Lenta" – the leading Belarusian manufacturer of textile haberdashery and curtain products, as well as medical dressings.

The purpose of this document is to present the Company to potentially interested investors. The recipients of this document are invited to sign a confidentiality agreement to obtain more detailed information about the Company.

PROCEEDS



GEOGRAPHY OF SALES



PROPERTY STRUCTURE



COMPANY OVERVIEW

- OJSC "Lenta" was founded in 1961 and is the leading Belarusian producer of textile haberdashery, curtains, garments, medical dressings. Long-term work experience and high business reputation of the Company have allowed forming a strong brand, which causes trust among consumers.
- OJSC "Lenta" has achieved high rates of economic efficiency and has a stable financial position, while continuing intensive development and further diversification of its activities and markets.
- At the end of 2018 the Company received a net profit of \$ 1 064 thousand USD. The absolute revenue figure received in 2018 was 21 822 thousand USD.
- OJSC "Lenta" carries out continuous work to update the technological equipment, expand the assortment and maintain an appropriate quality control system for the products that meet high industry standards.
- The Company has developed an effective distribution network both in Belarus and abroad. Significant efforts are being made to further develop it. More than 50% of Company's products are exported. Effective production and high quality of the products allowed the Company to become one of the main players on the Russian market, as well as to export its products to Ukraine, Poland, Germany, the Baltic States, Moldova, Armenia, Kazakhstan and Turkmenistan.

PROPOSED TRANSACTION

The Government of the Republic of Belarus is interested in the partnership of OJSC "Lenta" with a strategic investor in order to further develop the Company.

NAIP is ready to consider various forms of cooperation which may include purchase of state owned shares, purchase of additionally issued shares, a joint venture and/or other investment models.

FACTORS OF INVESTMENT ATTRACTIVENESS



ACCESS TO THE MARKET DEMONSTRATING SUSTAINABLE GROWTH

- ✓ In 2019, analysts forecast further development of the Belarusian economy GDP growth is expected at 2,5%. This lays the foundation for further positive dynamics of revenue and profits of OJSC "Lenta" as the Belarusian market is one of the key markets for the company's products' sale.
- ✓ Membership of the Republic of Belarus in the Eurasian Economic Union opens to the Company unimpeded access to the markets of Russia and Kazakhstan, forming a significant potential for further expansion.
- ✓ Products of OJSC "Lenta" is in great in the garment, knitted, shoe sub-sectors of light industry, electrical, furniture, chemical and other industries, as well as in medicine. About 85% of the company's products' sales fall on the corporate segment.



STRONG BRAND AND HIGH QUALITY OF PRODUCTS

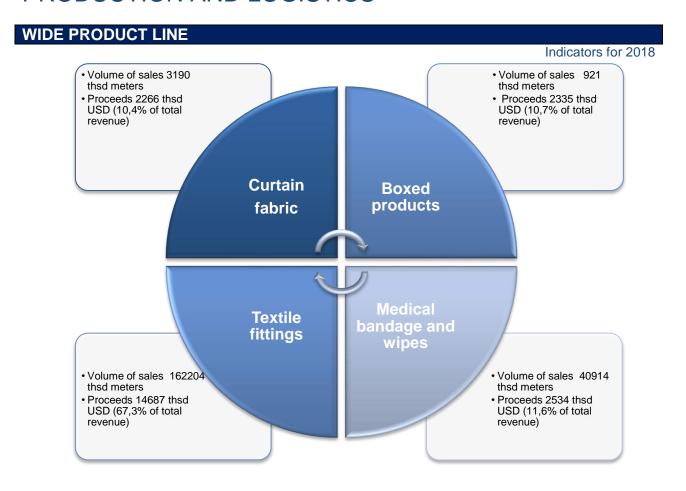
- ✓ Products of OJSC "Lenta" are models for the light industry segments of the market which is confirmed by numerous awards and prizes for achievements in the field of quality.
- ✓ The company has certified the current quality system for compliance with the requirements of STB ISO 9001-2009, and also certified the environmental management system for compliance with the requirements of STB ISO 14001-2005 and the OSH management system for compliance with the requirements of STB 18001-2009.



EFFICIENT TECHNOLOGIES AND DEVELOPED INFRASTRUCTURE

- ✓ OJSC "Lenta" has a well-developed production base, which includes a number of technologically connected blocks that allow in complex to create additional added value: tapes, plaiting, curtains, dyeing, production of textile fastenings "Contact" ("Velcro"), sewing, medical products.
- ✓ Company's equipment has been supplied by the best manufacturers in the respective segment, including Semel / Italy, Karl Mayer / Germany, Jacob Muller / Switzerland, Brother / Japan, Comez / Italy and Juki / Japan. On an ongoing basis, investments are made in the renewal of fixed assets.
- ✓ Total area of production and administrative premises of OJSC "Lenta" is about 40 thousand square meters.
- ✓ The Company is located in Mogilev, the third largest city in the Republic of Belarus, located 200 km from Minsk and 76 km from the border with the Russian Federation. The developed industry of the city contributes to the development of a resource and sales base; good transport links allow to optimize logistics.
- ✓ OJSC "Lenta" conducts an active marketing and distribution policy. Through its own distribution network, more than 70% of products are sold in the Republic of Belarus.

PRODUCTION AND LOGISTICS



SKILLED STAFF

DEVELOPED COMMERCIAL DISTRIBUTION NETWORK

- ✓ The number of employees of OJSC "Lenta" is 1080 people.
- ✓ About 70% of all employees work in the Company for more than 5 years.
- ✓ Human Recourse policy of OJSC "Lenta" provides for a program of continuous professional development.

Trading network of OJSC "Lenta" includes:

- three branches: in Gomel, Brest and Vitebsk;
- five stores: four in Minsk, the others in Mogilev, Bobruisk, Grodno;
- two warehouses (in Minsk and Grodno) with functions of wholesale distribution centers;
- 65 branded sections in various retail sites.

FURTHER STEPS OF THE INVESTOR AND CONTACT INFORMATION

The purpose of this document is to present the Company to potentially interested investors. The recipients of this document are invited to sign a confidentiality agreement to obtain more detailed information about the Company.

In case of interest, you can contact us at the addresses and by the phone numbers listed below.





NATIONAL AGENCY OF INVESTMENT AND PRIVATIZATION

REPUBLIC OF BELARUS



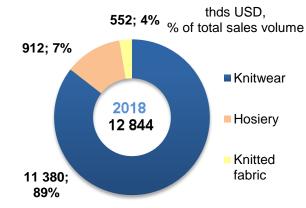


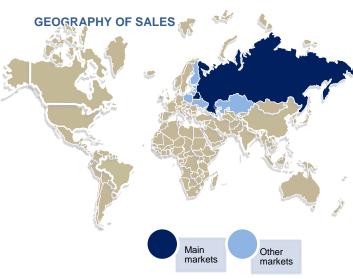
OJSC «8 MARTA»

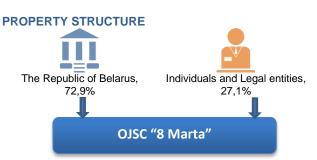
State institution "National Agency of Investments and Privatization" (NAIP) with support of the World Bank is implementing the project of attracting strategic investors to Belarusian light industry enterprises and invites you to consider investing in OJSC "8 Marta" – the leading Belarusian manufacturer of knitted goods.

The purpose of this document is to present the Company to potentially interested investors. The recipients of this document are invited to sign a confidentiality agreement to obtain more detailed information about the Company.

VOLUME AND STRUCTURE OF SALE OF GOODS







COMPANY OVERVIEW

- The company was founded in 1926 and for more than 90 years of its history has formed a stable tradition of producing high-quality products and has emerged as a leader of industry in the Republic of Belarus.
- ✓ OJSC "8 Marta" produces a wide range of knitted products, including dyed and printed knitted fabrics, clothes, hosiery. The main priorities of the Company's assortment policy are quality and comfort of products, its environmental friendliness and compliance with the most relevant market trends.
- In 2018 the company produced knitwear and hosiery, knitted fabrics for the amount of 15.1 million US dollars. The sales profitability indicator was 2.6%.
- ✓ OJSC "8 Marta" products are mainly sold on the domestic market of the Republic of Belarus (88.8% of total sales in 2018). The main export markets of the Company are the Russian Federation and other members of the Eurasian Economic Union, Ukraine, Poland, Estonia, Lithuania, Latvia, Finland. In 2018 goods were exported to the amount of 1559.6 thousand US dollars.
- ✓ OJSC "8 Marta" conducts an active investment activity. Systematically conducted technical reequipment of production forms a positive economic effect and ensures an increase in the level of competitiveness of the Company's products in the domestic and foreign markets.

PROPOSED TRANSACTION

The Government of the Republic of Belarus is interested in the partnership of OJSC "8 Marta" with a strategic investor in order to further develop the Company. NAIP is ready to consider various forms of cooperation which may include purchase of state owned shares, purchase of additionally issued shares, a joint venture and/or other investment models.

FACTORS OF INVESTMENT ATTRACTIVENESS



ACCESS TO THE MARKET DEMONSTRATING SUSTAINABLE GROWTH

- ✓ □ In 2019, analysts forecast further development of the Belarusian economy GDP growth is expected at 2.5%. This lays the foundation for further positive dynamics of revenue and profits of OJSC "8 Marta" as the Belarusian market is one of the key markets for the company's products' sale.
- ✓ ☐ Membership of the Republic of Belarus in the Eurasian Economic Union opens to the Company unimpeded access to the markets of Russia and other EEU's members, forming a significant potential for further expansion.



STRONG BRAND AND HIGH QUALITY OF PRODUCTS

- ✓ Long-term work experience and high business reputation of OJSC "8 Marta" allowed to form a strong brand that causes consumers' trust.
- ✓ In order to expand the consumer segment and take up free market niches, the Company developed the trademark VOSMAE.
- ✓ The assortment of goods produced under a new brand is aimed at young generation consumers and complements the classic assortment produced under the main brand.
- ✓ A significant aspect of Company's policy regarding the quality of products is priority using of natural materials such as cotton, rayon, linen, bamboo and wool.
- ✓ The Research Department of the Company constantly develops innovative materials and products, and the design team ensures that the products produced correspond to market trends and customer's needs.



✓ The quality management system according to the STB ISO 9001-2015 standard allows to maintain and strengthen Company's achieved results for the production of products with the highest consumer properties.

PRODUCTION AND LOGISTICS

EFFICIENT TECHNOLOGIES AND DEVELOPED INFRASTRUCTURE

√ The production structure of OJSC "8 Marta" includes five main workshops::

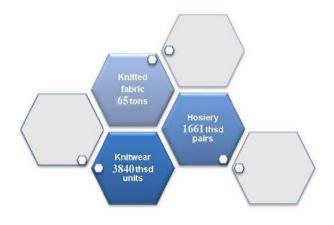


OJSC "8 Marta" owns 783 units of technological equipment, including by individual types:

- hosiery 217 units;
- knitting 38 units;
- sewing, cutting 504 units;
- color-finishing 24 units.
- The Company's equipment has been purchased from the best manufacturers in the relevant manufacturers segment, including First (Italy), DMS (Turkey), Lafer (Italy).
- ✓ On an ongoing basis investments are made in the renewal of fixed assets.
- The company is located in Gomel, the second most populous city in the Republic of Belarus, located in the south-east of the country, on the border with the Russian Federation and Ukraine.
- ✓ The factory of OJSC "8 Marta" covers an area
 of 3.9 hectares, the total area of production and
 auxiliary buildings and facilities is 55.2 thousand
 square meters. Part of the Company's areas is
 not involved in the current production process,
 so there is potential for expanding the scale of
 activities and developing new production areas.

WIDE ASSORTMENT AND MODERN PRODUCT DESIGN

Production in 2018 in physical terms



- The company continuously improves the assortment and develops new types of products. During the year specialists of OJSC "8 Marta" develop and introduce into production more than 600 models of knitted products and over 50 models of hosiery products. Drawings and colors of produced knitted fabrics are updated constantly.
- ✓ The combination of modern design and practicality ensures a consistently high demand for the Company's products.



DEVELOPED COMMERCIAL DISTRIBUTION NETWORK

The Company has formed an effective distribution network both in Belarus and abroad, and considerable efforts are being made to further develop it. In the Republic of Belarus, OJSC "8 Marta" has thirty-one company stores and three warehouses. The Company also owns 4 trading houses located in Russia, Ukraine and Kazakhstan.

Development of the distribution network of OJSC "8 Marta"



The network of firm stores of OJSC "8 Marta" in the Republic of Belarus



- ✓ The most active phase of the expansion strategy for the distribution network was implemented by the Company in 2017 23 new retail outlets were opened.
- ✓ At present, OJSC "8 Marta" is creating its own online store.

SKILLED STAFF

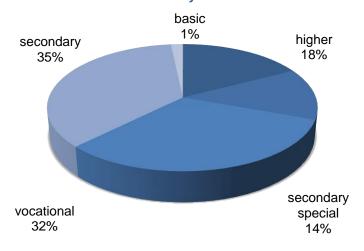


The number of employees of OJSC "8 Marta" directly engaged in the production process is **1457** people.

About 40% of the total staff has been working in the Company for more than 10 years.

- Human Recourse policy of OJSC "8 Marta" provides for a program of continuous professional development.
- ✓ The average monthly salary of the Company's industrial and production personnel in 2018 was 283 USD.

Personnel structure by level of education



NATIONAL AGENCY OF INVESTMENT AND PRIVATIZATION

The agency is ready to help foreign investors interested in doing business in Belarus:

- Provision of information on investment opportunities, preferential regimes and represented benefits, industries, legislation
- Submission of current information on investment projects
- Selection and presentation of information on options for land and premises
- Search for potential partners for the implementation of the investment project, organization of meetings, negotiations with potential partners for establishing cooperation

- Providing a platform for negotiations and support of the investor during negotiations
- Organization of visits to the Republic of Belarus (development of a program of stay, assistance in obtaining a visa)
- Representing the interests of the investor in negotiations with government representatives on the implementation of investment projects, as well as on improving doing business in the Republic of Belarus
- Subsequent support



CONTACTS



NATIONAL AGENCY OF INVESTMENT AND PRIVATIZATION

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IMPORTANT POINT

This document has been prepared for informational purposes only. It is provided to assist the recipients of the document in their decision on whether to further examine the proposed transaction.

All information contained in the document can be further clarified and supplemented by the National Agency of Investment and Privatization.



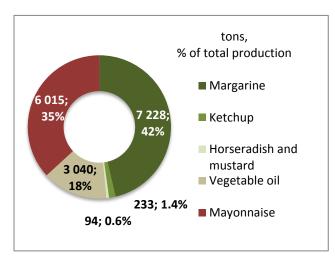


OJSC «MINSK MARGARINE PLANT»

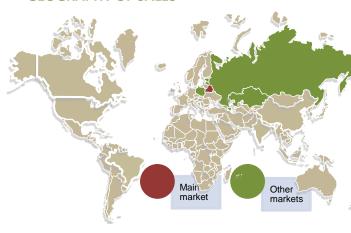
State institution "National Agency of Investments and Privatization" (NAIP) with support of the World Bank is implementing the project of attracting strategic investors to Belarusian food industry enterprise and invites you to consider investing in OJSC "MINSK MARGARINE PLANT" (hereinafter called the "MMP") – the largest enterprise of fat-and-oil industry in the Republic of Belarus.

The purpose of this document is to present MMP to potentially interested investors. The recipients of this document are invited to sign a confidentiality agreement to obtain more detailed information about the company.

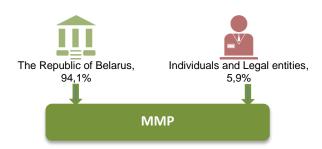
VOLUME AND STRUCTURE OF PRODUCTION (in physical terms)



GEOGRAPHY OF SALES



PROPERTY STRUCTURE



COMPANY OVERVIEW

- ✓ MMP was founded in 1951 and for more than 65 years of its history has formed a stable tradition of producing high-quality products and has taken a leading position in food industry in the Republic of Belarus.
- The company produces more than 50 items of products, including refined oils and fats, margarine, spices and seasonings (mayonnaise, ketchup, horseradish, mustard and other sauces). The main priorities of the MMP product line policy are the quality and safety of manufactured products, its compliance with the highest industry standards.
- ✓ During the period of January-November 2018 the volume of production in physical terms exceeded 17 thsd tons, revenue from product sales amounted to 19.5 mln US dollars.
- ✓ MMP products are supplied mainly to the domestic market of the Republic of Belarus (98.1% of the total production in 2018). Among the main export markets of the enterprise are Russian Federation, Poland, Estonia, Latvia, Georgia, Armenia, Kazakhstan and Azerbaijan.

PROPOSED TRANSACTION

The Government of the Republic of Belarus is interested in the partnership of MMP with a strategic investor in order to further develop the company.

NAIP is ready to consider various forms of cooperation, which may include purchase of state owned shares, purchase of additionally issued shares, a joint venture and/or other investment models.

FACTORS OF INVESTMENT ATTRACTIVENESS



ACCESS TO THE MARKET DEMONSTRATING SUSTAINABLE GROWTH

- ✓ In 2019, according to EBRD analysts, a further acceleration of the development of the Belarusian economy is expected – GDP growth is projected at 2.5%. This lays the foundation for further positive dynamics of earnings and profits of the MMP, as the Belarusian market is the key to sales of the company's products.
- ✓ Membership of the Republic of Belarus in the Eurasian Economic Union opens to the Company unimpeded access to the markets of Russia and other EEU's members, forming a significant potential for further expansion.



STRONG BRAND AND HIGH QUALITY OF PRODUCTS

✓ Long-term work experience and high business reputation of MMP allowed creating the strong brand with high consumers' credibility. Since 2001 MMP's products have been produced mainly under the "Golden Drop" trademark.

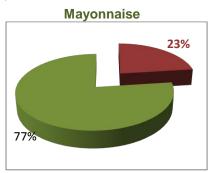
- ✓ Taking into account market conditions in the relevant segment, the company is actively developing cooperation with major retailers in the Republic of Belarus producing products under their trademarks.
- ✓ In order to expand the consumer segment and occupy free market niches, MMP is continuously working on drawing up new formulas of products and introducing modern production technologies.

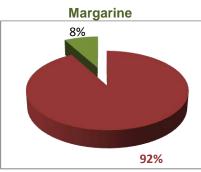


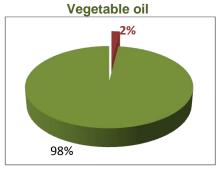




- The quality management system, according to the standard STB ISO 9001, operating at the enterprise since 2006, allows to maintain and strengthen the results achieved in the production of goods with the highest customer appeal of the products. Since 2012, the MMP has introduced a food safety management system based on the analysis of hazards and critical control points (HACCP) for the production and storage of products.
- ✓ MMP's products occupy significant share in the respective segments of the Belarusian retail consumer market. Data on the share of the domestic market for the company's products (in %) by key product groups in 2018 are shown in the following diagrams:







Market sha

Market share of MMP's products

A

Market share of other manufacturers

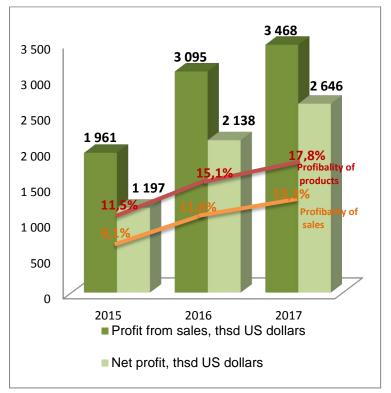
INDICATORS OF ECONOMIC EFFICIENCY AND FINANCIAL SUSTAINABILITY

HIGH PERFORMANCE INDICATORS



MMP has achieved high efficiency of economic indicators:

- ✓ During the period of January-November 2018, the company received an operating profit in the amount of 1.9 mln US dollars, net profit amounted to 1,23 mln US dollars.
- ✓ During 2015-2017, there was a steady trend towards improvement in the financial results of the MMP: the values of the main indicators of profitability in the specified period increased by 1.5 2 times.



PRODUCTION AND PERSONNEL

FAVORABLE LOCATION AND DEVELOPED INFRASTRUCTURE

✓ MMP is located in the center of Minsk – at Kozlova str., 27. The company occupies a territory exceeding 3.3 hectares, the production area (including administrative and auxiliary premises) is 23 thousand square meters.



QUALIFIED PERSONNEL



- The number of employees of the MMP in 2018 was about 418 people, where 400 are directly involved in the production.
- ✓ The personnel policy of the company provides for a program of continuous staff development.

FURTHER STEPS OF THE INVESTOR AND CONTACT INFORMATION

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Konfa is a modern pastry enterprise producing gingerbread, oatmeals and wheat biscuits, classic waffles and pectin zephyr.

This investment project calls for an upgrade of Konfa technologies and an improvement of its financial position.

AAT KONFA

Location

106 Gorodskaya street, Molodechno, Minsk region (73 km off Minsk, 120 km off Vilnius)

Charter capital

EUR87,300 (\$99,500).

Primary activity

Production of pastry: gingerbread, oatmeals and wheat biscuits, classic waffles and pectin marshmallows. The range includes over 100 items.

Total area

3.56 ha

Average monthly wage in 2017

EUR 629 280 (717 340 USD).

Certification

All products conform to the Eurasian Economic Union's TR TS 021/2011, TR TS 022/2011 and TR TS 029/2012 requirements for food additives, flavorings, and processing aids.

The management system is certified to comply with STB ISO 9001 - 2015.

HACCP-based procedures developed and implemented to ensure food safety.

Raw materials

Sugar, flour, confectionery fat and margarine are bought directly from manufacturers without middlemen to cut costs. The proportion of domestic materials is 79.5 %.



ABOUT PROJECT

THIS INVESTMENT PROJECT CALLS FOR AN UPGRADE OF KONFA PRODUCTION TECHNOLOGIES AND AN IMPROVEMENT OF ITS FINANCIAL POSITION.

SALES MARKET

The company sells most of its products on the domestic market. Approximately 5% of its production is exported to Russia, Germany, Israel, USA, Canada and other countries.

PRODUCTION FACILITIES

The total area of production facilities is 3,720m², the total volume is 23,500m³.

FINANCIAL TARGETS

- Current liquidity ratio 1.24;
- Working capital to current assets ratio 1.19;
- Current asset coverage ratio 1.07.



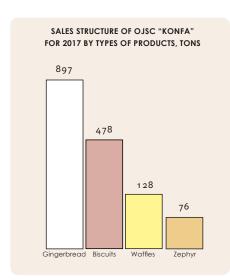
- Wide range of pastry (more than 100 items)
- Quality confirmed by absence of consumers' complaints
- STB ISO 9001 2015 and HACCP management system
- Production doesn't consist chemical preservatives
- Food safety

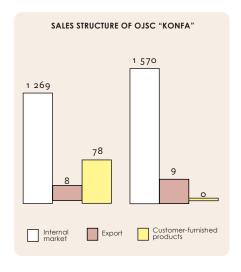
REVIEW OF COMPANY DEVELOPMENT

The company's strategic task is to upgrade its production technologies and launch new products. This strategy is expected to improve its financial position, enable to company to pay off its debts, invest its profits in new technologies, expansion and increased sales.

A study of Minsk's shops found few of the company's products on shelves, not enough to attract shoppers' attention or no products at all. A poll of consumers showed that consumers are unaware of the brand, which means that its marketing strategy is ineffective, and its marketing and sales departments are doing a poor job.

Meanwhile, over the last few years there has been a trend toward greater demand





for healthy food and natural confectionery. Customers are looking for products to satisfy their functional and dietary needs. While developing its marketing strategy, the company should promote its strengths to consumers, in particular use modern methods to advertise its quality and safe food.

Packaging is also important for successful product marketing. It makes the first impression. Therefore attractive packaging guarantees higher sales. According Business Insider, goods have just 7 seconds to make an impression on a customer. Packaging is the face of product that influences consumers' choices and helps them find necessary products. Konfa's packaging does not show its products to their advantage. That's why while drafting

a marketing strategy, it is necessary to address this problem to help the company build long-term relationships with its customers.

Analyzing prospective expansion, it is necessary to take into account Russia as a potentially huge market. The Chinese market also has a great capacity. However, China has high protective duties, for example, a 60% duty on flour imports. Certification requirements also restrict access to this market other barriers include the language and specific eating habits. The Chinese market may open up in the future, and therefore, in our opinion, the company should keep its foothold there.

Outdated and worn out equipment is a drag on Konfa's development. It

prevents it from cutting costs and making its products competitive in terms of prices.

The company's revenue from sales was expected to amount to EUR4.6 million (\$5.1 million) in 2018. Profits were estimated to total EUR372,900 (\$425,200), the sales margin was estimated at 10.3 %, the return on sales will be 8.5%. Costs were estimated at EUR 3.5 million (\$4 million).

MARKET REVIEW

1. Republic of Belarus

Confectionery production and sales are on the rise in Belarus. The major players are companies controlled by the central government that produce confectioneries both for the domestic market and for export. They dominate on the domestic market and exports account for greater share of their business compared with their competitors.

The second group includes companies controlled by local governments with Vitba (Vitebsk) being the largest of them.

Some companies are accountable to the Ministry of Agriculture and Food. Such manufacturers operate in nearly every regional city. They produce a limited range of products (mainly gingerbread and biscuits) and sell them mainly to consumers in these regional cities.

There are also private companies like Michaella (sweets, dried fruit in chocolate).

2. Russian Federation

Pastry is the largest segment of the confectionery market in Russia. Law average prices make these products quite affordable.

Large bakeries and confectionery factories are the largest producers of pastry. Most companies sell them in the region where they are located because there are many producers in every Russian region. Russia's confectionery market saturation is close to maximum. The proportion of made-in-Russia gingerbread is close to 100%, while other confections are supplied by both Russian and foreign companies. Russia has nearly 300 gingerbread producers, but only about a dozen of companies play a key

role. Taking into account the fact that the gingerbread market is not as big as that of beer or dairy, producers do not have a wide choice of opportunities to create memorable products. Most companies slightly modify their habitual brand through new taste, packaging, creative glazing and additives. However, modern companies are working to improve quality, delivery and storage conditions. And yet, based on a range of available evaluation criteria, one can clearly see opportunities for growth in this sphere.

Imported confectionery products account for just 5% of Russia's market.

3. Republic of Kazakhstan

With annual production in the region of 180,000 tons, only 30% goes for export.

Domestic pastry production totaled 183,000 tons with four major companies accounting for 85%. AO Rakhat, the biggest one, produces 80,000 tons, followed by AO Bayan-Sulu with 47,000 tons, TOO Almaatinsky Product with 16,000 tons and Hamle with 13,000 tons. In all, the four companies produce 156,000 tons. Aktyubinsk Confectionery Factory is suspended operation as it seeks to attract investment in a major upgrade.

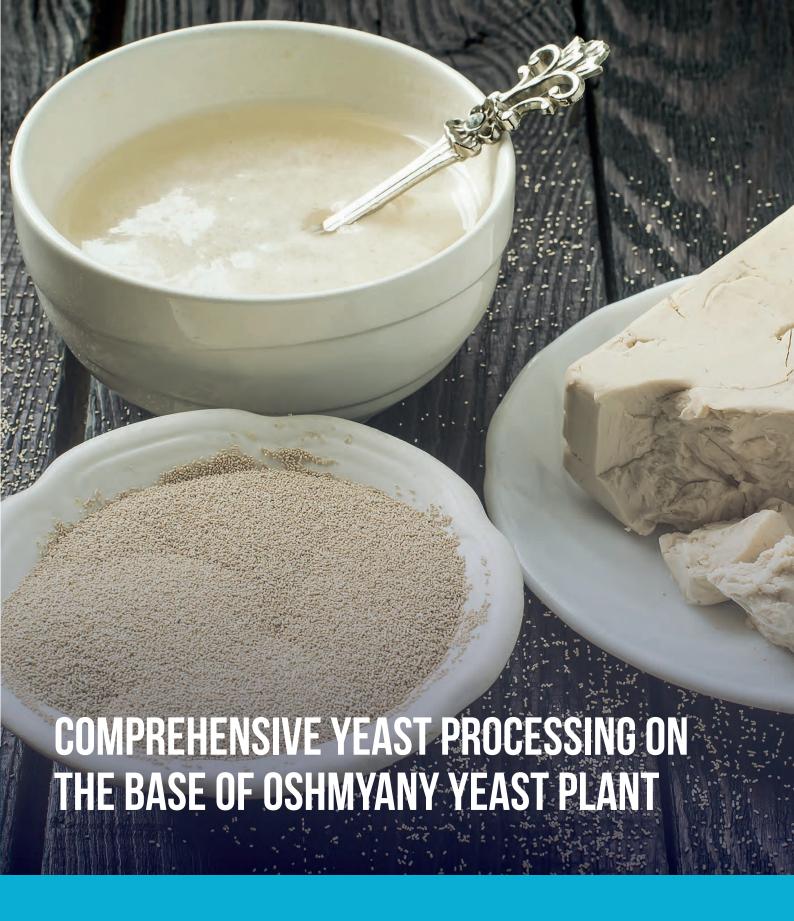
The market was estimated at 227,000 tons in 2016. Local companies produced 183,000 tons; 112,800 tons was imported and 68,800 tons was exported.

The country's confectionery market comprises 49% of domestic and 51%

of imported products. Nearly 35-40% is imported from Russia and 12-13% from Ukraine.

Kazakhstan does not subsidize domestic producers; that is why imported products are cheaper.

Kazakh companies generally produce healthier products. For instance, Russian waffles come with a filling that contains 70% of fat, while Kazakh waffles come with a filling that contains 80% of natural nuts. Obviously, the latter are more expensive. Foreign producers lure consumers with flashy packaging, and spend heavily on advertising and marketing. Packaging accounts for 15% of some products' costs.



The implementation of the investment project will provide a new type of domestic food production - yeast extract, on the basis of which it would be possible to produce a modern adsorbent of mycotoxins, expanding the range of enriched and specialized food products, balancing food products for vitamin and amino acid composition, increasing the

biological value of proteins in animal feed due to the production of high-value proteinvitamin product - feeding yeast.

In general, the project will reduce imports of similar products from the EU, China and the United States and increase the competitiveness of the domestic yeast industry.

OSHMYAN YEAST PLANT

Location

The plant is located in the west of the Republic of Belarus in the town of Oshmyany, 52 km from Vilnius and 133 km from Minsk.

The average annual capacity of output

5 thousand tons per year (the maximum capacity can reach about 400 tons per month at full utilization).

Primary activity

The production of bakery yeast (compressed and dried), as well as the production of dried fodder yeast

Form of ownership

Private

The amount of the authorized capital

245 834 USD (210 715 EUR).

The amount of shares issued

7 375 011

Implement of stocks

98.51% - State Committee on Property of the Republic of Belarus, 1.49% - individuals.

The market value of the branch

450 000-700 000 USD

Land and immovable property

The plant is located on a land plot with a total area of 2.04 ha. Warehouses for storing molasses are located near the Gudogai railway station. The total area of land - 0.37 ha.

Payroll

71 employees

PRODUCTION



Compressed yeast «Stolichnye»



Dry baking yeast



Compressed yeast «Stolichnye»



Dry yeast «Spirtovyye»



Dry yeast «Vinnyye»



ABOUT PROJECT

THE NEED TO RESHAPE THE PLANT IS CAUSED BY **THE OVERSATURATION OF THE MARKET WITH PRESSED BAKERY YEAST**. ON THE TERRITORY OF THE REPUBLIC OF BELARUS CURRENTLY THERE ARE 3 ENTERPRISES WITH A TOTAL CAPACITY OF MORE THAN **30,000 TONS PER YEAR**. AT THE SAME TIME, THE GENERAL MARKET DEMAND OF THE REPUBLIC IS A MAXIMUM OF **7,500 TONS** PER YEAR.

THE GOAL OF THE PROJECT

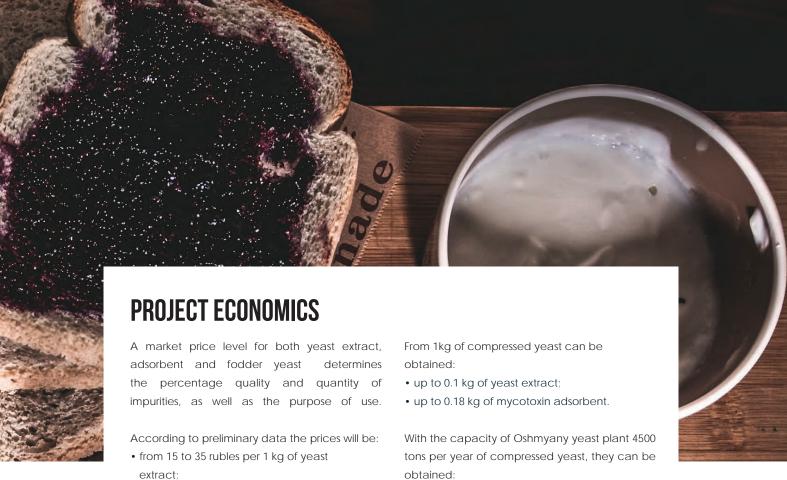
The implementation of technologies for the comprehensive yeast processing to obtain products with higher value added - yeast extract, mycotoxin adsorbent.

INVESTMENT VOLUME

3-7 millions USD/2,5-6 millions EUR (total investments depend on the technology of production of inactive yeast cells).

THE NEEDS OF THE PROJECT

- The technology of obtaining of inactive yeast cells;
- Modernization of existing production and laboratory;
- Construction of additional production capacity, taking into account the technology of inactive yeast cells



- from 8 to 16 rubles per 1 kg of mycotoxin adsorbent.
- up to 450 tons of yeast extract or 6.75 million
- up to 810 tons of mycotoxin adsorbent or 6.48 million rubles

THE ADVANTAGES OF THE **PROJECT**

- · Developed infrastructure and good condition of the production area (land, water delivery, electricity, heating, canalization);
- · Availability of cheap raw materials -molasses from which high-value products can be made;
- · Skilled labor resources with many years of experience;
- · Open access to the local market and the market of the EEU countries;
- · Unique production, which currently has no analogues in the EEU countries;
- Ever-growing demand for high sales.

FORM OF COOPERATION

Currently, measures have been initiated to allocate the plant to an independent legal entity, which will significantly simplify the building of partnerships.

The branch of OJSC "Yeast combine" Oshmyany yeast plant offers the organization of a joint venture in the form of a limited liability company. The company is ready to contribute fixed assets (equipment, real estate) to the authorized fund. The company's directorship is open to discuss any other forms of cooperation.

DESCRIPTION OF THE PRODUCT TO BE MANUFACTURED

YEAST EXTRACT

Yeast extract is a water-soluble fraction of free peptides and amino acids, which is formed as a result of the disintegration of yeast under the action of enzymes or by heating. Yeast extracts initially are made from baking or brewer's yeast grown on molasses.

This extract is used as an independent biologically active food additive, as a flavor additive in food products, as well as an independent food product, including in a medical diet, cosmetology:

FLAVOR ADDITIVE

Yeast extract is a natural flavor enhancer, as, in particular, it contains glutamic, guanidyl and inosinic acids. For this reason, it is used in the food industry as a flavoring agent in the production of sauces, soups and semises.

According to the regulation of the European Council No. 1334/2008, yeast extract as a flavoring additive can be marked with the term "natural".

FOOD PRODUCT

Yeast extract is used as a basis for the production of various spreads, usually with the addition of other ingredients. In the UK and New Zealand pasta called Marmite is produced, in Switzerland - Cenovis, in Australia — Vegemite, in Germany — Vitam-R.

As well as yeast, yeast extract is rich in vitamins B1, B2, B3, niacin, biotin, folic and

pantothenic acid, for this reason it is used in medical diet.

COSMETOLOGY

Yeast, which is used in cosmetics in the form of yeast extract, serve as a powerful energy source, contributing to the renewal of skin cells and improve the metabolism of the dermis and epidermis.

Yeast extract is a full-fledged active cosmetic component of natural origin, which acts as a powerful antioxidant and activator of metabolic processes in cells and tissues.

Yeast extract in combination with vitamin soothing ingredients, such as thiamine and pyridoxine, through multiple interactions and synergistic effects helps to restore the natural radiance of the skin, removing excess shine due to the balance of the sebaceous glands. The use of yeast in the production of products with ultraviolet filters is effective — such complexes act as protective agents, reparantants, and sunscreens with an additional anti-age effect.



safety one of the most important factors ensuring productivity health and high animals and birds. The existence mycotoxins in leads deterioration in productivity, reproduction and immune status of animals. Belarusian conditions, most common infection with fungi

the genus Fusarium, which leads to the appearance mycotoxins of the group of trichotetacenes (aflatoxin, DON, zearalenone, ochratoxin, etc.). Effective adsorbents can solve this problem, one of which will be the adsorbent of mycotoxins based on yeast membranes.

FODDER YEAST

Fodder yeast is a special yeast biomass based on substrates plant (waste paper and starch production) and non-plant materials (petroleum fractions) grown to feed livestock, fur-bearing, birds, and fish. Fodder yeast is used in the production of compound feedstuff, as well as a dupplement to feed rations.

To produce 20 tons of dry fodder yeast, 80 tons of raw compressed yeast are needed. The capacity of the plant is 10 tons of raw compressed yeast per day. The composition of amino acids and the content of crude protein in feed yeast

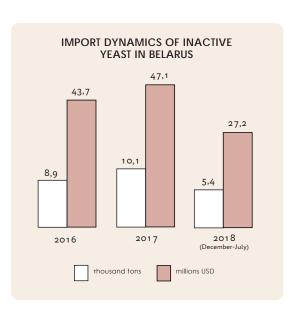
is comparable to fish flour (animal protein), soybean meal and sunflower meal(vegetable proteins). However, the digestibility of animal protein is much better than vegetable protein. Proteins of fodder yeast and fish flour digest at 89-90%, vegetable proteins only at 65-70%.

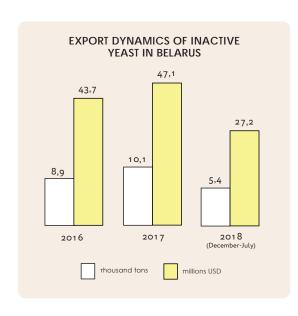
EEU MARKETS REVIEW AND THE REPUBLIC OF BELARUS YEAST EXTRACT

YEAST EXTRACT

The development of the market of flavor enhancers occurs in line with the development of the food industry as a whole, because additives of this type are present in most ready-to-use products and semi-finished products. The main consumers of flavor enhancers are producers of meat and fish products, snacks, semi-finished products, etc.

In the world market of food ingredients, today there is a tendency of transition from artificial to natural additives. Despite the higher cost of natural ingredients, both producers and consumers prefer them to synthetic additives. In the world market of food ingredients today there is a tendency of transition from artificial to natural additives. Despite the higher cost of natural ingredients, both producers and consumers prefer them to synthetic additives. Yeast extracts used as a flavoring additive are becoming increasingly popular on the market.





At the moment, the demand for yeast extracts is growing about 5% annually in Europe and America and about 10% in China. The total market growth rate for the group of amplifiers in the forecast period will be about 3% in real terms. At the same time, for sodium glutamate is expected to grow at the level of 2.5-3% annually, for yeast extract the same figure will be about 15-17% annually. As the trends of healthy lifestyles and well-being of the population increase, the consumption of natural flavor enhancers will increase.

As for the value of the market in the forecast due to unsatisfied demand in the world market, the decline in the production of glutamate in Chinathe largest production region. With the growth of consumption of yeast extracts will increase and market valuation, because. the cost of a natural flavor enhancer is 4 times higher than sodium glutamate. The average annual growth of prices for monosodium glutamate will be about 4%, for yeast extracts 1% -1.5%.





MYCOTOXIN ADSORBENT

The global market for mycotoxin preparations is in a stable position with a tendency to a constant increase in demand, which is justified by the increased urgency of the problem of contamination of animal feed. To date, the economic losses from pollution of feed and food by secondary metabolites of fungi exceed the amount of 20 billion UDS per year. According to some analysts, the total number of mycotoxin-affected feed in the world reaches from 25 to 40%.

On the territory of Belarus there are no own production of such drugs. According to estimates of various analytical agencies, approximately 80-85% of adsorbents present on the Belarusian market are Russian-made. Analyzing the current situation, it should be noted that there are all conditions for the production of competitive products, but so far there is no necessary processing of raw materials and reasonable requirements for the parameters of a commercial agents.

FODDER YEAST

The demand for feed additives is directly related to the demand for animal products. In turn, the consumption of livestock products depends on the number-news and welfare of the population. The world's population continues to grow rapidly: in 2018, its number was 7.6 billion people, and by 2025 the world's population could reach 8.1 billion.

Considering that the world's population is growing, it is necessary to increase agricultural production in order to meet consumer demand in the medium term. Total meat and fish consumption at the global level is expected to increase by 15% between 2018 and 2027, according to a new report from the Food and agriculture organization of the United Nations.



Investment proposal "Production of semi-finished meat at Bobruisk meat processing plant" was initiated by the plant itself. Implementation of a new investment project implies the introduction of new technology for production of semi-finished meat, produced and packed with modern automated production lines.

Prerequisites for the realization of this project are: regular consumers' demand for the fast food products, shift of priorities from cooking at home to use products which do not require significant time for preliminarily preparation and undergoing of heat-treated in a convenient package for a short time.

BOBRUISK MEAT PROCESSING PLANT

Location

333 Karl Marx str., Bobruisk Mogilev region

Total square of the meat processing plant

12.2 ha

Personal

869 employees (79 managers personnel, 109 specialists, 681 workers)

Statutory fund

1,1 mln USD (988 028 EUR).

Production capacity

More than 70 tons of meat products per work shift:

- sausages 15.8 tons;
- semi-finished products 6.2 tons;
- meat 50 tons

Output products

- meat and food byproducts,
- sausages,
- semi-finished meat,
- nutritional baked animal fat,
- animal skin,
- blood and blood byproducts;
- endocrine-enzyme raw materials.

Products certification

Quality management system corresponds with the state standards ISO 9001, quality management system and food safety on the basis of HACCP principles, complied with the requirements of state standard ISO 9001-2001 system of voluntary certification «Euro-Standard»

Representative offices and brand stores

Meat processing plant is the founder of the "Trade shop «Zimus" retail chain, and also has sales representatives in the cities of Minsk and Grodno.

FINANCIAL RESULTS

In 2017, the production volumes of «Bobruisk meat processing plant» reached 32.2 mln USD (27.9 mln EUR) in current prices, the growth rate in accordance with 2016 was 159.6 %.

Production volumes in 2017:

- meat and food byproducts 10,699 tons (growth rate – 152 %);
- sausages 4,056 tons (growth rate 93,5 %);
- semi-finished meat 1,583 tons (growth rate 141, %).

In 2017, total supply of livestock to the plant was 17,157 tons or 147.7 % compared to 2016.

«Bobruisk meat processing plant» sells its products both inside and outside Belarus, with the following features of the markets.

The following trends are typical for the market of Belarus:

- saturation with sausages, ready-made meat products, semi-finished meat;
- high degree of demand's sensitivity in the pricequality ratio: consumers seek to purchase a quality product with a lower price.

The volume of products sold in the domestic market in 2017 amounted to 13.4 mln USD (11.6 mln EUR). One of the main priorities in the domestic market is to work with food hypermarkets and large retail chains. In 2017, the volume of sales of sausages to retail amounted to 650.5 tons, which is equal to 16.06 % of the total sales of sausages.

The main priorities of foreign trade in 2017 were Russian Federation and China. In 2017, the total export amounted to 19 mln USD (16.5 mln EUR) (Russian Federation – 95.3%, other countries – 4.7%). The share of export in the total volume of products sold amounted to 54.9%.

According to the results of financial and economic activities in 2017, OJSC «Bobruisk meat processing plant» earned profit from the sale of products in the amount of 3.6 mln USD (3.1 mln Euro).

The overall financial result of «Bobruisk meat processing plant» in 2017 was positive. Net profit reached 132 thousand USD (115 thousand EUR).



ABOUT PROJECT

PREREQUISITES FOR THE REALIZATION OF THIS PROJECT ARE: REGULAR CONSUMER'S DEMAND FOR THE FAST FOOD PRODUCTS, SHIFT OF PRIORITIES FROM COOKING AT HOME TO USE PRODUCTS WHICH DO NOT REQUIRE SIGNIFICANT TIME FOR PRELIMINARILY PREPARATION.

PROJECT PURPOSE

The implementation of new project implies introduction of new technologies for the production of semi-finished meat, produced and packaged with the assistance of modern automated production lines.

INVESTOR'S PARTICIPATION FORM

Joint company

INVESTMENT VOLUME

3.4 mln USD (2.9 mln EUR)

PROJECT EFFICIENCY

net present value
(NPV)

simple payback
period

dynamic payback
period

dynamic payback
period

yield index

1 million EUR (1,2 million USD)

3 years and 7 months

4 years and 1 month

1,39

internal rate of return
(IRR)

31,15 %



- Marketing campaign;
- · Marketing campaign,
- Waste-free production;
- Stable sales position in Belarus.

DEVELOPMENT STRATEGY

- improvement of financial results of the company achieved in the previous period;
- increase in production and sales volumes ratio;
- efficient use of material, labour and technical resources;
- implementation of activities, aimed at achieving key development indicators.

PRODUCTION FACILITY

Meat processing plant is fully provided with engineering systems, as well as a land plot of 0.4 ha, which are necessary for the construction and steady production of the new plant.

ENERGY RESOURCES

By 2022, when the plant will have reached the designed capacity, it will consume per year:

- electricity 2,880 thousand kW / h
- heat power 7,200 thousand Gcal
- water 192 thousand m3

The cost of energy resources will be 570.6 thousand EUR (657,8 thousand USD).

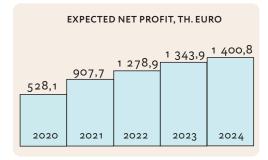
LABOR FORCE

For the normal operation of new plant for the production of semi-finished meat will require provision of labour resources in the amount of 63 people:

- 45 workers;
- 2 managers;
- 6 specialists and other employees

Labor costs per year will be 269.4 thousand EUR (310.5 thousand USD).

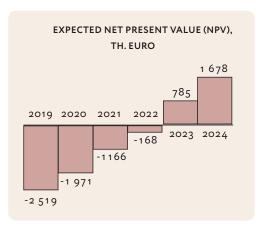
22 466 22466 22 466 17 973 13 479 2020 2021 2022 2023 2024



FINANCIAL RESULTS

Financial and economic results of the company indicates its sustainable operation during the forecast period. So, in 2024:

- profitability of sales from profit on sales –
 7.60 %:
- profitability of sold products from profit on sales – 8.72 %;
- current liquidity ratio 6.230;
- self-sufficiency coefficient of current assets 0.839:
- self-sufficiency coefficient of financial liabilities by assets 0.084





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CONTACTS



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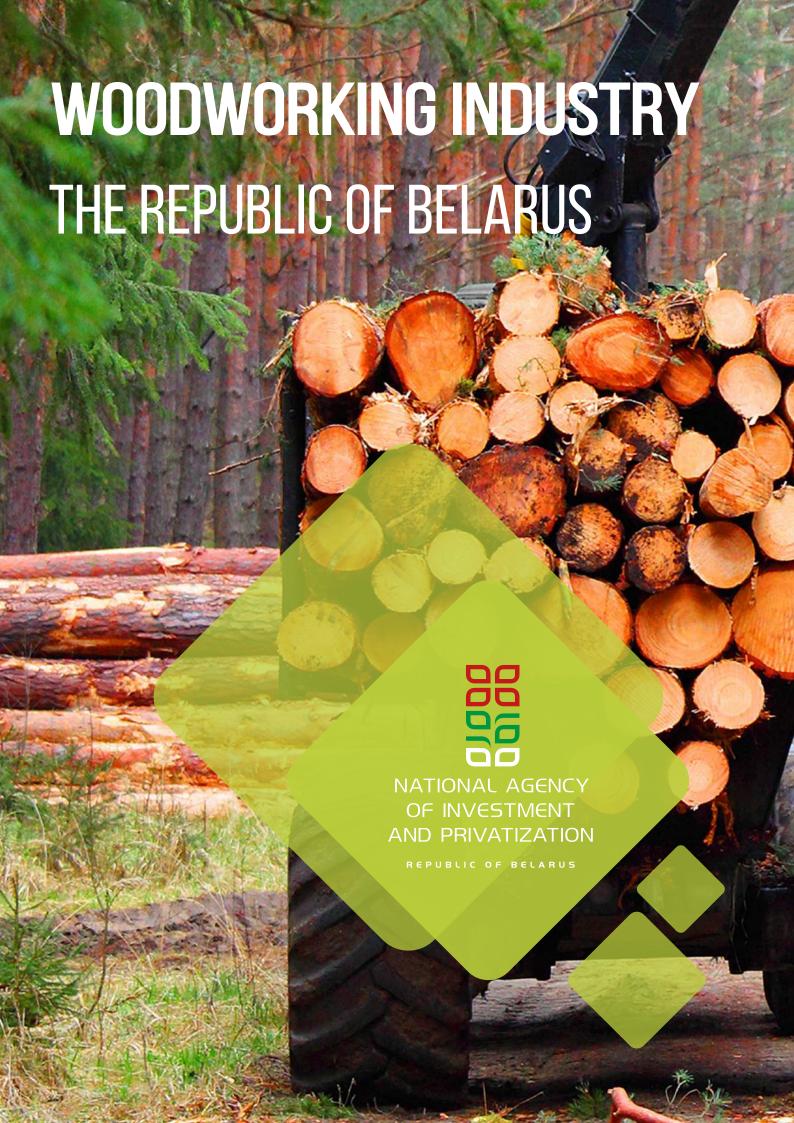
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Bleached chemical-thermomechanical pulp (hereinafter – BCTMP) is used in the production of paper and paperboard as a cheaper alternative to bleached hardwood pulp.

Unlike traditional technologies for the production of pulp, the production of BCTMM practically does not pollute environment and consumes less water and chemicals.

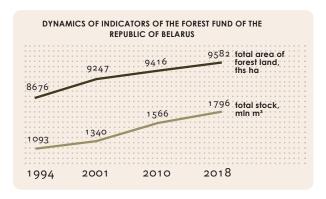


FORESTRY OF THE REPUBLIC OF BELARUS

In the Republic of Belarus forests are one of the main renewable natural resources. Forests and forest resources are of great importance for the sustainable socio-economic development of the country, ensuring its economic, energy, environmental and food security.

According to a number of key indicators characterizing the forest fund (the forest cover of the territory, the forest area and the growing stock of timber per inhabitant), Belarus is among the top ten forest countries in Europe (the share of forests in the country is 39.8%).

As a result of purposeful work on forest reproduction and forest cultivation, positive dynamics of the forest fund were achieved. The main indicators of the forest fund as of January 1, 2018:



- forest area 8260.9 thousand hectares:
- forest cover of the territory 39.8%;
- total stock of standing timber -amounted to

1796.0 million m³:

- reserve for 1 ha of forest land 217 m³ per 1 ha;
- average stand age is 56 years.

In Belarus, along with the increase in the total forest area, a steady increase in the area of ripening, ripe and overmature stands is observed.

During the twenty-year period, the area of ripe and overmature stands was significantly increased and amounted to 14.7% of the total forest area.

The forestry of Belarus is owned by the sate.

In accordance with the Decree of the President of the Republic of Belarus of May 7, 2007 № 214 "On some measures to improve activities in the field of forestry" harvested industrial wood is sold at the stock exchange of the OJSC Belarusian Universal Commodity Exchange. Pulp bolts are sold at the stock exchange weekly, quarterly and annually.



ABOUT PROJECT

BCTMP IS A FIBROUS SEMI-FINISHED PRODUCT OBTAINED FROM **VEGETABLE RAW MATERIALS**, SUBJECTED TO MILD CHEMICAL AND HEAT TREATMENT, FOLLOWED BY GRINDING IN DISK MILLS UNDER PRESSURE.

PROJECT GOALS

Creation of an enterprise for the production of bleached chemical-thermomechanical pulp.

SCOPE

- import substituting production;
- high value added production
- increase in tax revenues;
- deep processing of wood.

APPLICATION OF BCTMP

- production of high quality paper for printing;
- manufacture of food packaging materials;
- production of cardboard for various purposes;
- production of sanitary paper.



- Rational use of wood raw materials. For the production of one ton of BCTMP about 2.9 m³ of wood is required, whereas for the production of one ton of pulp 4-5 m³;
- Relatively low capital costs and a shorter period for the construction of enterprises for the production of mechanical pulp compared to sulphate pulp mills;
- Competitiveness. In the production of BCTMP, it is
 possible to adjust the thickness, density, color purity,
 porosity and shape. Hardwood BCTMP has gained
 recognition in the markets of Europe, Canada,
 Southeast Asia and China;
- Environmental protection. In the production of BCTMP, water consumption is 8-12 m³ per ton of finished product, which is 4-5 times less than in the production of sulphate pulp and there are practically no gas-dust harmful emissions:
- Energy efficiency. Recuperation of steam and its use in production is possible.

INVESTMENT PROPOSAL

Production capacity

140 000-300 000 tons/year

Required raw materials volume

2.9 m³ of pulp wood per 1 tonne of BCTMP (870 thousand m³ when reaching full capacity of 300 thousand tons / year)

Concept

A stand-alone plant with its own energy block operating on wood waste. Suitable for areas with limited access to forest resources.

Product

Hardwood BCTMP, various types. BCTMP is produced in the form of commercial products, which is packed in bales weighing 250 kg each.

Plant area (without auxiliary premisses)

50-100 ha

Personnel

85 people

Power requirement

55 megawatt

Cost of a set of main production equipment

395 mln BYN (160 mln EUR, 187 mln USD) - without the cost of sewage treatment plants and energy boiler

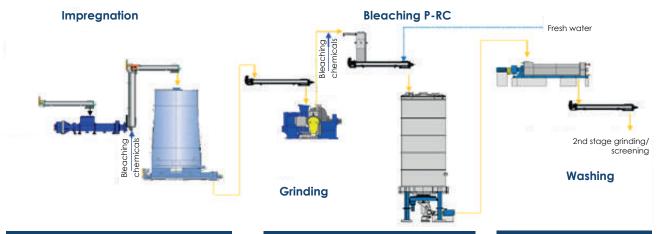
CAPEX

640 mln BYN (260 mln EUR, 305 mln USD)

OPEX

565-590 BYN /t (230-240 EUR/t, 270-280 USD/t)

BCTMP PRODUCTION PROCESS



Impregnation

- Moderate pretreatment
- Effective impregnation with chemicals
- Removal of metal ions
- Reduced COD / extractives
- Preliminary bleaching

Bleaching P-RC

- Effective interaction with chemicals at:
 - high temperature
 - high concentration
 - low pH
- Extra processing time to complete the bleaching reaction

Washing

 Removal of dissolved organic impurities

BCTMP BLEACHING STAGES



Getting bleached chemi-thermomechanical pulp includes steaming chips, grinding in two stages with its chemical treatment and bleaching.

The dark color of the pulp is mainly due to residual lignin, which must be removed during bleaching.

In modern bleaching processes BCTMP molecular chlorine is not used - it is replaced by oxygen, hydrogen peroxide and chlorine dioxide.

of bleaching

The byproducts of such bleaching are harmless.

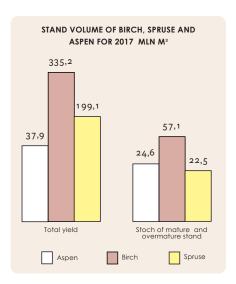
RESOURCE BASE

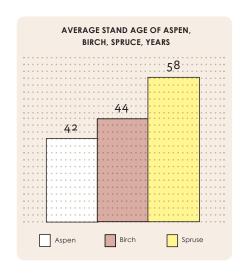
The self-sufficiency in raw materials of the investment project for obtaining BCTMP directly depends on the state of the forest funds of Belarus, which has been steadily improving over the past years.

The main raw materials used to obtain BCTMP are hardwood pulp bolts - aspen and birch; it can be also produced from spruce and pine.

Pulp bolts are the logs harvested mainly from the top of a tree trunk of a certain species or logs with such natural curvature that cannot be used in wood processing for the manufacture of sawn timber in the future.

The supply of wood raw materials for the production of BCTMP is supposed to be carried out from the enterprises of the system of the Ministry of Forestry of the Republic of Belarus.



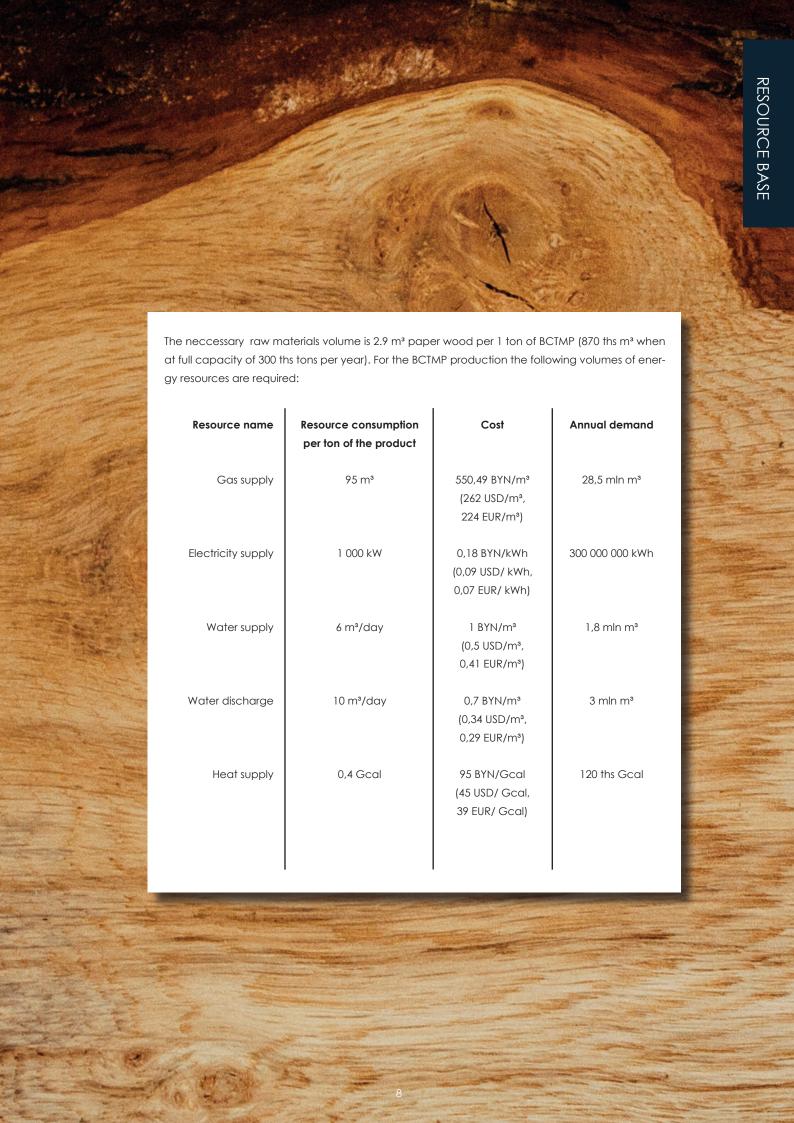


The market has developed the following prices for the necessary paper wood:

- Aspen 26 BYN/m³ (12,3 USD/m³, 10,6 EUR/m³);
- Birch 30 BYN/m³ (14,2 USD/m³, 12,2 EUR/m³);
- Spruse 31 BYN/m³ (14,7 USD/m³, 12,6 EUR/m³).

Processing technology should take into account the characteristics of the morphological structure of the cell wall of each wood species. It is important that such fast-growing deciduous species of wood such as aspen and birch which are widely distributed in the Republic of Belarus can be used to obtain BCTMP.

The essential factor that constrains the use of pine wood in thermo-mechanical wood pulp production is higher content of fats and resin compared to the wood of spruce. As a rule, pine wood can not be used in quantities of more than 10% of the total volume of raw wood.







Implementation of the project is recommended in the Vitebsk, Minsk and Mogilev regions of the Republic of Belarus.

On the territory of these areas there are the largest unclaimed volumes of softwood timber. This makes them the most attractive because of the availability of raw materials.

BCTMP MARKET REVIEW

The need for a continuous increase in the production of BCTMP is due to the increased consumer demand on the world market and the expansion of the field of application of this type of wood raw material. In addition, BCTMP can be considered as a cheap alternative to bleached pulp. At the same time, the operating BCTMP production plants, located mainly in Canada and Scandinavia and producing from 100 to 620 thousand tons per year, are not capable of meeting the ever-growing demand for BCTMP.

Compared with other pulp classes, it is relatively cheaper and easier to produce BCTMP, the equipment for its production is not so expensive. However, the price of BHTMP is quite ustable and much lower than the cost of cellulose produced by chemical means. Currently, the price of BHTMP in China is 590-610 USD per 1 ton of coniferous BHTMP, and the price of hardwood BHTMP is 770-780 USD per 1 ton, while the net price of bleached pulp is 865-890 USD per 1 ton.

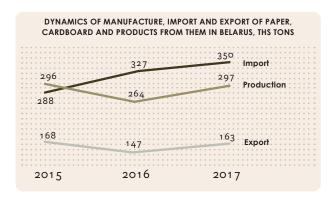
BCTMP from hardwood is successfully used in the composition of high-quality printing paper, food packaging materials, in the manufacture of cardboard and sanitary paper.

The forecast of the BCTMP market development can be estimated on the basis of the dynamics of production and consumption of cardboard and paper, in the manufacture of which this semi-finished product is used.

Over the past twenty years, global consumption of paper and paperboard has quadrupled, and by 2030 it will be 482 million tons. On average, demand will grow by 1.1% per year. These are the results of the market research (World Paper Markets up to 2030) prepared by Poyry Management Consulting. The study covers the markets of 80 countries in 10 product areas, including printing paper, packaging varieties, etc. At the same time, by 2030 the consumption volumes of sanitary paper, container and packaging cardboard will increase.

The main growth drivers are the demand for packaging in emerging economies, the boom of e-commerce, as well as the growth in consumption of convenience foods and branded consumer goods. Annual growth in consumption of packaging materials is projected at around 2.9%. China and India are the key countries that provides for the consumption growth of paper and are charactirized by population growth, urbanization and the formation of a new middle class.

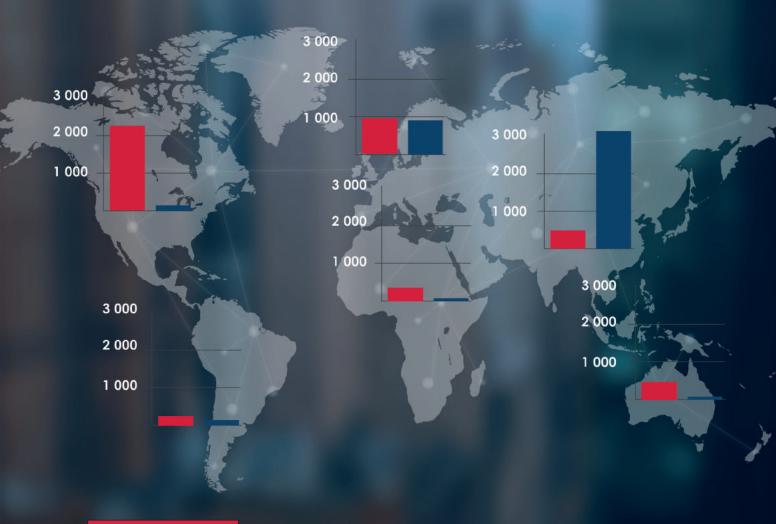
In the pulp and paper industry of the Russian Federation, the growth trend continues for the main types of products. Paper and paper products production index in 2017 was 104.7% compared to the previous year.



The pulp and paper industry of Belarus annually produces about 250 million tons of paper and about 60 million tons of cardboard, some of the products are exported. Despite the growing production volumes of Belarusian enterprises, the level of paper imports to the country remains high. In 2018, 1,208.5 t of BCTMP were imported to the Republic of Belarus at a price of \$ 486/t.

In Belarus, there is no existing production of BCTMP. The organization of such a production will not only reduce the overall volume of imports, but also reduce the cost of the goods themselves, and support domestic producers.

BCTMP PRODUCTION AND CONSUMPTION RATIO IN THE WORLD MARKET



Production

Consumption

BCTMP WORLD MAIN PRODUSERS

Country	Plant	Raw material	Company	Capacity ths tonnes
Canada	Tembec	aspen/ maple	Tembec	620
	Ranger	aspen	West Fraser	220
	Quenscel River	spruce	West Fraser	350
	Miller Western	aspen/spruce	Miller Western	590
	Fibreco	aspen/spruce	Fibreco	200
Sweden	SCA	aspen/birch	SCA	100
	Waggeryd	spruce	Waggeryd	140
	Rottneros	aspen	Rottnerso	85
Finland	UPM	aspen	UPM	170
Norway	Folla	spruce	Mayr-Melnhof Karton	100
Estonia	Estonian Cell	aspen	as estonian cell	450
New Zeland	Winstone	insignis pine	Winstone	190
	Pan Pac	insignis pine	Oji	200
Russia (Kaliningrad region)	International Paper	aspen/pine	International Paper	200
Russia (Irkursk region)	Pulp-and-paper plant in Bratsk	spruce	parity joint venture International Paper and Ilim Holding	300
Russia (Irkursk region)	Ust-Ilim	aspen	parity joint venture International Paper and Ilim Holding	120

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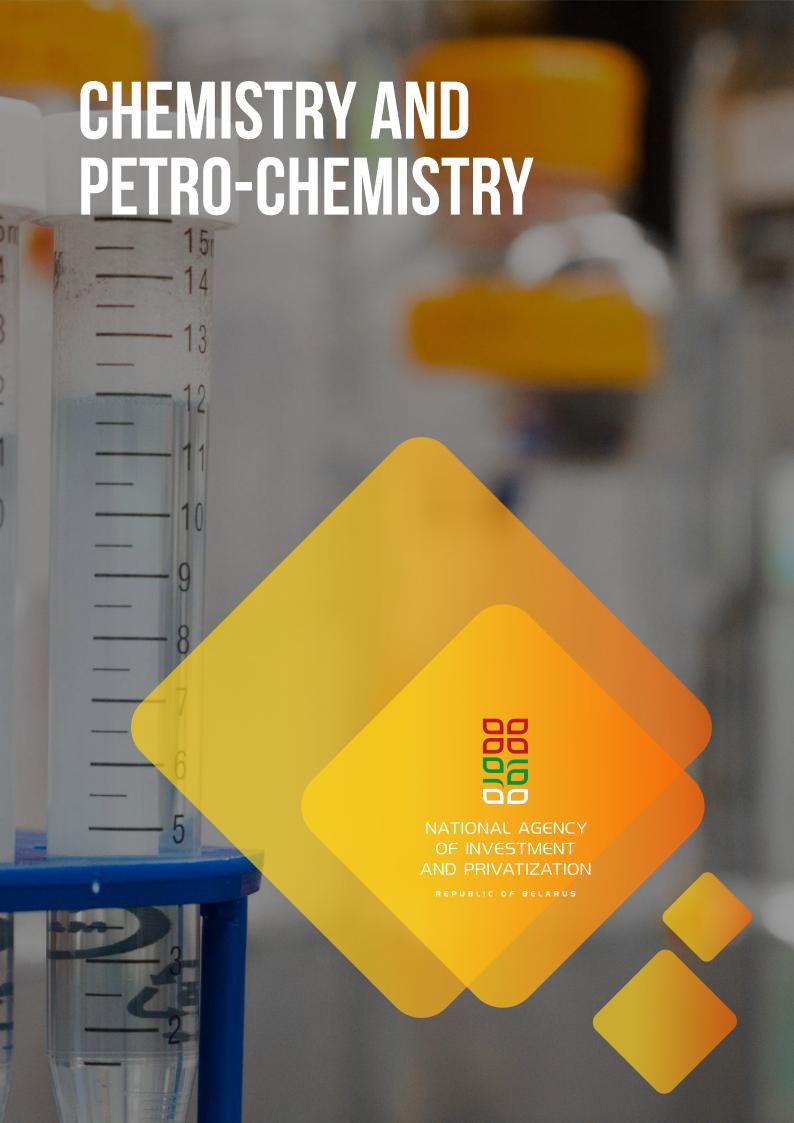
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OJSC Lakokraska

Investment opportunity

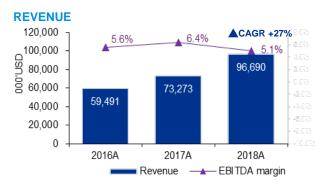


March 2019

OJSC Lakokraska Overview

- ☐ KPMG is pleased to introduce an opportunity to invest in OJSC Lakokraska ("the Company", "Lakokraska"), the leading producer of paints and coatings in the Republic of Belarus
- ☐ KPMG Limited has been retained as an exclusive financial advisor to National agency of investment and privatization (NAIP) in respect to the potential investment in Lakokraska by a strategic partner ("Proposed Transaction")

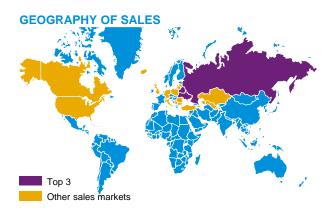
This preliminary investment overview is intended to introduce the Company to potentially interested parties as a precursor to signing of a confidentiality agreement and access to more detailed information and discussions



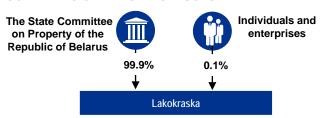
Source: KPMG analyses for 2016-2017, Company's data for 2018

REVENUE BY SEGMENT AND GEOGRAPHY USD mln 20.7 15.0 11.7 26.0 349 40% 2018 USD97 mln 68% 76% 53% 20% Russia Belarus Ukraine Other

■ Varnishes ■ Phthalic anhydride ■ Enamels ■ Paints and other



COMPANY'S OWNERSHIP STRUCTURE



BUSINESS OVERVIEW

- □ Founded in 1965, the Company is the leading Belarusian producer of paints and coatings with a focus on production of wide range of varnishes and enamels (for architectural, industrial and special applications) as well as phthalic anhydride
- □ Lakokraska is the exclusive producer of phthalic anhydride in Belarus and one of the leaders in the Russian market owing to cost efficient production and high quality. Approximately 79% of the Company's revenue comes from exports mainly to Russia and Ukraine
- ☐ The Company's paints and enamels are highly regarded by domestic and foreign consumers for a decent combination of competitive price and high quality
- Attractiveness of the Company's anti-corrosion products is additionally enhanced by the license for usage of internationally recognized brand name Magyar Lakk
- □ Lakokraska operates own R&D function which allows to successfully research and introduce new materials and products that better address the needs of consumers. Share of innovative products in total volume constitutes approximately 10%
- □ Production facilities of Lakokraska are located in Lida, Grodno region. The Company uses equipment of the leading German manufacturers with a total annual capacity of 54,000 tons of phthalic anhydride, 43,000 tons of varnishes and 18,000 tons of enamels
- ☐ The Company's strong revenue growth in 2018 is attributed to the increase in varnishes sales and the launch of additional production line of phthalic anhydride
- □ Lakokraska has strong potential for further development, coming from export opportunities, including sales to Asia Pacific region and launch of new products, such as maleic anhydride

PROPOSED TRANSACTION

- ☐ The Government of the Republic of Belarus is contemplating Lakokraska's partnership with a strategic investor in order to accelerate implementation of the development plans
- NAIP on behalf of the Government is ready to consider various forms of cooperation that may include purchase of the existing state-owned stock, purchase of newly issued stock, launching joint ventures and other widely used models
- ☐ The key priorities of the Government in the context of the potential transaction are as follows:
 - employee retention during 3 years after the deal and maintaining remuneration at the level not lower than average level in Grodno region of the Republic of Belarus
 - partial or full financing of envisaged investments potentially including equipment upgrade, processes improvement and development of new products





Key Investment Highlights



ATTRACTIVE MARKET SHOWING SUSTAINABLE GROWTH

In 2018 the Belarusian economy has seen further acceleration with the GDP growth reaching 3%
driven fundamentally by continuing recovery of the Russian economy. This sets the basis for the
further positive dynamics in Lakokraska's top line and profits as the local market is seen as key for
the most profitable products of the Company

- Machinery, one of the key sectors of paints and coatings consumption, is expected to be among the fastest growing, owing to gradual recovery of the Russian economy resulting in ample export opportunities for Belarusian manufacturers
- Reduction of interest rates in Belarus is expected to drive recovery of construction sector, a key consumer of paints and coatings
- ☐ The Company has already proven its export capabilities by selling the products to Latin America and Asia Pacific region, and there is still untapped potential for growth of export revenues. In particular, the opportunity to enter the Chinese market is currently being investigated
- As the market is shifting from traditional alkyd materials to more environmentally friendly water based ones, Lakokraska would be able to exploit the spare capacity and triple the respective output



LEADING MARKET PLAYER

- Lakokraska is the unrivalled leader on the domestic paints and coatings market controlling around 27%, while its 6 largest competitors jointly hold approximately 37%
- □ Lakokraska is the exclusive producer of phthalic anhydride in Belarus and holds 16% of the respective Russian market
- □ Lakokraska puts significant efforts into research and development of new materials. Strong R&D competencies of Lakokraska allow it to successfully bring new products to the market, with recently launched materials having accounted for more than 10% of its 2017 volume
- ☐ The envisaged launch of maleic anhydride production is expected to further enhance the Company's market leading position, both domestically and globally



COST-EFFICIENT PRODUCTION

- The Company's cost efficient production and high quality allows to successfully compete on CIS markets as well as in Europe and Americas. It also facilitates numerous contract manufacturing arrangements with the foreign clients and DIY retail chains operating in the market
- Recent investments in phthalic anhydride production and power station allowed to increase energy efficiency: the Company fully replaced external thermal energy sources and can substitute up to 30% of electric power supply
- ☐ Through 2016 2018 the Lakokraska management has achieved 6% reduction in headcount and 74% increase in revenue per employee through operational improvements



ADVANCED DISTRIBUTION NETWORK

- Lakokraska enjoys seamless access to a wide base of international customers through the distribution network of its partners, including Belneftekhim holding
- ☐ The Company operates own truck fleet, rail infrastructure and 11 regional distribution centers across the whole Belarus that ensure availability of the entire range of products to the end user, and allow to respond quickly to customers' requests

Source: Company data, Sberbank CIB macro research



Operational profile

Differentiated product range







Production volumes, tons 2017A 36.223 38.090

Mainly condensation resin based varnishes, produced by azeotropic method

>30 different types: ready to use varnishes for various surfaces and intermediate varnishes for enamel production







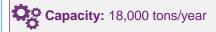
	Production	volumes	, tons
-9	2016A	2017A	2018A
	25,755	30,967	45,712

In 2017 the second production line of phthalic anhydride was installed, which more than doubled the production capacity

According to the Company's quality management department, quality and technical characteristics are in line with the samples from leading European producers







_		Production	volumes,	tons
e	25	2016A	2017A	2018A
	_	11.251	10.228	13.790

condensation Mainly polymerization resin based enamels, produced in beaded mills and dissolvers

Perspective focus is on development of anticorrosive coatings, viscosity materials with a high level of dry residue, materials with low consumption during energy application

Other products



Paints Hardeners Solvents Car fluids

International distribution

network

Efficient production



Equipment from leading German manufacturers







2MW out of 6MW can be generated by own power station



Manufacturing process is in conformity with **ISO 14001**

Headcount

1.221

2016

2017

1.143

Access to wide customer base

Domestic distribution network Minsk Gome **Distribution centers** Production

(owned)

Retail store (owned)



facility

Distribution through other partners

Distribution through

Belneftekhim network

Source: Company's data





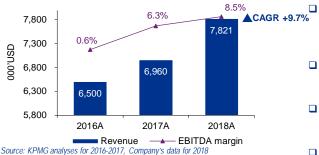
OJSC Krion

Overview

- KPMG is pleased to introduce an opportunity to invest in OJSC Krion ("the Company", "Krion"), the leading producer of industrial gases (oxygen, nitrogen, argon) in liquid and gaseous form in the Republic of Belarus
- KPMG Limited has been retained as an exclusive financial advisor to National agency of investment and privatization (NAIP) in respect to the potential investment in Krion by strategic partner ("Proposed Transaction")

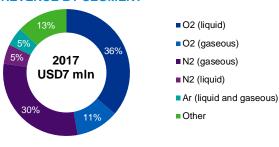
This preliminary investment overview is intended to introduce the Company to potentially interested parties as a precursor to signing of a confidentiality agreement and access to more detailed information and discussions

REVENUE



Source: KPMG analyses for 2016-2017, Company's data for 2018

REVENUE BY SEGMENT





- Integral
- MAZ
- Gomelstroymaterialy
- ■Brest lamp factory
- ■BFLAZ
- Other

BUSINESS OVERVIEW

Established in 1956, the Company specializes in production of oxygen, nitrogen, argon in liquid and gaseous form by method of air separation as well as special gas mixes for industrial and food applications

Krion is the unrivaled market leader, controlling over 60% of industrial gases sales in Belarus (exclusive of the in-house air separation performed by some industrial gases consumers)

Company's customer base includes major Belarusian industrial groups, operating in chemicals, metals, glass, machinery, aerospace, healthcare, electronics and other industries

Krion's customers' loyalty is secured by the reliable and efficient supply system and infrastructure. The logistics facilities include pipelines connecting Krion to several major customers, as well as trucks fleet and rail infrastructure owned by the Company

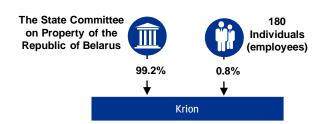
Krion operates two air separation machines with the aggregate annual capacity of 65.9 thousand tones of oxygen, 22.5 thousand tones of nitrogen and 1.7 thousand tones of argon

The Company employs 157 people, most of which have been in Krion's business for over 10 years and have massive experience in the field

The Company's revenue has shown continuous growth in 2016 - 2018 and the trend is expected to persist. According to Company's data EBITDA margin reached 8.5% in 2018 and is expected to continue at this level

Krion's growth strategy is built around development of client base via search for new applications of industrial gases, installation and servicing of air separation systems on the territory of the customer (on-site scheme)

COMPANY'S OWNERSHIP STRUCTURE



Source: Company data

PROPOSED TRANSACTION

- The Government of the Republic of Belarus is contemplating Krion's partnership with a strategic investor in order to accelerate implementation of the development plan
- NAIP on behalf of the Government is ready to consider various forms of cooperation that may include purchase of the existing state-owned stock, purchase of newly issued stock, launching joint ventures and other widely used models
- The key priorities of the Government in the context of the Proposed Transaction are as follows:
 - implementation of development projects potentially including development of a new air separation unit, expansion of product range
 - improvement of the Company's processes \Box technologies; development of its product portfolio
 - maintenance of the existing labor contracts and social guarantees for the Company's staff



Investment highlights



STABLE MARKET SHOWING SUSTAINABLE GROWTH

- ☐ In 2018 the Belarusian economy has seen further acceleration with the GDP growth reaching 3%
- Industrial sector (petrochemicals, metals, machinery), which is the key consumer of industrial gases, is expected to be growing faster than the rest of the market thus creating additional demand for industrial gases
- ☐ Wide range of industries served by the Company facilitate Krion's resistance to any unfavorable fluctuations that might occur



LEADING MARKET PLAYER

- ☐ Krion is the market leader in its segment, controlling over 60% of industrial gases sales in Belarus
- The Company has market leading credentials and competencies in production of industrial gases and provision of maintenance services for cylinders and cryogenic tanks
- □ Loyal customers of Krion include the largest Belarusian industrial enterprises: Integral, MAZ, Gomelstroymaterialy, Brest lamp factory, BELAZ and etc. Additionally, Krion is the exclusive supplier of oxygen to medical institutions of the Republic of Belarus



ADVANCED LOGISTICS INFRASTRUCTURE

- ☐ Krion's key production facilities are conveniently located in Minsk alongside its major clients. Being located in the center of Belarus gives the Company competitive advantage in reaching customers throughout the country
- Around 30% of revenue comes from customers that receive Krion's products via pipeline, which helps to ensure low transportation costs and therefore sets the ground for a long-term mutually beneficial cooperation
- The Company has its own truck fleet and rail infrastructure, which helps secure uninterrupted supply of products to Krion's customers throughout Belarus



GROWTH OPPORTUNITIES

- The Company constantly explores new applications of its products in order to protect and grow the client base. Currently, Krion's management are working on the following potential projects:
 - Novopolotsk Fiberglass: application of industrial gases to reduce emissions from the combustion process
 - ☐ Minsk Regional Technopark: application of liquid nitrogen for recycling of tires
- □ Krion is considering entering the market for servicing of gas separation units installed on-site. Potential customers include Minsk Heating Equipment Plant, Svetlogorsk Khimvolokno and Lida Lakokraska

Source: Company data, Sberbank CIB macro research



Production facilities and logistics

Production facilities

Air separation unit 1: KzhAzhArzh-6.8/3



Installed in 2010 Products: O2, N2, Ar

Capacity: 54,500 tones/year of O2, Compressor: Centac 5CII-C550MX3

Air separation unit 2: AzhAr-4



Installed in 1991 Products: O2, N2

Capacity: 11,400 tones/year of O2, Compressor: 6BM16-140/200

- Production method lowtemperature rectification of compressed air
- □ Key production facilities are located in Minsk, additionally Krion operates a gas filling station in Brest
- ☐ The Company's profitability margins could be significantly improved by the replacement of the existing units
- ☐ The Company has a strict quality control system, which helps ensure customer loyalty. Each batch is rigorously tested in the own laboratory

Production volume, tons

	2016A	2017A	2018A
02	21,179	21,887	24,103
N2	2,683	3,098	3,021*
Ar	275	267	747

^{*} Excluding nitrogen delivered via pipeline

Main customers and logistics



Krion's core production facility

Krion's gas transferring station (from liquid to gaseous)

Main customers (supply via track and rail)

Main customers (supply via pipeline)

Source: Company's data



Agro

🚡 Industrial gas suppliers







The production of carbon fiber at Polymir plant was chosen following global trend to use PAN fibers. PAN-based precursor carbon fiber is 10 times lighter and 6 times stronger than steel.

It is thermally and corrosion-resistant, thus, it can be used in production of sport goods, construction, wind industry, car industry, rocket and aircraft industry.

POLYMIR PLANT ADVANTAGES

PROJECT EFFICIENCY

The majority of carbon fiber producers doesn't have their own resources, acrylonitrile in particular, which is produced at the plant «Polymin» OJSC «Naftan» (Polymir plant produces a wide range of chemical products). In this regard, production of carbon fiber at Polymir plant is expected to be more efficient than that of other manufac **PLACE BENEFITS**

EXPERIENCED PERSONNEL

The employees of Polymir plant have experience and expert skills in polyacrylic fiber production operations. experts The from various departments are able to cope with wide of range tasks: production, researc, marketina and distribution.

DEVELOPED INFASTRUCTURE AND ENERGY SOURCES

The products manufactured by the company are competitive due to their high quality, diverse assortment and active marketing. They are widely known and have numerous consumers both in the domestic and in the market foreign market.

CAPACITY FOR RAW MATERIALS PRODUCTION

The main raw material for carbon fiber production based on the PAN precursor is acrylonitrile. With the reached acrylonitrile the production of capacity of 86,000 tons per year, Polymir plant consumes 35,450 tons of acrylonitrile per year for its own needs for the production of Nitron-D fiber, the rest is sold to third parties.



Carbon fiber price varies from 20 to 120\$/kg (depending on its range). High-tension and high-modulus fiber prices may reach 250 \$/kg.

The demand growth is due to the expansion of carbon fiber application. According to analysts, until 2030 an annual 10-15% increase is observed.

In the view of Polymir plant, it is necessary to focus on the automotive segment of the market, since a higher growth in demand is projected for the next 20 years in this segment.



EXPECTED INVESTOR`S PARTICIPATION

OBJECTIVE OF THE PLANT

Search for an engineering company with a carbon fiber production technology and experience in implementing projects for the construction of such industries.

The main term to realize carbon fiber project at Polymir plant is a distribution guaranty.

TERMS OF SALE

As technologies for carbon fiber production have always **optimized** and **modernized** in order to reduce costs and increase products quality.

One of the search condition of an engineering company is good relations with the institutes that analyze and optimize the carbon fiber manufacturing process.

PROJECT COSTS

The estimated cost of the project provided economically reasonable production capacity of 5,000 tons of fiber per year is about \$ 275 million.





Conveyor belts are applied to the transportation of freights and materials. They are an essential part of almost every type of industry: food, chemical, heavy, woodworking, stone-working, mining, pharmaceutical, and also furniture production.

This investment project would contribute to the sustainable development of the region, allow to increase production efficiency, create new highly productive workplaces, provide stable supply of Belarusian enterprises with this type of products, increase the level of import substitution in Belarus.

"Belshina" OJSC

Ownership

"Belshina" is an open joint stock company, the majority of shares belong to the state.

It is a part of "Belneftekhim" conglomerate.

Location

4 Minskoye shosse, Bobruisk town, Mogilev region

Infrastructure

There are large-size tires plant, mass tires plant, superlarge-size tires plant, mechanical plant, and other divisions necessary for the production and sales, as well as social facilities.

Staff

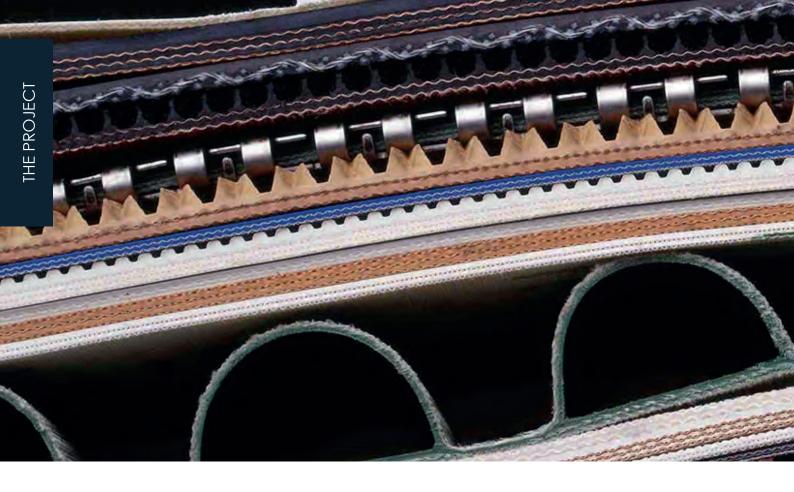
9,316 employees (799 managers, 1,263 specialists, 7,114 workers).

Products certification

The quality management system of the enterprise is certified on compliance to the requirements of ISO 9001:2015, DIN EN ISO 9001:2015, STB ISO 9001-2015 and IATF 16949:2016.

Customers

Major Belarusian and Russian machine-building enterprises, such as "BelAZ", "Minsk Automobile Plant", "Minsk Tractor Works", "Minsk Wheel Tractor Plant", "Rostselmash", "Gomselmash", "Amkodor", "AVTOVAZ", "KAMAZ", "UK GAZ Group".



ABOUT THE PROJECT

CONVEYORS PROVIDE STEADY AND POWERFUL FREGHT TRAFFICS, ALLOW HIGH EXTENT OF AUTOMATION AND ARE WELL PROVED IN VARIOUS SERVICE CONDITIONS. THE PROBLEM OF MECHANIZATION OF HARD AND LABORIOUS WORKS CAN BE SOLVED ONLY WITH BROAD USE OF CONVEYORS OF VARIOUS TYPES.

PROJECT PURPOSE

Establishing of conveyor belts production at "Belshina" OJSC

RANGE OF USE

Various types of industry: food, chemical, heavy, woodworking, stone-working, mining, pharmaceutical, and also furniture production.

INVESTMENT VOLUME

min. USD 27.1 mln (EUR 23.7 mln)

PRODUCTIVITY

Production capacity is 3,500 standard tonnes per year, or 200,000 running metres per year

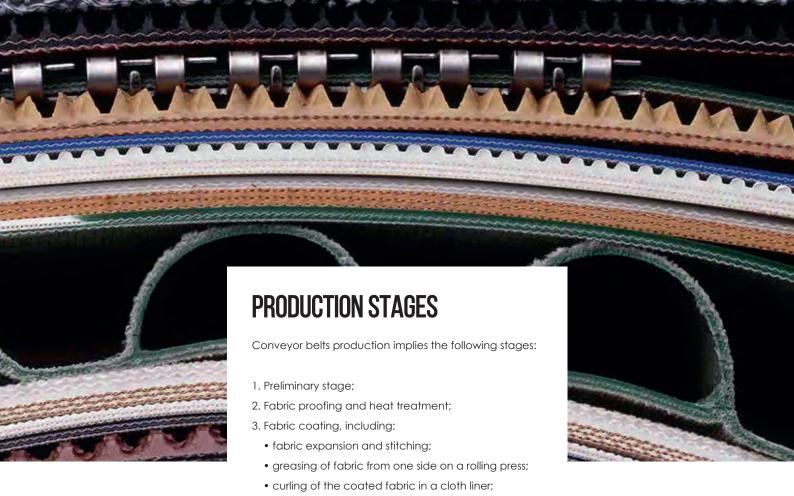
RESOURCE REQUIREMENT

- Electrical energy 1 450 850 kWh per year
- Heat 465.03 Gcal per year
- Gas 539.81 thsd m³ per year

The total cost of energy resources per year is estimated to USD 303.3 thsd. (EUR 264.9 thsd).

PRODUCTION SPACE

Not less than 4,500 m² with the size of 150 x 30 m



4. Assembly and duplication of the conveyor belt frame;

• transportation of the fabric to the rubberizing

5. Length cutting;

section.

- Lining of working and non-working surface of duplicated fabric;
- 7. Cross cutting to appropriate dimensions;
- 8. Curing;
- 9. Quality control;
- 10. Marking and packaging of finished products.

RAW MATERIALS BASE

Rubber mixes and fabric bases are used as the main source of raw materials for conveyor belts production.

Rubber mixes for conveyor belts production can be produced at "Belshina" OJSC in the town of Bobruisk. Fabric bases are planned to be bought.





NATIONAL AGENCY OF INVESTMENT AND PRIVATIZATION

The agency is ready to help foreign investors interested in doing business in Belarus:

- Provision of information on investment opportunities, preferential regimes and represented benefits, industries, legislation
- Submission of current information on investment projects
- Selection and presentation of information on options for land and premises
- Search for potential partners for the implementation of the investment project, organization of meetings, negotiations with potential partners for establishing cooperation

- Providing a platform for negotiations and support of the investor during negotiations
- Organization of visits to the Republic of Belarus (development of a program of stay, assistance in obtaining a visa)
- Representing the interests of the investor in negotiations with government representatives on the implementation of investment projects, as well as on improving doing business in the Republic of Belarus
- Subsequent support



CONTACTS



NATIONAL AGENCY OF INVESTMENT AND PRIVATIZATION

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IMPORTANT POINT

This document has been prepared for informational purposes only. It is provided to assist the recipients of the document in their decision on whether to further examine the proposed transaction.

All information contained in the document can be further clarified and supplemented by the National Agency of Investment and Privatization.

