



NATIONAL AGENCY
OF INVESTMENT
AND PRIVATIZATION

REPUBLIC OF BELARUS



INVESTMENT OPPORTUNITY

PRODUCTION OF INDUSTRIAL LASERS

REPUBLIC OF BELARUS

Business Environment

EURASIAN ECONOMIC UNIT



512 mln
consumers

EAEU



183 mln consumers in the EEU

10 mln consumers in Belarus

INVESTMENT LEGISLATION

70 agreements on
avoidance of double
taxation

**The Republic of Belarus is a member of
the Multilateral Agency for Guarantees
and Investments**

66 agreements on assistance
in the mutual protection of
investments

Law on investment

1. Protection against nationalization
2. Unhindered transfer of profit (income) abroad
3. Equality and non-discrimination of investors

VISA REGIME

In 2018, Belarus extended the visa-free stay for foreigners to 30 days. Visa-free visits are provided on condition of the entrance through the National Airport Minsk for citizens of 74 countries, including European countries, as well as Brazil, Indonesia, the United States, Japan and other countries.

ABOUT THE PROJECT

THE INVESTMENT PROJECT AIMED AT SETTING UP A COMPANY IN ORDER TO PRODUCE INDUSTRIAL LASERS ON THE TERRITORY OF THE REPUBLIC OF BELARUS.

PROJECT DESCRIPTION

The project's implementation involves construction of a plant in order to produce industrial lasers (fiber, diode or disk types) for processing (cutting, welding, micro-processing, marking/engraving, thermal treatment, hardfacing and cleaning) of metal, as well as other materials.

ABOUT THE PRODUCT

An industrial laser is a device that converts the energy of "pumping" (light, electric, thermal, chemical, etc.) into the energy of coherent, monochromatic, polarized and narrowly directed radiation flow in the wavelength range from ultraviolet (about 0.1 nm) to submillimeter infrared due to the forced emission or scattering of light by an active medium placed in an optical resonator.

ADVANTAGES OF APPLICATION

- | | |
|--|---|
| <ul style="list-style-type: none">- A wide range of applications- Reliability- High productivity- Processing almost any materials | <ul style="list-style-type: none">- Minimum deformation of a material- Reduces production of waste- Automation of the working process- Noiselessness of processing |
|--|---|



THE PREREQUISITES FOR THE PROJECT IMPLEMENTATION:

- ✓ The laser industry is one of the fastest growing sectors of the world economy (long-term growth rate up to 10% per year on average);
- ✓ Significant developments in the production of optical and laser devices in Belarus, as well as high level of scientific support for the laser-optical industry;
- ✓ Possibility of partial financing of the investment project implementation by using resources of "Belarusian innovation fund" under the State Committee for Science and Technology of the Republic of Belarus;
- ✓ Development of own high-tech production of industrial lasers, as well as decrease the share of imports and increase the share of exports;
- ✓ Stable demand for products in the EEU countries and the People's Republic of China.

ADVANTAGES OF THE PROJECT IMPLEMENTATION IN BELARUS:

- ✓ Availability of qualified and cheap labor resources;
- ✓ Guaranteed sales markets on the territory of the Republic of Belarus and abroad;
- ✓ Possibility to implement the investment project as a resident of FEZ "Vitebsk" on land plots with the developed infrastructure;
- ✓ Benefits and preferences at implementation of the investment project;
- ✓ Possibility of further production expansion (Ministry of Industry's enterprises can provide assistance at implementation of the investment project);
- ✓ Possibility to export products to the EEU countries (more than 180 million consumers) without paying customs duties and payments.

THE PROJECT IN NUMBER

PROJECT'S COST

The cost of the project implementation is from \$ 10 to \$ 150 million.

INVESTOR'S PARTICIPATION

Setting up a new company or joint venture in cooperation with a local company.

PRODUCTS

- Industrial lasers of fiber, diode or disk types with different radiation power:
 1. 20-50 W-for marking;
 2. 3-6 KW-for cutting;
 3. 5-10 KW-for hardfacing;
 4. 20-30 KW-for welding.
- Spare parts for industrial lasers.

PROJECT'S EFFICIENCY

Time to reach design capacity	2 years
Pay back period	5 years
Internal rate of return	20%-40%
Profitability of sales	30%-50%

The analysis of the project's effectiveness was carried out taking into account the market's capacity of industrial lasers in the Russian Federation, as well as other EEU and CIS countries.

MAIN CONSUMERS

Internal market :

Professional market-supplies to state or private metallurgical companies, large machine-building enterprises, as well as industrial enterprises engaged in processing metals and other materials.

Private market - retail and wholesale trade, selling to individuals.

Foreign market:

Exports to the markets of the EEU and CIS countries (average annual growth of imports in Russia-28%). South-East Asian countries (China, India) - more than 30% of the world's industrial laser imports, as well as the European Union countries.

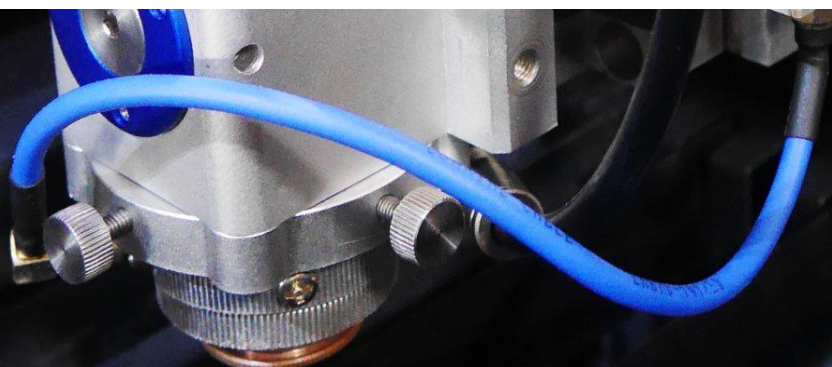
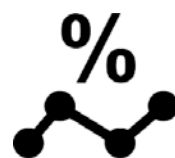
DISTRIBUTION OF SALES BY MAJOR REGIONS

CIS countries – 60%

Belarus – 10%

EU countries – 10%

South-East Asia – 30%



INDUSTRIAL LASERS MARKET OVERVIEW

GLOBAL TRENDS

The global photonics' market doubled: 2005 - \$ 250 billion, 2011 - \$ 385 billion, 2015 - \$ 500 billion. By the end of 2020, the photonics' market is projected to grow at more than **\$ 730 billion**.

The average growth rate of photonics' product sales in the world market over the past 10 years is **7%** per year, and in China - **20%**.

Sales of lasers have doubled in a decade, reaching \$ 13.7 billion in 2018 and **\$ 14.6 billion** in 2019. In recent years, there has been a significant growth in the sector of laser material processing.

The global market of laser systems for materials processing in 2018 reached a record volume of **\$ 19.8 billion**, with growth of **17%**. The experts note an increase of demand in precision metal processing laser systems in Europe and China, as well as for processing of non-metallic materials.

The total sales of industrial lasers set a new record - \$ 5.1 billion in 2018 and **\$ 5.3 billion** in 2019 (**+4%**). High-power fiber lasers for metal cutting are the leader of sales.



\$ 730 billion

Photonics' market
volume by the end of
2020

RUSSIAN FEDERATION

The share of Russia in the global market, including sales both within the country and abroad, is no more than **1.5%**. Moreover, more than 70% of the equipment does not meet the world level.

Russia ranks 5th place in the world in terms of lasers processing technology equipment and only 19-20th place in the world in terms of its production.

Russia ranks 11th place in the world in terms of lasers import and export. The saturation of lasers' market and technologies in Russia is estimated by experts at **10-15%**, and its capacity is **\$ 1 billion**.

The volume of laser-optical equipment sales by Russian's manufacturers for the period from 2014 to 2017 grew by **3-4%** per year and in 2017 reached the level of **\$ 1 billion**.

In recent years, there has been a decrease in the production of metal-cutting machines in Russia by **17%**, which indicates a decrease in demand for metal machining.

But in general, the demand for photonics' technologies and equipment in the real sector of Russian's economy remains low, due to the condition of Russian's economy and the lack of technical standards necessary for the use of innovative laser-optical technologies in industry.

INDUSTRIAL LASERS MARKET OVERVIEW

BELARUS

In Belarus, the laser-optical industry is at a high level of development.

The "B. I. Stepanov's Institute of physics"(the national Academy of Sciences of Belarus) develops new laser sources and systems for various purposes, studies the nonlinear dynamics of complex systems and optical methods for diagnosing of natural objects and biological environments.

Belarus has developed human resources potential with the lowest labor's cost from the EEU countries. Also, the development of laser-optical technology production is supported by the state.

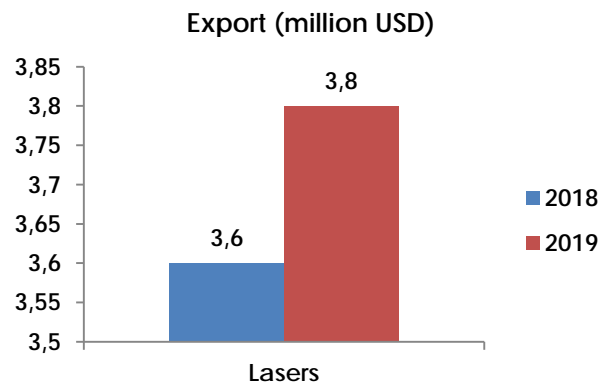
The average annual growth rate of Belarus' import of laser equipment for processing materials is **2%**, and export-**9%**, which indicates a high export-oriented potential.

There is also a significant development of the metallurgical and mechanical engineering industries, where industrial lasers can potentially find application.

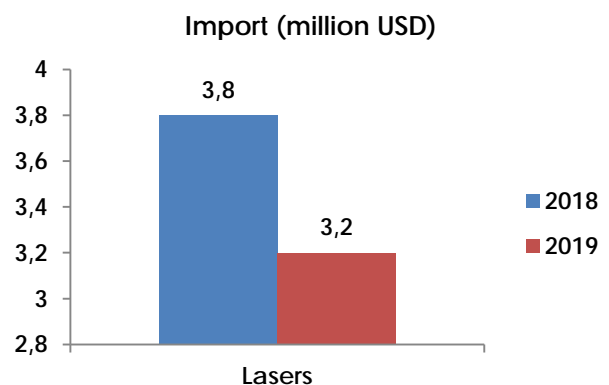
Among the promising areas of scientific development in the field of laser technologies are materials processing technologies using lasers, as well as metallurgical additive technologies using a laser beam for layer-by-layer sintering of powder blanks products with high strength.

EXPORT AND IMPORT

Belarus in 2019 exported **3.8 million** units of lasers by the amount of **\$ 3.8 million** (+470% in quantitative terms and +6% in monetary terms compared to 2018).



Belarus in 2019 imported **4 million** units of lasers by the amount of **\$ 3.2 million** (+480% in quantitative terms and -18% in monetary terms compared to 2018).



Based on the analysis of statistical data, there is a steady demand for laser devices during 2018-2019.

NATIONAL AGENCY OF INVESTMENT AND PRIVATIZATION

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

- Presentation of information on investment opportunities, preferential regimes and benefits, industries, legislation
- Provision of current information on investment projects
- Selection and provision 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 to establish cooperation
- Providing a platform for negotiations and support for the investor during the 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 officials on the implementation of investment projects, as well as on improving business practices in the Republic of Belarus
- Post investment support



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