



UTILIZING THE OPPORTUNITIES OF BUSINESS INCUBATORS IN THE DEVELOPMENT OF INDUSTRIAL ENTERPRISES

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Abstract. *In this article, the effective use of opportunities of business incubators in the development of metallurgical industry enterprises is discussed. In particular, the economic advantages of the creation of new workplaces as a result of supporting and implementing the results of innovative scientific and technological development projects of scientists contributing to the activity of industrial enterprises are highlighted.*

Keywords: *industry, metallurgy, import, cost, mechanical engineering, product, nanotechnology, integration.*

We know that any country cannot imagine the development of its industry without metallurgy. Mining, chemical industry, construction, mechanical engineering, electrical engineering industries are directly related to metal production indicators. On the other hand, the demand for ferrous and non-ferrous metal products in the above sectors is increasing day by day.

Today, 4 million tons of ferrous metal are used in all industries in our country. Considering that 50 percent of it is covered by imports, the share of metal costs is 15 percent in the cost of housing construction, and 40 percent in machine building, and the need for this type of product will reach 6 million tons by 2026, we can understand how important it is to develop this industry. In this case, the need for high-quality metal products is especially high. In this regard, in recent years, the metallurgical industry in our country has been radically renewed and is entering the stage of development based on modern technologies. As the share of investment projects in these processes is increasing, it makes it possible to increase the volume of metal production several times.

In most regions of our country, there are enterprises within the scope of metal production. In particular, Tashkent region is one of the largest regions in this direction. The share of metallurgy in the region's GDP is about 13 percent. The volume of product production has increased by 7.8% in recent years, and today it is 49.7%. "Ozmetkombinat" JSC enterprise in the city of Bekobod has a special place in the industry of our country. The enterprise has been among the leaders in the production of ferrous metal for many years. In accordance with the decision of the head of our state on December 28, 2020 "On measures for the implementation of the investment program of the Republic of Uzbekistan for 2021-2023" JSC "Ozmetkombinat" JSC "Casting complex" and expansion of existing large investment projects are being implemented.

In the world's ferrous metallurgy industry, the volume of production of high-strength steel, in particular, is increasing. According to the World Steel Association (WSA), 1 billion 968.4 million tons of steel were produced worldwide last year, which is 3.8% more than in previous years. China, Japan, and India are leading in steel production. The share of Asian countries is about 69% of the total melted steel today. By 2050, global steel consumption is expected to increase by 1.5 times. In addition, the need for metal products of the main sectors of the economy of the European Union will increase.



According to experts, at least 80% of innovative developments in the field are based on the introduction of new materials and their production technologies. It is expected that nanotechnologies will be widely used on an industrial scale, which will stimulate the further development of powder metallurgy, artificial formation of ultrapure metals with plasma.

The development of the metallurgical industry is directly dependent on metal-consuming industries and responds to all fluctuations in these industries. The most important condition for its successful development at the global, national and regional level is the ability to provide the market needs with high-quality metal products on time. JSC "Uzmetkombinat" plays an important role in the development of the economy by supplying large industrial enterprises and construction companies with ferrous metal, such as the Navoi and Olmalik mining and metallurgical combines.

Almalyk Mining and Metallurgical Combine is one of the flagships of non-ferrous metallurgy. The large mining and metallurgical enterprise is strengthening its position not only in Uzbekistan, but also in Central Asia in terms of mining and processing of copper-molybdenum, zinc-lead, polymetallic and gold-containing ores. It is among the 30 largest enterprises in the world in terms of mining and production of copper products.

Although rare and precious metals such as molybdenum, rhenium, zinc sulfate, cadmium, tungsten, palladium are produced at the combined enterprises, its main product is copper. Copper is a type of metal, and it is widely used in the electrical engineering industry as it is the best conductor of heat and electricity. Copper metal is used in the production of everything from simple refrigerators used in our lives to televisions and electronic devices. In the copper industry of our country, in addition to cable and wire products, electrical engineering and for them the task of increasing the volume of copper processing to 4 times by adopting new types of products for equipment, solar and wind energy, and electric cars is also set.

An effective mechanism of science and production integration has been established at the Almalyk Mining and Metallurgical Combine. As a result of research and research conducted by scientists and specialists, new types of products are obtained every year. A new type of composite alloy-metal ceramic products was mastered at the scientific production association in Chirchik. For this, a production section of composite alloys based on iron powder and molybdenum carbide was established in the association, and the same products is actively produced.

It is always important to combine education and practical cooperation with such large enterprises. In particular, a number of international projects are being implemented in cooperation with JSC "Uzmetkombinat" and higher education institutions, students and young people participate in these projects and bring their theoretical knowledge and skills into practice. Among them, projects such as the development of the technology of casting steel carrier scat wheel in a modern way, the technology of casting of lifting windows in a modern way are included.

In fact, the field of metallurgy, along with the acquisition of theoretical knowledge, also requires practical activities, therefore, it is desirable to involve more students and young people in the projects. Currently, two large international projects are being implemented with the countries of China and Belarus.

In addition, Uzbekistan - China is a joint project based on "Development of technology for obtaining high-quality light aluminum-lithium alloys". Its products are used



in engineering, aviation, architecture and construction, energy and other industries. While the Chinese partners are conducting research on improving the chemical composition of aluminum-lithium alloy, our scientists are conducting studies on the technology of obtaining the alloy, liquefaction and processing modes.

Among the scientists, students and young people are also participating in the Uzbekistan-Belarus joint project. It envisages "Creation of strong nanostructured materials based on aluminum and tantalum oxides". The main focus is on the production of heat-resistant products, and it is determined to increase the strength of details used in high temperature environments. There is a metal called lithium in nature. It does not sink in water, but reacts like all alkalis. It can compete with "athletes" along with scandium and strontium due to its hardness and density and electromagnetic properties. They make up most of the chemical elements listed in Mendeleev's periodic table. On our planet, there are many types of them, starting from ordinary iron, steel, copper and others. Each has its place in all fields.

In general, the promotion of new technological solutions in the field of metallurgy requires a lot of scientific research and hard work from scientists. As a result, the role of mutual cooperation between industry, business and science continues to increase and international relations develop. Against the background of these trends, a new image of regional metallurgy is formed. Its main features are what we are witnessing today in the example of our country - the production of high-quality and exportable products that meet world standards.

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