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DEVELOPMENT OF FERROUS METALLURGY IN UZBEKISTAN IN THE CONTEXT OF MODERNIZATION OF THE NATIONAL ECONOMY

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Abstract: In article consider perspectives develop black metallurgies Uzbekistan in examples Uzmetkombinat. Production produces black metallurgy in the Gase only for the second time raw material hisnot real perspective for growth and provide demand republic. For stable develops branch need to create own raw material base, to have location republic of Uzbekistan.

Keywords: branch of ferrous metallurgy, manufacture, development, economical safety, iron mine, forecast.

Introduction

Metallurgy is still firmly in the ranks of the main basic industries of the modern world economic system. The state of other basic industries largely depends on the level of its development. Over the past 12 years, global steel consumption has grown from 771 to 955 million tons. in year. The high importance of metallurgy in its modern form enhances the role of its internal problems and takes their solution beyond the framework of an individual enterprise, region and even country. Ferrous metallurgy is one of the leading sectors of the country's economy. Ferrous metals constitute the material basis for the development of industrial production, transport, construction, communications, trade and all other sectors of the country's economy. Therefore, the development of various sectors of the country's economy largely depends on the level of production of ferrous metals.

Sustainable supply of the economic complex of Uzbekistan with ferrous metallurgy products is one of the most important factors in the successful implementation of economic and social transformations carried out in the country. The stable growth of demand for the products of this industry is predetermined by the economic development of the republic.

Ferrous metallurgy of Uzbekistan is represented by the joint-stock production association Uzbek Metallurgical Combine - JSC "Uzmetkombinat" and by small metallurgy - foundries of machine-building plants of the republic. The main part of ferrous metallurgy products of the republic is produced in the Tashkent region, and the main producer of ferrous metals in the region is Uzmetkombinat JSC. The products of foundries of machine-building plants make up an insignificant part (0.1%) of the total steel production. These products are used for the internal needs of the factories themselves and their volumes do not significantly affect the production of ferrous metals in the republic. The Tashkent Pipe Plant produces small-diameter pipes.

This provision gives reason to believe that JSC "Uzmetkombinat" is practically the only enterprise on the territory of the Republic of Uzbekistan and Central Asia that produces steel and rolled ferrous metals.

Joint Stock Company "Uzmetkombinat" is the leading ferrous metallurgy enterprise in Central Asia. The plant is the base industry and is closely related to all industries. According to experts, at present, the total demand of Uzbekistan for rolled ferrous metals is only 36.1% provided by the processing of scrap and waste of ferrous metals at Uzmetkombinat JSC, located in the city of Bekabad, the rest (63.9%) is imported from CIS countries, primarily from Russia, Kazakhstan and Ukraine.

JSC "Uzmetkombinat" is a monopoly manufacturer, on this basis, the distribution of its products in the domestic market is regulated

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in accordance with the law. The rolled metal produced at the JSC is mainly used in the republic, and is also supplied to the countries of near and far abroad.

The presence in the republic of labor resources, natural gas, electricity, large reserves of natural iron ore raw materials, labor resources, favorable prospects for their use and the growing needs of the country's economy in metal products create the necessary prerequisites for the accelerated development of the republic's ferrous metallurgy. However, the production of ferrous metallurgy products on the basis of only secondary raw materials has no real prospects for growth and meeting the needs of the republic. The analysis showed that the republic has a sufficient potential of mineral resources to fully meet the needs of the industry.

One of the possible ways to more fully meet the country's demand for rolled ferrous metals is the creation in the republic of production with a full metallurgical cycle through the development of the reserves of its own mineral resources of the available deposits of the republic.

As you know, Uzbekistan has rich reserves of raw materials and resources, including reserves of iron ores. [one; from. 25]

Uzbekistan does not have its own developed iron ore base. According to the State Committee for Geology of the republic, three deposits have been explored to date: Suren-Ata in Tashkent, Temirkan in Jizzakh regions and Tebinbulak in the Republic of Karakalpakstan. [2]

An additional source of raw materials for the ferrous metallurgy of Uzbekistan is the steel-making slags of Uzmetkombinat JSC. More than 3 thousand tons have accumulated in the dumps of the association and 50 thousand tons of steel-making slag are produced annually. From these slags it is possible to extract and produce pig iron for steelmaking.

The secondary (technogenic) resources of the Almalyk Mining and Metallurgical Combine are suitable for the production of a carbonaceous product. [3]

The main product of the beneficiation process, concentrates containing 16–18% copper, are processed according to traditional pyrometallurgical schemes.

According to the adopted technological scheme, the following types of waste and intermediate products are generated in the production process:

- slags of reflective melting;

- slags of oxygen - flare smelting;

- converter slags.

Slags of reflective and oxygen-flare smelting contain valuable components in quantities exceeding their concentration in the original ores (Table 1).

Table 1.

Compositions of slags of the copper-smelting production of the Almalyk Mining and Metallurgical Combine

Slag type	Content of main components%				
	Si	Fe	S	SiO_2	Fe_3O_4
Reflective smelting	0,4-0,6	35-40	0,7-0,9	35-38	10-12
Oxygen flare smelting	0,6-0,8	33-38	0,5-0,6	33-36	12-18
Converter smelting	3,1-3,5	48-52	1,9-2,1	22-24	20-24

The separation of all valuable components from waste can bring great economic benefits, comparable to the sale of the main product - copper and molybdenum.

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At present, these slags are accumulating in special storages and are awaiting the emergence of new technologies for their processing. Annually, only with the tailings of the AGMK enrichment plant, 400-500 thousand tons of magnetite, which is the most valuable raw material for ferrous metallurgy, are thrown into the dump. Considering the physicochemical properties of magnetite, it is not a big problem to isolate it from the total tailings flow. Only a small investment is needed to build a separator department. the copper smelting plant of these slags has accumulated about 20 million tons, with an average copper content of 0.6-0.8% in them, it can be calculated that about 140 thousand tons of copper, 7 million tons of iron and many other valuable components.

The greatest importance, both now and in the future, for the development of ferrous metallurgy in the republic are the resources of scrap metal. Iron resources include cinders and scrap. In connection with the great demand for sulfuric acid in the Republic, the development of sulfuric acid production on a significant scale is planned. In the production of sulfuric acid on pyrite will be obtained in the form of waste cinders, which can be used as iron ore raw materials.

Therefore, an important problem facing the scrap processing organizations of the republic is to strengthen control over the accounting of the existing scrap metal at enterprises and old equipment to be replaced, as well as collection, delivery and procurement of scrap metal.

The analysis shows that the republic has a sufficient potential of mineral resources for the development of ferrous metallurgy in the future.

In increasing production efficiency, an important role is played by the introduction of the achievements of scientific and technological progress in the industry itself - improving technological processes, improving product quality, etc.

The main directions of scientific and technological progress in the development of ferrous metallurgy are improving quality, expanding the range and volume of products based on increasing production efficiency. Achievements of scientific and technological progress, contributing to the effective development of ferrous metallurgy in Uzbekistan, include the use of high-performance electric furnaces in the conversion metallurgy at large enterprises and mini-plants in the production of simple and complex alloyed steels, the organization of ferrous metallurgy with a steel-rolled production scheme, the development of deposits of ores, obtaining iron from ores by direct reduction.

To achieve these goals, it is necessary, using these resources rationally, to make efforts for deeper processing of existing raw materials and production of products that have a steady demand in the domestic and world markets. For the further development of the metallurgical industry, it is necessary to solve the following tasks:

- increasing the level of raw materials supply in the industry due to the involvement of new types of raw materials from new deposits in the turnover and the expansion of import supplies of scrap metal;

- an increase in the volume of production of finished rolled metal;

For sustainable development of the industry, it is necessary:

- the production of ferrous metallurgy products on the basis of only secondary raw materials has no real prospects for further growth in production and full satisfaction of the needs of the republic;

- the growing needs of the country require significant development of ferrous metallurgy in Uzbekistan in the future;

- the prospects for the development of the national potential in the development of the modern metallurgical industry, saturation of the domestic market with long-range metal

products, as well as an increase in its export component create a general favorable background for the domestic market.

The implementation of all these measures will allow expanding its raw material base, bringing the volume of production of metal products to volumes that fully meet the needs of the national economy in ferrous metals, excluding their import into the republic and expanding the export potential.

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