

# THE INFLUENCE ON ECOLOGY AND ECONOMY OF COMPLEX USING OF NATURAL RESOURCES IN MINING-ORE INDUSTRY

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The intensive using of natural resources led to necessity to include the environmental regulations demands in mining-and-processing enterprises' activity. At first, environment protection developed as biological branch of knowledge. In modern, when scales of consuming activity grew up, the changes of natural balance as consequence of insufficient attention to ecological factor influenced considerably development of national economy. That's why the problem of environment protection makes great economic sense.

The technologies of complex and full resources using, especially in mining-ore industry are the main directions of science research. The deficit of resources is an underwater reef, which prevents Ukrainian economy progress. At the same time, practice of management evidences of artificial deficit. Today, we throw out on dump the great volume of resources, which is called the "wastes". A colossal sum of money is spent on transportation, utilization and maintenance of rising wastes avalanche.

Today the largest quantity of wastes is generated in mineral raw complex, including extractive and dressing enterprises. Near 70-75% of wastes total volume arises in these brunches. Only 6-7% of wastes are utilized now.



Figure 1 – The diagram of natural resources using

It is necessary to switch to utilization of the secondary resources, to application of low-wasted and resource-saving technologies. This way the losses can be converted to profits. Without doubt, a complex of legal, economic, organizational and administrative measures is needed. Flexible and successive state policy, which can economically encourage enterprises to care about primary resources, and everywhere where it is possible to substitute them by secondary resources, is needed. Its means necessity of integral economical mechanism, which can aim at full using the "second circle riches".

The using of secondary resources allow to, firstly, to reduce utilization of valuable natural resource, to keep it for future generations and cut down

environmental damage; secondly, it is as a rule, economically profitable owing to large content of useful components and comparatively low expenses for transportation; thirdly, application of secondary material guarantees lowering the industrial wastes quantity, that facilitates reducing the expenses on environment pollution prevention.

The scientific and technical progress in mining-ore industry is capable to change traditional conception of material base. The complex processing of material along with volume of production output increase and the assortment expansion allows reducing the expenses. By-product producing at the same amount of wastes reduces its cost price as material expenses are distributed through all production volume. Besides, complex processing provides increase of effectiveness of basic funds and economy of capital investments using.

The experience of wastes reusing for example OJSC “The Central mining-and-processing combine” demonstrates the effectiveness of complex technology, which utilizes both the primarily and the secondary resources. The using of lying tailings allows enterprise to get supplementary major items of production (concentrate) and following by-products (sand, crushed rock). Such kind of situation has a positive influence on the whole enterprise and environment. First of all the area of tailings pond diminishes, it follows reducing of maintenance costs on dam fortification and lowering probability of area flooding.

The dynamics of expenses on concentrate producing from lying tailings is given on the fig. 2.

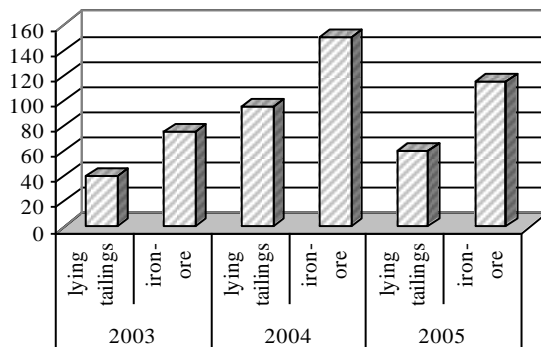


Figure 2 – The dynamics of expenses on concentrate producing from primary and secondary resources, UAH

The cost price of products from tailings at the Central mining-and-processing combine is lower than the ones obtained from iron-ore. There is no necessity in initial stages of technological process. The feed is piped to redressing.

As, Kriviy Rih is a heart of mining-ore industry. There are five ore-dressing combines that return to a nature great volume of wastes as a result of their activity.

That's why the experience of the lying tailings processing is ecologically and economically acceptable for all ore-dressing enterprises. The problem of nature resources complex using is important, actual and perspective. All economists should always remember that resources are exhaustive. This point of view is the beginning of effective manager's decision or successful scientific work. The volume of wastes grows up in geometry progression when the nature deposits work out.