

development of existing mineral deposits eliminates the possibility of selective mining of rich and easily accessible areas at the expense of optimal planning for the mining operations development of and is essential to improve the reliability of the mining enterprise system.

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TAKING INTO ACCOUNT OF AMOUNT AND QUALITY OF ATTRACTED IN THE BOOTY OF BALANCED ON MAINTENANCE QUALITY INDEXES MINERALS OF SUPPLIES

Estimate rationality of process of mastering of mineral resources the indexes of plenitude of exception of them from the bowels of the earth and to the further processing. Especially severe losses at the primary processing of multicomponent mineral resources. Therefore, the number of «passing» components withdraws that from complex mineral raw material increases continuously. If in 1970 from the supplies of the colored and black metals withdrew 35 useful

components, in 1990 their number attained 70, then in the beginning of the XXI of century – over 80.

Researches are based on materials of work of ore mining enterprises of Krivbass. The structure of Kryvyi Rih belongs to one of the most interesting geological objects of Ukrainian of shield, that explains not only localization of bowels of the earth of unique supplies of iron-ore components but also original geological structure, history of geological development of region, that represents all basic stages of the formation.

The aim of the work is the development and introduction of methodology of determination of losses of balance-industrial supplies and impoverishment of content of quality indexes of minerals taking into account the complex mastering of bowels of the earth.

For the achievement of the aim, such tasks are untied: the analysis of present methods of determination of losses of balance-industrial supplies and impoverishment of content of quality indexes of minerals; the improvement of existent methodologies of determination of losses of balance-industrial supplies and impoverishment of content of quality indexes of minerals taking into account the complex mastering of bowels of the earth.

Today all less than one component minerals become and less than. In ferrous quartzite's except a basic component there is much copper, vanadium, zinc, lead and other useful components, part from them in composition wastes use as building material. Thus the cost of such macadam approximately equals prime prices of booty of iron-ore minerals.

On some deposits, beds, ore bodies or areas of array of ferrous quartzite's content of quality indexes of titan, vanadium, cobalt, copper, zinc, sulphur, nickel, phosphorus, germanium and non-metallic minerals sometimes higher, what in the basic deposits of minerals of the coloured metals.

The applied formulas are for determination of indexes «visible» losses of balance-industrial supplies and impoverishment of content of quality indexes of minerals in iron-ore mass both adulterations in iron-ore mass of useful components of containing breeds and their additions or reductions take into account in her due to abandonment in the losses of balance-industrial supplies of impoverished or enriched on maintenance the quality indexes of minerals of part.

However the end-point allows exactly to take into account and divide the sources of bringing in iron-ore mass on maintenance the quality indexes of useful components and source of losses of balance-industrial supplies and on maintenance quality indexes minerals of supplies, as a result visibility of prosperity is created sometimes even in case of impermissible severe losses of balance-industrial supplies.

At content of valuable component in breeds that apply, (often it arrives at 0,3–0,5 middle content of quality indexes of minerals) such visibility of prosperity is possible even at 30 % losses of balance-industrial supplies.

For example 1. In the balance-industrial supplies of ferrous quartzite's is to 32 % cities of quality indexes of iron, and at applying and containing on maintenance quality indexes minerals breeds is a 16 %.

Volume of losses of balance-industrial supplies even 30 balanced supplies, but due to producing on maintenance the quality indexes of minerals of breeds in the volume of to 30 of 100 e exception on mountain mass (that quite possible), then on a formula at content quality indexes of iron in the obtained iron-ore mass 27,2 %, what testifies to safe position, but 30 balanced supplies it is lost beyond retrieve, similarly as thrown away opportunity the use in the future presently balanced on maintenance quality indexes minerals of supplies and breeds with content of quality indexes of iron 16 And the supplies of these breeds in a pool are enormous.

For example 2. Will expect the volume of losses of balance-industrial supplies and impoverishment of content of quality indexes of minerals in iron-ore mass for the terms of the Kryvyi Rih pool, if $c=56\%$; $c_3=35\%$; $b=16\%$; $q=0,1\%$; $a=50\%$; Π =of 100 т; B =of 100 т. On the usually applied formulas the volumes of losses of balance-industrial supplies and impoverishment of content of quality indexes of minerals in iron-ore mass will present $\Pi=11\%$; $P=11\%$. In reality according to formulas $\Pi=20\%$; $P=10\%$.

If not to conduct the separate account of all sources of entering iron-ore mass from the balance-industrial supplies of useful components, then lose another possibility of objective comparison of work for the improvement of the use of bowels of the earth of areas of arrays of hard minerals that are in the different mining (at

presence of in the breeds of useful components and without them, at possibility of abandonment in the losses of balance-industrial supplies of poor on maintenance quality indexes minerals and without them) and geological conditions.

In an order to take into account this important circumstance, some other factors (even partly), for example multicomponent of minerals and possibility of determination of losses of balance-industrial supplies at the surveyor providing of booty and complexity of the use of mineral raw material, it is expedient to replace an index – content of quality indexes of useful components (metals) by next indexes:

- minerals, that withdraw the value of content of quality indexes in the balance supplies; in supplies, that loses;
- at impoverishing on maintenance quality indexes minerals breeds;
- by a value on maintenance quality indexes in digging, that withdraws.

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ESTIMATION OF THE EFFECT OF RESOURCE-SAVING TECHNOLOGIES ON THE EFFICIENCY OF ORE MINING IN THE UNDERGROUND DEPOSIT DEVELOPMENT IN THE CONDITIONS OF THE REPUBLIC OF TAJIKISTAN

The mining industry of the Republic of Tajikistan has the specifics of a resource-oriented nature. The industrial potential of the underground mining of the Republic has a pronounced concentration at the initial stages of the technological cycle. In Tajikistan, process innovations are predominant, associated with the acquisition of equipment and aimed at improving the quality of products, i.e. preservation of the occupied place in the market.

One of the priority directions of accelerating the pace of development of this industry and solving problems of increasing the efficiency of developing a mineral deposit using an underground