

PREPARATION FOR EXTRACTION IN UNDERGROUND MINING OPERATIONS

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Annotation: The article is about underground mining operations, preparation for the opening of mines, scraping included in the preparatory solders, about the location of the welding solders, indicators of the size of the preparatory work, requirements for the preparatory work, ventilation solders and their passage during the preparatory work, methods of preparing the main horizon, the main it is mentioned about the dependence of the placement of horizons on the pressure of the mine.

Key words: Mine, preparatory welds, streak, ort, scraping, shearing, cutting welds, main horizon, ore body, stagnation, ore thickness, ore stripping, massif.

Preparation of the mine area for mining, dividing it into floors with the main horizon welds, with a carrier line, backs and dividing the floor into minable blocks with the help of vosstayushii welds. the preparatory slopes serve for the movement of people, the transportation of the mass of mining rocks by means of vehicles, the delivery of materials and equipment, the ventilation of the horizon, etc. The mining area is divided into panels and columns by the preparatory slopes, due to the fact that the mineral in the mine is slightly inclined. the cutting blades, which are planted directly for ore mining within blocks, panels and columns, are divided into a special group. cutting solders include the following solders:

- To separate subgrade or horizontal strata lines to mine the block in subgrade and massif layer.
- scraper-horizon pits are tracks or backs that serve to deliver stripped ore to the main- horizon pit and for secondary crushing of large pieces of ore.
- smelting horizon smelters are a complex of smelters consisting of backs, tracks and chambers that serve to lower the crushed ore to the main horizon and serve for secondary crushing.
- cutting shafts and slots, horizontal or vertical passage, ventilation joint and a number of other joints, as they are directly related to ore extraction, are considered separately in the study of mining systems. The adopted methods of preparation, the location and dimensions of the preparatory solder must comply with the following requirements:

ensuring the safety of ore mining operations; ventilate the mined pit as normal; to ensure that blocks and layers ready for mining are ready on time to have a constant and uniform amount of reserves for the extraction of a given ore reserve with a specified average amount of useful compounds; creation of comfortable and safe conditions for the movement of people, delivery of materials and equipment along the roads;

ensure that the loss of ore in the protective tanks of the preparing solders is minimal; determine the efficient method of delivering, loading and transporting ore out of the

block; ensure low cost of maintenance of solders and repair of reinforcements;

should ensure timely drainage in conditions of large amount of underground water. the methods of preparation of the main horizon depend on the thickness of the ore

body, the size of its deviation angle, the physico-mechanical properties of the ore and mixed rocks, the method of extracting mda from the floor, and the methods of transportation of minerals in vehicles. Among the technological processes of ore mining, the process that has the most influence on the placement of transported horizon solders is the process of unloading and loading ore, changing one or other elements of the technological process, the reason for changing the placement scheme of the transported line and the medium it can. for example, if a vibratory ore unloader is installed on the ore scraper delivery shaft, the dimensions of the main horizon welds and the layout of the equipment will also change. the choice of the scheme of placement of preparatory solders outside the ore body and along the ore body depends on the following factors: the thickness of the ore body, the direction of ore mining, the method of ventilation and other factors. When the ore layer is thick and very thick, the preparation line is passed outside the ore body. The advantage of such a preparation scheme is: the reduction of the cost of repair and maintenance of the reinforcement, the low level of ore loss in the pits between the floors, the possibility of starting pit mining after the end of ore mining in the block, and the fact that the ventilation scheme does not change. the main disadvantage: in the initial period of preparation, costs can be quite high due to the need to pass quarries directed to the ore body. A single haulage line may be sufficient to mine a very thick ore body if it is fed by extracting ore from the massif through an under-floor ore dropper. in which the ore crushed under the floor is transported by mechanized method to the mine where the ore is unloaded. If the angle of lying of the ore body is variable, and the thickness of the mda body is different, and there are discontinuities, then it is convenient to carry out the placement of the line according to the scheme b shown in Fig. 2.12, because it is possible to follow the lying elements of the mda body it will be easy. the change of the direction of the line to the hanging or lying sides of the ore body is determined depending on the stability of the mixed rock. if the service life of the line is long, it is placed between the suspensions. In mda deposits where the ore body is thick and very thick, the strip or back preparation scheme is used.

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