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PROBLEMS CAUSED BY THE ROCKS SHIFTING PROCESS AND FACTORS THAT AFFECT IT

The dredging of coal layers and other fossil minerals forms the cavities of considerable sizes in the Earth's interior. The rocks that occur at the surface of the mine workings may move by the action of gravity and rock pressure, causing the faulting of all strata, including the Earth's surface.

As the result of faulting and deformation of the entire thickness of rocks violated the integrity of mine workings fixing is disturbed. The objects located on the earth surface are deformed or can be collapsed (there are cracks on the walls).

The rocks that lie above a longwall are released from the pressure of the above lying rocks, and the above lying rocks lose the support. As a result the natural balance of rocks around the longwall is broken, they are moved and deformed. The increase of load on clearing pothole is carried out, mainly, due to the increase in speed of their motion that directly affects the deformation processes in the mountain massif and the duration of the landslide process.

The subsidence of the earth's surface above the mining workings is one of the most important impacts of mining operations on the geological environment. The reduce of engineering and geological rocks stability, the non-densifying of rock massif lying over underground workings, the redistribution of tension round the developed space in a massif, the waterlogging of large areas, the flooding of buildings and structures are connected with the development of this process. The subsidence of the earth's surface above the mining workings is also linked to the rocks collapse (in many cases - complete) above the mining workings at which the breach of continuity with the formation of new fracturing zones takes place.

The faulting of the rocks thickness and the earth's surface caused by underground mining depends on many factors. The main of them are the tectonic disturbances and movements; the angle of inclined layer; the watering of rock strata; the power of extracted layer and the depth of mining; the system of working; the speed of coalfaces movement; the breach of rock strata; the power of pumps and the relief.

To avoid all these problems we should know the rules of the rock strata and the earth surface faulting processes. It is necessary to examine the peculiarities of this processes, perform calculations of the faults and deformations that occur both at the earth's surface and in the objects, build the preventive pillars of optimal sizes that do not allow the unnecessary loss of minerals.

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