Liliya Kas'yanenko O.G. Vagonova, research supervisor S.I. Kostrytska, language adviser SHEI "National Mining University", Dnipropetrovs'k

Increasing Effectiveness of Investments into Labor Conditions Improvement

The main reasons that stipulate the high accident rate, traumatism and occupational diseases of coal mine workers in Ukraine are as follows: high dustiness of the working area air; insufficient degassing system; defects of methods and means of forecasting accidental emissions and of gas-dynamic phenomena prevention; complexity of venting systems and significant unproductive air losses; physical depreciation of the most part of mining equipment and machinery; insufficient provision of mines by the tools of labor conditions control and by primary and automatic facilities of fire-fighting; insufficient provision of working clothes, shoes and means of individual protection for workers etc.

In the conditions of significant deficit of financial resources, mining management must solve difficult problems, connected with giving priority to particular measures, directed at labor conditions improvement. Exactly the same tasks have to be solved by higher sectoral and state control bodies.

Presently in the branch, as well as on the level of mines more and more often management and decision-making are not systematic, scientifically grounded and planned, but situational. It concerns the problem of implementing particular measures depending on the events (accidents, breakdowns or breakdown situations), which have recently occurred at mines and separate mine areas, or depending on the decision of controlling bodies. As a rule every mine develops its own variant of measures for different problems, connected with labor protection. These variants are accumulated at higher levels of hierarchy, where final decisions are made, which is not the optimal variant for management organization. Measures, created by the mining management, usually are directed at supporting the achieved level of safety, but not at the fundamental improvement of labor conditions.

Taking this into consideration we suggest an algorithm of choosing the priority directions of investments into labor conditions improvement, which differs in a way that in the process of choosing the priority direction the total value of expectation of social damage from dangerous events is considered.

The algorithm is multi-purpose and can also be used when choosing the priority direction of investments by mining management as well as by higher control levels, including the state one. The main distinction of the selection process on different levels consists in different approaches to defining the values of forecasted loss from breakdowns, accidents and occupational diseases. When selecting the priority directions of investment the forecasted loss is defined relative to the mining enterprise and in other cases the total quantity of the expected social damage from dangerous events is taken into account.