

About working on the ultimate pit outline in the open mining

Zharikov S., Kutuev V.

Federal state budgetary institution of science Institute of mining of the Ural branch Russian Academy of Sciences, Yekaterinburg, Russia

e-mail: 333vista@mail.ru

Currently, among the miners there is a question: "Need, or no need to regulate the conduct of drilling and blasting operations at statement of ledges in the extreme situation?" For both sides there will be quite serious arguments, but we will not go into unnecessary details under this article. Instead, it is advisable to focus on what is actually happening in the mining industry. In business, everything is solved at lightning speed. If the head of one mining Association saw the other market participant competitive advantage in the form of cost reduction by reducing the amount of posting, then he will do the same, not paying special attention to the geological and technical conditions of development. The result of rapid changes in the parameters of development without organizational and cultural changes in the work in the production shops will be catastrophic landslides that occur suddenly and, as a rule, unexpectedly even for the surveying service. The economic benefit in this case begins to depend very significantly on whether the Board will fall or not. Someone will think that will fall, and someone – that will not fall, but when it comes to the safety and lives of miners, it is always necessary to take into account the adverse outcome. The engineer should not hope that he will not fall, but should make it so that the death of people when the Board falls, was impossible. From this point of view, the regulation of the excavation works seems to be the right way to improve the safety of mining operations. And there are already major advances in solving the problem, namely the development of Federal rules and regulations to ensure the stability of the sides of quarries and sections. At the same time, should pay attention to the fact that the carrying out of geomechanical observations and forecast calculations in accordance with modern progressive methods of measurement and analysis, in most cases, will not reveal the development of geodynamic movements the result of the influence of the massif of short-period pulse loads caused by blasting operations until decolouration will not be clear. In this regard, the very solution of geomechanical problems in the design of boards should be closely related to drilling and blasting operations, not only in the formation of the slope contour, but also in the approach of technological explosions to this contour. Given that in these areas of knowledge different methodological techniques, and deformation processes are considered in different periods, the organizational combination of geomechanics and explosives in the regulation of backwash work is quite a difficult task, which in principle can not be solved as a result of their parallel work. Such work can only be organized sequentially. In the beginning, geomechanical assessment of the state of the massif with the determination of stable angles is carried out, then the study of the dynamics of explosions, and then the development and implementation of special technology of drilling and blasting operations on the limit contour of the quarry.