

PARAMETERS OF DRILLING-AND-BLASTING OPERATIONS FOR THE USE EMULSION EXPLOSIVES

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The analysis of experience of emulsion explosives application for the last 10 years has allowed to establish a tendency for increasing in their usage on underground mining operations. Safety of operations conducting, smaller volumes of products of explosion and high power rates of emulsion explosives lead to decrease in influence on a condition of miner and atmospheric air. However, lack of the approved and widely applied method of calculation of drilling-and-blasting operations parameters which consider power characteristics of emulsion explosives constrain their implementation.

The coefficient of explosives operability that was calculated on working capacity or explosion heat underestimates up to 30% indicators for emulsion explosives. For an exception of these disadvantages, the offered method of calculation of drilling-and-blastions operations passports defines working capacity coefficient with accounting of extent of realization of detonation velocity. Calculation of drilling-and-blasting operations parameters is based on definition of sheak zones and fracturing formation around blast-hole charges.

The rational arrangement of blast-holes in a face of mine working is based on accounting of the areas of cuts, which are braeking-off and outline parts of a face. The offered technique of development of passports of drilling-and-blasting operations is based on industrial measurements of detonation velocity during change of density and diameters of charges of Ukrainit-PP emulsion explosives type. The technique is recommended for calculation and drawing up passports of drilling-and-blasting operations during mine workings drivage.

Key words: drilling-and-blasting operations, emulsion explosives, explosion heat, operability of explosives, detonation velocity, contortion and fracturing

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