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PRIMJENA KONTROLISANOG MINIRANJA PRI ISKOPU ULAZNOG PORTALA DESNE TUNELESKE CIJEVI TUNELA „VRANDUK“ NA KORIDORU VC

Sažetak:

Visina zasjeka desne portalne konstrukcije, tunela Vranduk započinje na 337,24 dok visina lijeve strane započinje na 331,74. Projektovana niveleta desne tunelske cijevi je na 315,24 što znači da je neophodno otkopati 22m' desne i 16,50m' lijeve kosine. Radovi na iskopu izvođeni su kombinacijom mašinskog iskopa i miniranja.

Otkopavanje hidrauličnim bagerom visine od 10 – 11m' do nivelete tunela nije bilo ekonomski prihvatljivo jer se radilo o stijenskoj masi znatne tvrdoće sa prosječnom jednoosnom čvrstoćom $qu=45$ MPa.

Glavni zadatak i najveći izazov prilikom iskopa miniranjem stijenske mase na predusjecima jeste određivanje bušačko-minerskih parametara koji će obezbjediti što manje oštećenje po dubini konturnog dijela stijenske mase, te sve potencijalne štetne utjecaje miniranja svesti na minimum.

U ovom radu daje se prikaz određivanja bušačko-minerskih parametara pri iskopu ulaznog portala desne tunelske cijevi tunela „Vranduk“ na koridoru Vc.

Ključne riječi: *Iskop, zasjek, predusjek, kosina, bušenje, miniranje*

APPLICATION OF CONTROLLED BLASTING IN THE EXCAVATION OF THE ENTRANCE PORTAL OF THE RIGHT TUNNEL TUBE OF THE "VRANDUK" TUNNEL IN THE VC CORRIDOR

Summary:

The height of the section of the right portal structure, Vranduk tunnel, starts at 337.24, while the height of the left side starts at 331.74. The projected level of the right tunnel pipe is at 315.24, which means that it is necessary to excavate 22m' of the right and 16.50m' of the left slope. Excavation work was carried out using a combination of mechanical excavation and blasting.

Excavation with a hydraulic excavator to a height of 10-11m' to the level of the tunnel was not economically acceptable because it was a rock mass of considerable hardness with an average uniaxial strength of $qu=45$ MPa.

The main task and the biggest challenge during the excavation by blasting the rock mass at the intersections is the determination of the drilling and mining parameters that will ensure as little damage as possible to the depth of the contour part of the rock mass, and reduce all potential harmful effects of blasting to a minimum.

This paper describes the determination of drilling and mining parameters during the excavation of the entrance portal of the right tunnel pipe of the "Vranduk" tunnel on the Vc corridor.

Key words: *Excavation, notch, undercut, slope, drilling, blasting*

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