



Vpeljava novega jeklenega ločnega podporja pri izgradnji prog v Premogovniku Velenje

ID 04 Introduction of a New Steel Arc Supports in Building Roadways in Velenje Coal Mine

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POVZETEK

Zaradi vse bolj zahtevnih montan geoloških pogojev v Premogovniku Velenje, centralizacije odkopavanja (jami Pesje in Preloge se z odkopi vse bolj približujeta druga drugi in zaradi tega prihaja do medsebojnih vplivov), zaradi večjih globin in vse večjih pritiskov smo pristopili k uvajanju novega tipa jeklenega ločnega podporja TH 29. Razlike med starim podporjem K24 in novim TH29 so v obliki profila, ki omogoča bolj zvezno popuščanje in s tem manjšo nevarnost pri sprostitvah napetosti v jamskih progah. Druga razlika pa je v samem materialu, kateri je bil pri starem podporju dodatno termično obdelan (poboljšanje oz. kaljen), novi material ima pa ustrezno trdnost zagotovljeno z ustreznimi metalurškimi dodatki in dodatne obdelave tako niso potrebne zaradi česar je dosežen prihranek pri proizvodni ceni. Novo podporje tako zagotavlja večjo nosilnost in manjšo nevarnost za sprostitve napetosti v jamskih progah. Uvajanje novega podporja je zelo kompleksna operacija saj za sabo potegne spremembe v tehnološkem procesu, celo logistiko in vzdrževanje opreme za popravilo jeklenega ločnega podporja. S tem se intenzivno ukvarja razvojna skupina, ki je v preteklosti v Premogovniku Velenje že uspešno vpeljala več novosti pri podpiranju jamskih prog.

Ključne besede: premogovnik, jekleno ločno podporje, metalurško obdelan, jamske proge, podporje TH29.

ABSTRACT

Due to increasingly demanding montan geological conditions in Velenje Coal Mine, centralization of excavation (excavation of pit Pesje and Preloge are coming closer to each other and this leads to interactions), because of greater depths and increasing pressures we accede to the introduction of a new type of steel arch support TH 29. The differences between the old K24 and the new TH29 supports is in the form of profile that enables continuous loosening and less threat in the release of rock burst in the roadways. Another difference is in material itself, the old steel arch were thermally processed (quenched and tempered), the new material has adequate strength ensured with the appropriate

metallurgical additives and additional processing is not required, so production cost are achieved in savings. New steel arch support provides greater load capacity and lower risk for release of rock burst in the roadways. Introducing the new steel arch support units is a very complex operation, because this means changes in the technological process, even logistics and maintenance of equipment for repairing steel arch support. This problem is the main topic of development team, which has successfully implemented numbers of innovations in supporting roadways in Velenje Coal Mine.

Key words: Coalmine, Steel Arch Support, Metallurgical Additives, Roadways, TH29 Support.