

光面爆破空气垫层装药轴向不耦合系数理论研究

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摘要 空气垫层装药是岩石光面爆破常采用的一种有效装药结构。预留的空气垫层降低了爆轰波和爆生气体压力, 减少了其对孔壁岩石的冲击压缩破坏, 延长了炮孔中爆生气体的存在时间, 提高了爆生气体准静压力作用下岩石光面爆破断裂成缝的质量。根据光面爆破的要求, 从理论上探讨了空气垫层装药结构主要参数轴向不耦合系数的计算方法, 并以部分岩石为例进行了实例计算。在此基础上将此方法应用于工程实践, 取得了良好的光面爆破效果。

关键词 [爆破工程](#); [光面爆破](#); [装药结构](#); [空气垫层](#); [轴向不耦合系数](#)

分类号

THEORETICAL STUDY ON AXIAL DECOUPLING COEFFICIENTS OF SMOOTH BLASTING WITH AIR CUSHION CHARGING CONSTRUCTION

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Abstract

Charged with air cushion, the blasting mechanism of smooth blasting with soft cushion charging construction is studied. Namely, the soft cushion can not only decrease the pressure of explosion shock waves and explosive gases in order to reduce the shock compress breaking on hole-wall, but also can extend the action time of explosive gas-pressure and improve the quality of breaking cracks of smooth blasting under the quasi-static pressure of explosive gases. According to the requirements of smooth blasting, axial decoupling coefficients of charging construction with air soft cushion are analyzed. Correspondingly, the theoretical calculation formulas are presented. Finally, the axial decoupling coefficient values of smooth blasting in some rocks with air layer are calculated, and the air soft cushion charging construction is used in engineering practice of smooth blasting. The results show that air soft cushion is an effective smooth blasting charging construction.

Key words [blasting engineering](#); [smooth blasting](#); [charging construction](#); [air cushion](#); [axial decoupling coefficient](#)

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