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综放面倾向煤柱支承压力分布规律研究

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收稿日期 2004-10-10 修回日期 2005-4-28 网络版发布日期 2006-12-15 接受日期

摘要 在较厚煤层综放面倾向煤柱支承压力现场实测的基础上, 应用弹塑性极限平衡理论, 考虑煤层厚度及倾角的影响, 分析得出综放面倾向煤柱支承压力峰值位置的计算式及分布规律。该研究为综放回采巷道的合理布置及护巷煤柱参数的合理确定提供了依据, 有利于改善巷道维护状态和提高煤炭资源采出率, 并为类似条件下的综放开采提供有益借鉴。

关键词 [采矿工程](#) [较厚煤层](#) [综放面](#) [支承压力](#) [极限平衡理论](#) [倾向煤柱](#)

分类号

STUDY ON DISTRIBUTION LAWS OF STRESS IN INCLINED COAL PILLAR FOR FULLY-MECHANIZED TOP-COAL CAVING FACE

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Abstract

Based on in-situ observation about stress in inclined coal pillar for fully-mechanized top-coal caving face of thinner coal seam and the elastoplastic limit equilibrium theory, taking the thickness and angle of coal seam into account, the results and relations are analyzed systematically and completely; and the formula and the distribution laws of stress peak value are obtained. The study will provide some references to the reasonable design for gateway and the determination of parameters for coal pillar preservation in the condition of gob-side driving in fully-mechanized top-coal caving face, and to improve the maintenance of gateway and increase the recovery ratio. And it will provide some available references for other similar mining areas.

Key words [mining engineering](#) [thinner coal seam](#) [fully-mechanized top-coal caving face](#) [abutment pressure](#) [limit equilibrium theory](#) [inclined coal pillar](#)

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