

论文

大埋深高水压裂隙岩体巷道底臌突水试验研究

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摘要:

随着煤炭开采向深部发展, 高地压和高水压矿井破碎岩体巷道发生底臌突水灾害越来越多。为进一步研究该类巷道底臌突水机理与特点, 笔者运用相似模拟试验和现场巷道底板增压注水试验不同手段综合研究深部巷道底臌突水的临界突变规律。运用相似试验模拟了承压水作用下, 巷道底板发生破坏的特征; 通过现场注水试验分析巷道底臌量和底板物性变化规律, 发现了深部巷道底臌突水的突变性规律。

关键词: 大埋深; 高水压; 裂隙岩体; 巷道; 底臌突水

Experimental research on floor heave and water inrush in the broken rock roadway under great depth and high water pressure

Abstract:

With the depth of coal mining increasing, more and more floor heave and water inrush hazards occur in the broken rocks roadway in the coal mine with high ground and water pressure. In order to study the mechanism and characteristic of this kind of roadway floor heave and water inrush, two different methods were accepted to study the critical mutation law of deep roadway floor heave and water inrush synthetically, which includes similar simulation test and water injection test by boosting pressure in the roadway floor. The characteristics of roadway floor failure disturbed by confined water was found by the similar simulation test. The change law of floor heave quantity and the floor rock physical property was analysed by the site water injection test, and the mutagenicity of the deep roadway floor heave and water inrush was found.

Keywords: great depth; high water pressure; broken rock; roadway; floor heave and water inrush

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