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煤层底板断裂突水时间弱化效应机理的仿真模拟研究—以开滦赵各庄煤矿为例

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摘要：

采用现场地应力实测、室内不同含水量情况下的断裂带物质的单轴、三轴常规和流变力学试验以及弹塑性
^3D)等研究，获得了断裂带物质弱化效应力学参数，阐述了其弱化机理和主要控制因素，提出了煤层底板断裂构
对赵各庄矿13水平（－1100m)F8断层破碎带穿越的首采区安全回采方案做出了预测和评价。

关键词：延迟滞后突水 突水时间效应 流变试验 三维可视化模拟 煤层 底板

Trial Analyses and Numeric Simulations of Waterbursting Time-effect under Coal Bed

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of Plan Designing for Water Conservancy and Power,Beijing,1000183) Institute of Geology and Geophy
Scienc

Fund Project:

Abstract:

In the light of safe mining evaluations for the first mining district which is cut by fault
level in the Zhaogezhuang coal mine, Kailuan, this paper adopts such methodology as measured grou
special rheological rock mechanics experiments, and three-dimensional visual numeric modeling usi
effect mechanics parameters of fault materials have been obtained. The paper also discusses their
controlling factors, and presents a new concept of the time weakening effect of fault materials u
develops and enriches basic theory of water-bursting in coal mine. As a result, different safe mi
mining district at the thirteenth level in Zhaogezhuang mine have been predicted and evaluated.

Keywords:water-bursting time-effect rheology 3-D visual numeric modeling

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