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Calculation of Working Face Water Inflow with Large Well Method -Taking the First-mining Face of 12308 in Selian Coal Mine as an Example

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Abstract Working face water inflow forecasting is the basis of correct implementation of mining design and layout of drainage system. Selian 2nd coal mine is located in Ordos, Inner Mongolia autonomous region, which belongs to semi-arid high altitude deep mining of mines. Mid Jurassic aquifer and middle-lower Jurassic Yan'an formation aquifer are the main water filling aquifers, and its direct water-filling source is sandstone fracture water of 3-1 coal seam roof. Mine water filling channel mainly is roof sandstone fissure. Its hydrogeological condition is of relatively simple. By using the big well method, its water inflow has been predicted that the minimum is 44.31 m^3/h, the maximum is 158.37 m^3/h, and the normal value is 119.18 m^3/h. It has achieved a good effect for using the big well method to predict water inflow from sandstone aquifer of working face roof, which provides theoretical basis for water prevention and control measures of working face.
Keywords first-mining face, hydrogeology, water filling factor, forecasting of water inflow