

Impact of Ground Water Temperature on Coal Mining Water Yield in Deep Coal Mines

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Abstract As exploiting depth of coal mines increases in China, ground temperature and ground water temperature rise, accordingly permeability coefficient of aquifers will magnify. This variety of permeability coefficient will affect the coal mining water yield. Taking Zhaolou Coal Mine as an example, considering the impact of ground water temperature on permeability coefficient, coal mining water yield was predicted using analytical method. The predicted result was 398.53 cubic meter per hour. Compared with the condition of no variety of ground water temperature, the value of coal mining water yield increased 59.63 cubic meter per hour, the range was 17.60%. So ground water temperature was an important factor influencing coal mining water yield in deep coal mines.

Keywords deep coal mine, permeability coefficient, water temperature, coal mining water yield