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Risk Assessment of Reinforcement System on Fractured Rock Mass, Gate Shaft Project, Jatigede Dam, Sumedang, West Java, Indonesia

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Abstract : Power waterway is one of dam structures and as an intake vertical tunnel or well function for hydroelectric power plants in Jatigede area, Sumedang, West Java. Gate shaft is also one of parts the power waterway system. The paper concerns some consideration in determining a critical state parameter on the back stability analysis of gate shaft or excavation wall stability during excavation. Study analysis was carried out using without and with reinforcement system. Results study showed that reinforcement shaft could reduce the total displacement and safety factor could increases significantly. Based on the back calculation results, it was recommended to install some reinforcement materials and drainage system to reduce pore water pressure.

Keywords : power waterway, reinforcement, displacement, safety
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