

The effects of discontinuities on stability of rock blocks in tunnel.

ABSTRACT

This paper presents the results of an investigation that was carried out using important parameters such as discontinuities in forming rock block and instability in tunnel. The discontinuities like bedding and joints are one of the most important factors compared with parameters such as engineering features of rock mass. In this review, numerous features like Rock Quality Designation (RQD), rock classification (RMR), stress and strain, and distributions of discontinuities in a sample tunnel were evaluated. However, most of them were suitable in the tunnel, but because of creating more intersection points in critical zone, the movement of blocks in tunnel roof and wall of the tunnel are possible. It also demonstrates the simple factors such as step-over joints in rock mass, having important effect in instability.

Keyword: Step-over joint; Rock quality designation; Rock mass rating; Stress and strain; Discontinuity significant index (DSI).