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## Squeezing Potential Evaluation of Tunnel in Tropical Area

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### ABSTRACT

In recent years, there has been an increasing interest in the tunnel construction. This part describes the squeezing behavior of poor rock mass associated with deformability and strength properties. Squeezing phenomena happen in tunnels which are surrounded by weak and moderately strength of rock. Squeezing cause to deformed the tunnels cross section and wastes a lot of human and natural source in all of the word every year. The purpose of current study is to determine methods employed to classifying and quantifying of potential squeezing in tunnel. The results show that some part of case-study tunnel has potential of squeezing. Along with the empirical and semi-empirical approaches is available in order to evaluating of potential of squeezing in tunnel are presented moreover squeezing potential evaluation of Padang Renas tunnel which is located in tropical area (Malaysia) are presented. . The implications of the anticipated ground conditions and squeezing on machine and ground support selection as well as the field observation of the actual conditions are discussed in this paper.

### KEYWORDS

Empirical approaches, Semi-empirical approaches, Squeezing, Padang Renas tunnel.

## 1. INTRODUCTION

The current investigation was limited by empirical and analytical methods for construction tunnel alignments. Because of the chosen research approach, the research results may lack generalisability. Therefore, researchers are encouraged to update the proposed propositions further. The magnitude of tunnel convergence, the rate of deformation and the extent of the yielding zone around the tunnel depend on the geological and

geotechnical conditions, the in-situ state of stress relative to rock mass strength, the ground water flow and pore pressure, and the rock mass properties. According to the results of this research, some part of the longitudinal axis of this tunnel has potential of squeezing. Squeezing is consequently synonymous with yielding and time-dependence squeezing stands for large time-dependent convergence during tunnel excavation.

It takes place when a particular combination of induced stresses and material properties pushes some