عنوان مقاله:

Stability analysis of jointed rock slopes using key block method (Case study: Gas Flare site in ۶, ۷ and ۸ phases of
(South Pars Gas Complex

نویسندگان:

Mohammad Azarafza - *Department of Geology, Faculty of Science, University of Isfahan, Iran*

Ali Reza Yarahmadi Bafghi - *Department of Geology, Faculty of Sciences, University of Yazd, Iran*

Ebrahim Asghari-Kaljahi - *Department of Earth Sciences, University of Tabriz, Tabriz, Iran*

Gholamreza Bahmannia - *Energy engineering and Environment, Phase of ۶, ۷ & ۸, South Pars Gas Complex, Assaloyeh, Iran*

Mohammadreza Moshrefy-far - *Department of Geology, Faculty of Sciences, University of Yazd, Iran*

خلاصه مقاله:

Stability analysis and calculation of safety factor of slopes especially jointed rock slopes, the most important noticeable issue for stability analysis of slopes. Numerical modeling of soil and rock slope stability analysis most widely used in engineering geology. In this study, for analyze the complex slope used geotechnical modeling. Geotechnical modeling was separated into two parts, the first intended for geometrical modeling and the second for two-dimensional mechanical modeling. This model based on the proposed algorithm developed in MATHEMATICA software. Modeling on the complex slope in the Gas Flare site has been implemented. Due to the location of the Gas Flare site in Assalouyeh anticline, slopes are in Mishan and Aghajari marl formations. Because of the STR - ۰۱ slope complicated conditions and discontinuity system, for stability analysis have been selected. The main body of this slope is divided into two distinct parts with different mechanical properties. The STR - ۰۱-۱ Section due to the high fragmentation, discontinuity system and low spacing, in pseudo-soil conditions can be found on site. In this section, the overall structure of the body is still preserved, but the rock body is so badly crushed. For this reason, the rock mass as soil condition is considered and analysed. The STR - ۰۱-۲ section as a STR - ۰۱-۱ section is not crushed. Then for the STR -۰۱-۲ section, structural analysis under jointed rock mass condition. The proposed algorithm used for this analysis, is based on the appropriate assumptions and the ability to accurately. Finally for geotechnical model control, results of the proposed method with the results of Basic key group method and numerical modeling with distinct element method by UDEC and for pseudo-soil conditions with finite difference method by Flac/slope are calculated and compared. The results of the proposed method are in good agreement with the results of the numerical methods.

کلمات کلیدی:

Stability Analysis, jointed rock slopes, key block method, South Pars Gas Complex

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