

عنوان مقاله:

Predicting the Geotechnical Characteristics of Some Sedimentary Rocks by Point Load Test

محل انتشار:

سی و نهمین کنگره ملی و چهارمین کنگره بین المللی علوم زمین (سال: 1399)

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خلاصه مقاله:

In the current research, laboratory investigations including mineralogical studies, X-ray diffraction analyses, physical properties, point load, block punch, Brazilian tensile and uniaxial compressive strengths have been carried out on fifteen rock samples to predict their mechanical properties from the point load strength. The samples were four types of various sedimentary rocks including sandstone, limestone, travertine and conglomerate collected from the northern and north-western parts of Damghan, north of Iran. Empirical relationships between the properties were determined using simple regression analysis methods. The simple regression analyses show reliable equations between the parameters. Results show strong relations between the values of point load index, block punch strength, Brazilian tensile strength and uniaxial compressive strength of the tested rocks with high regression coefficient. Also it was found that the statistical models provide acceptable equations for predicting the mechanical properties of rocks

کلمات کلیدی:

Point load strength; uniaxial compressive strength; sedimentary rocks; regression analysis

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