عنوان مقاله:

A correlation between physical and mechanical properties of limestones

محل انتشار:

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خلاصه مقاله:

In this study, the relationships between the physical, index tests and mechanical properties of metamorphic rocks have been investigated. The data for the physical and mechanical properties of limestones were collected from laboratory studies. The physical properties of rocks such as P-wave velocity, dry density, and slake durability index and mechanical properties such as point load index and uniaxial compressive strength (UCS) are important properties which are used widely in geological and geotechnical engineering. In this study, the mechanical properties of limestones were determined in the laboratory and correlated with P-wave velocity, dry density, slake durability index and point load index. The statistical analysis has been investigated in order to find the valuable relationships between physical and mechanical properties of the studied rock. Empirical equations have been developed to predict the uniaxial compressive strength, from physical properties and index tests, which may avoid the necessity for timeconsuming and tedious laboratory testing.

کلمات کلیدی:

physical properties; index test; uniaxial compressive strength; limestone