

## **Prediction of Index-Mechanical Properties of Pyroclastic Rock Utilizing Electrical Resistivity Method**

**Authors :** İsmail İnce

**Abstract :** The aim of this study is to determine index and mechanical properties of pyroclastic rock in a practical way by means of electrical resistivity method. For this purpose, electrical resistivity, uniaxial compressive strength, point load strength, P-wave velocity, density and porosity values of 10 different pyroclastic rocks were measured in the laboratory. A simple regression analysis was made among the index-mechanical properties of the samples compatible with electrical resistivity values. A strong exponentially relation was found between index-mechanical properties and electrical resistivity values. The electrical resistivity method can be used to assess the engineering properties of the rock from which it is difficult to obtain regular shaped samples as a non-destructive method.

**Keywords :** electrical resistivity, index-mechanical properties, pyroclastic rocks, regression analysis

**Conference Title :** ICGPE 2016 : International Conference on Geosciences and Petroleum Engineering

**Conference Location :** Zurich, Switzerland

**Conference Dates :** July 21-22, 2016