ABSTRACT
In this study, geomechanical properties of marbles have been studied and some experiments were carried out where Turkish Standards Institute (TSE), American Society for Testing and Materials (ASTM) and European Standards specifications were taken as a reference for experiments. In fact, determining geomechanical properties of marbles are useful for correctly choosing the usage area. Experiments were made on two different types of marbles. Experimental tests are as follows: Uniaxial compression, water absorption, volume mass, specific weight, porosity, bending strength, seismic velocity, inspections on polarizing microscope and freezing-thawing tests. This test gives strength and weight loss after freezing cycles. The durability of marble is determined as a result of these tests and usage area of marbles are established whether to use in floors or natural facing stone in building sector. After the tests the requirements according to Turkish Standard Institute criterion, ASTM criterion and European Standards criterion are determined for Denizli Pink and Mugla Lilac marbles. These marbles found to be suitable for both inside and outside usage with enough bending strength. Seismic velocity, water absorption, density, specific weight, porosity values and strength reduction by freezing-thawing tests and inspections on polarized microscope gave satisfactory results.