

Determination of Weathering at Kilistra Ancient City by Using Non-Destructive Techniques, Central Anatolia, Turkey

Authors : İsmail İnce, Osman Günaydin, Fatma Özer

Abstract : Stones used in the construction of historical structures are exposed to various direct or indirect atmospheric effects depending on climatic conditions. Building stones deteriorate partially or fully as a result of this exposure. The historic structures are important symbols of any cultural heritage. Therefore, it is important to protect and restore these historical structures. The aim of this study is to determine the weathering conditions at the Kilistra ancient city. It is located in the southwest of the Konya city, Central Anatolia, and was built by carving into pyroclastic rocks during the Byzantine Era. For this purpose, the petrographic and mechanical properties of the pyroclastic rocks were determined. In the assessment of weathering of structures in the ancient city, in-situ non-destructive testing (i.e., Schmidt hardness rebound value, relative humidity measurement) methods were applied.

Keywords : cultural heritage, Kilistra ancient city, non-destructive techniques, weathering

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020