The Relations between Seismic Results and Groundwater near the Gokpinar Damp Area, Denizli, Turkey

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Abstract : The understanding of geotechnical characteristics of near-surface material and the effects of the groundwater is very important problem in such as site studies. For showing the relations between seismic data and groundwater we selected about 25 km2 as the study area. It has been presented which is a detailed work of seismic data and groundwater depths of Gokpinar Damp area. Seismic waves velocity (Vp and Vs) are very important parameters showing the soil properties. The seismic records were used the method of the multichannel analysis of surface waves near area of Gokpinar Damp area. Sixty sites in this area have been investigated with survey lines about 60 m in length. MASW (Multichannel analysis of surface wave) method has been used to generate one-dimensional shear wave velocity profile at locations. These shear wave velocities are used to estimate equivalent shear wave velocity in the study area at every 2 and 5 m intervals up to a depth of 45 m. Levels of equivalent shear wave velocity of soil are used the classified of the study area. After the results of the study, it must be considered as components of urban planning and building design of Gokpinar Damp area, Denizli and the application and use of these results should be required and enforced by municipal authorities.

Keywords : seismic data, Gokpinar Damp, urban planning, Denizli

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