

**Investigation of the results of seismography to determine shear wave velocity and soil shear strength parameters**

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Correlation between the results of field tests such as impact and standard penetration (SPT), and dynamic parameters of soil layers such as shear wave velocity ( $V_s$ ) has been verified and several empirical relations were presented in different texts. In the absence of field geophysical methods or laboratory tests, these relations should be used with caution and require individual experience. Besides, most of these relations are valid only when the SPT value ( $N_{spt}$ ) is less than 50 impacts. In this paper, correlation between soil shear strength parameters (based on Mohr-Coulomb failure criterion) and soil shear wave velocity obtained from cross hole seismography method on soil layers by boreholes of maximum 30 meters in depth (in accordance to Iranian Code of Design 2800), are investigated. These parameters are based on direct shear tests on the samples taken from boreholes drilled in Zanjan Petrochemical Plants site investigations.