

Penentuan kecepatan gelombang geser tanah dengan metode multi-channel analysis of surface wave.

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=135164&lokasi=lokal>

Abstrak

Multi-channel analysis of surface wave is a non-destructive seismic test that measures shear wave velocities of soil. This in situ test is a simpler, faster, efficient and low cost method compared to other previous seismic method that only uses two receivers. The method is applied in this study used 24 vertical receivers or geophones of 4.5 Hz to record the propagation of surface waves. Furthermore, the seismic data records are transformed to construct the phase velocity dispersion curves. As a result, the shear wave velocity (V_s) profile is produced from the inversion process that observes the changes of phase velocity with frequency. Comparison between Multi Channel Analysis of Surface Wave and Standard Penetration Test results is also performed in order to evaluate the reliability and appropriateness of Multi-channel Analysis of Surface Wave method. In general, the result shows that shear wave velocities obtained from Multi-channel Analysis of Surface Wave method yield higher values than shear wave velocities from Standard Penetration Test. The deviation of shear wave velocities obtained from this method is less than 20%. The values of shear wave velocities are in allowable range and are relatively in good agreement with Standard Penetration Test result.