

SRT

(Seismic Refraction Tomography)



An Active Source Surface Wave Technique for Measuring Compressional Wave Velocity (V_p)

Advantages

- Non intrusive: no boreholes required, all equipment is deployed on the surface
- High resolution lateral variability in profiles
- Portable and versatile: equipment can be deployed in most areas of open ground
- Sensitive to velocity inversions

Specifications

- Twenty-four 4.5 Hz geophones deployed in a line at usually 1 - 3 m spacing
- Depth of investigation equal to approximately quarter of the array length: up to 10 m
- Source can be a sledgehammer or a vehicle mounted 40 kg Accelerated Weight Drop (AWD)
- Results can be displayed as 2D profiles or a 3D model constructed from multiple profiles
- Topographic variation can be accommodated

Applications

- 2D section of compressional wave velocity
- Inference of engineering parameters: Young's modulus, shear modulus
- Liquefaction Assessment
- Ground Improvement QA
- Drillhole Targeting

