

DYNAMIC ELASTIC BEHAVIOR OF THE SÃO PAULO FORMATION

TAIOLI, F. Instituto de Geociências da Universidade de São Paulo, São Paulo, Brazil

The city of São Paulo is the major urban concentration in Brazil. In order to accomplish the demand for basic infrastructure for such a population, it has been exploited, like other urban areas in the world, the underground space, despite the difficulties inherent to such option.

The objective of this study was to analyze, based on a database, the dynamic elastic properties of the materials present in the São Paulo Formation, in the light of the new geological knowledge.

Data obtained from in situ measurements were selected and analyzed statistically, in order to correlate the propagation velocities of the p and s waves with both altitude and depth.

The data of the São Paulo Formation presented good linear correlation between p and s waves velocities versus altitude and depth, with Pearson coefficients of about -0.8 for altitude and varying from 0.57 to 0.98 for depth.

The major dispersion observed may be correlated to the presence of two enriched limonitic horizons.