Civil engineering application of the Spectral Analysis of Surface Wave (SAWSW) method

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Civil engineering works covers a wide spectrum of applications that include projects that are small and huge in scale. The applications from a single wave form have never been so successful and widely applied in Civil engineering as the Spectral Analysis of Surface Wave. Its ability to define the dynamics properties of materials for both profiling and imaging has been rapidly utilized to address engineering structures of a few millimetres of depths to bedrock as deep as 50 meters has been widely reported. The direct involvement of

Warta Geologi (Newsletter of the Geological Society of Malaysia), Vol. 29, No. 5, September-October 2003

civil engineers themselves in this method of geophysical test has been more intensive than the other geophysical methods. Their applications include evaluation of pavement, testing of concrete structures, assessment of fill materials and evaluations and design in geotechnical engineering. SASW is more practical in the field as the source is reasonably simple as compared to the other geophysical methods. In this paper specific applications of the SASW method in civil engineering are highlighted so that both engineers and geophysicist are able to appreciate their potential applications.