

P50 Measuring the Spatial and Temporal Pressure Variation from Buried Charges

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Abstract:

The characterisation of loading from a shallow buried charge has been well investigated in recent work conducted at Blastech and The University of Sheffield. Recent parametric studies have used a free flying mass to investigate the effect of changing geotechnical parameters on the impulse generated from a shallow buried charge. In common with many other previous studies a free flying mass was used to capture the impulse.

A new approach which aims to better capture the loading from shallow buried charges uses a fixed plate with data recorded via load transducers and spatially and temporally resolved with an array of Hopkinson pressure bars. This paper outlines the revised experimental approach for the capture of spatially and temporally resolved impulse data at the blast-target interface. Issues encountered during the commissioning tests using charges buried in silica sand are discussed, and initial results from the original and revised Hopkinson pressure bar arrays are presented.

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