

P48 Repeatability of Buried Charge Testing

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Abstracts:

The relationship between the geotechnical parameters and the impulse delivered by a charge buried shallowly (<100 mm) within a soil mass has received much attention in recent times. It has previously been demonstrated that for uniform soils a high degree of repeatability in the delivered impulse can be achieved when carefully controlling the geotechnical conditions. In this paper the authors explore the recommendations given in AEP55 regarding the testing of surrogate mine blasts using both minepots and the STANAG standard sandy gravel.

It is already known that an increase in moisture content independently of bulk density can lead to an increase in measured total impulse from a buried charge. This implies that water has a greater effect on the enhancement of buried charges than its mass alone would suggest. In this respect, using bulk density as a measure of geotechnical control and hence repeatability is questionable. A methodology for the careful preparation of the sandy gravel soil is presented along with comparative results from minepots demonstrating the comparative repeatability of both methodologies.

Notes: