

DYNAMIC TESTING AND PREDICTION OF MORTAR AND ROCKET EFFECTS AGAINST PROTECTIVE STRUCTURES

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ABSTRACT

Indirect fire rockets and mortar attacks are currently occurring against both military and civilian targets in several parts of the world. Many of the countries affected by these problems are seeking to provide personnel and equipment with effective protection from the effects of these weapons.

A significant amount of work conducted into protective measures ultimately relies on the results of trials conducted using statically detonated munitions for assessment purposes. Static firings do not accurately replicate the effects of actual attacks in many important aspects and it is often necessary to establish realistic effects through the results of dynamic firings. In the case of rockets and mortars this can present significant technical challenges.

This paper details experimental techniques used in the UK to examine the effects of dynamically fired rockets and mortars against soil and concrete protective targets, together with predictions based on numerical modelling and empirical equations.