INTERMEDIATE-SCALE UNDERGROUND MAGAZINE TESTS: RESULTS OF AIRBLAST STUDIES FROM AN IDELAIZED DETONATION EXPERIMENT

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A series of 1/3-scale explosive tests (up to 2,600 kg net explosive weight) were conducted at the Linchburg Mine, near Magdalena, NM to provide airblast data from detonations which simulated accidental explosions in Underground munitions storage chambers. In addition, Computer calculations were performed for selected experiments to validate hydrocode predictive models. The extensive data base developed from these tests provide insights into blast propagation in confined volumes of multichamber underground ammunition storage facilities and the relative effect of shock and gas pressures that define the external hazard Quantity-Distance. This paper presents the analyses and discussion of the measured and calculated data.