SEVERE BLAST EFFECTS MEASUREMENTS USING SHOCK-HARDENED, SELF-RECORDING INSTRUMENTATION MODULES

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Research on explosives storage safety has become a subject of practical interest throughout much of the industrialized world. Significant quantities of military munitions are stored in locations now being encroached upon by civilian habitation. In the recent past, most research on explosives storage safety was concerned with blast effects from accidental explosions. In explosion experiments, measurements were concentrated at distances where the blast loads were near the damage threat level of nearby structures. A few measurements were made at intermediate distances to establish the blast and shock attenuation with distance from the explosion source.

This paper discusses operation and application of HDAS technology on recent explosives safety experiments and shows it's capability for blast effects measurement from as close as one meter from a large explosion to very low overpressure regions in the free field.