Abstract Submitted
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Dynamic Compaction of Sand[1] JUSTIN BROWN, TRACY VOGLER, LALIT CHHABILDAS, Sandia National Laboratories — Dynamic compaction of sand was investigated experimentally to stress states of approximately 2 GPa using a special target fixture for accurately measuring shock velocity in porous materials. Experiments were performed in the partial to nearly full compaction region. The Hugoniot state of the sand was determined using the measured velocity interferometer profiles and impedance matching techniques. The velocity interferometer probes located on the rear surface of a stepped target provide accurate measurements of shock velocity by correlating time difference for the four measurements. These results were used to fit parameters for the P-Alpha and P-Lambda models for porous materials for simulating the experiments with the CTH hydrocode.

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