

Abstract Submitted
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Percolation of Blast Waves through Sand¹ WILLIAM PROUD, Institute of Shock Physics, Imperial College London, London, SW7 2AZ, United Kingdom — Previous research has concentrated on the physical processes occurring when samples of sand, of varying moisture content, were shock compressed. In this study quartz sand samples are subjected to blast waves over a range of pressure and duration. Aspects of particle movement are discussed; the global movement of a bed hundreds of particles thick is a fraction of particle width. The main diagnostics used are pressure sensors and high-speed photography. Results are presented for a range of particle sizes, aspect ratio, density and moisture content. While the velocity of the percolation through the bed is primarily controlled by density and porosity the effect of moisture reveals a more complex dependence.

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William Proud
Institute of Shock Physics, Imperial College London,
London, SW7 2AZ, United Kingdom

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