

Abstract Submitted  
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**Shock Compression of Solid with Voids by Gridless Lagrangian**

**SPH KATSUMI TANAKA**, National Institute of Advanced Industrial Science and Technology — Eulerian studies for the shock propagation through an air bubble in water have shown a hot spot with locally high temperature and high pressure when incident shock pressure is enough high to generate supersonic water jet. Single air bubble which is compressed adiabatically disappeared during shock compression. Temperature rise in water was not enough to initiate emulsion type explosives for incident shock pressure lower than 1GPa. The mechanism of local hot spots with multiple voids has been studied numerically by Smoothed Particle Hydrodynamics (SPH). Effects of turbulent mixing by voids will be discussed.

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