

Abstract Submitted  
for the SHOCK05 Meeting of  
The American Physical Society

**Expanded Small-Scale Shock Reactivity Test** RICHARD GRANHOLM, HAROLD SANDUSKY, NAVSEA Indian Head Div. — Explosives react from a strong shock, even in quantities too small for detonation. The potential for a new material to be an explosive can be evaluated from this shock reactivity. The recently developed small-scale shock reactivity test (SSRT)<sup>1</sup> uses very high confinement to allow prompt reactions to occur in less than half-gram samples well below critical diameter, with the reactions quantified by a dent in a soft aluminum witness block. This test has been expanded to simultaneously measure both early and late-time reactions from a single sample subjected to the output from an RP-80 detonator. The sample apparatus is further confined within a small chamber instrumented with a pressure gage for internal air blast. This provides a measure of late-time reactions, such as from fuel/air combustion. Results are shown from several simultaneous early- and late-reaction measurements.

<sup>1</sup>H. W. Sandusky, R. H. Granholm, D. G. Bohl, “Small-Scale Shock Reactivity Test,” NSWC Technical Report (in publication), Naval Surface Warfare Center, Indian Head, MD 20640

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Date submitted: 07 Apr 2005

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