

Abstract Submitted
for the SHOCK15 Meeting of
The American Physical Society

Shock Sensitivity of a Double-Base Propellant as a Function of Size, Age, and Processing Method HAROLD SANDUSKY, NSWC IHDI —
The shock sensitivities of a fresh and aged double-base propellant were measured with material quantities much less than that required for the conventional Large Scale Gap Test (LSGT). The Insensitive High Explosive Gap test (IHEGT) yielded the same critical initiation pressure for fresh samples using 11 g of material as the LSGT with 240 g. Results from IHEGT for the aged samples will be discussed. Challenges with different processing methods (pressing versus extrusion) owing to the limited available material and how these were overcome will also be addressed. These results demonstrate how small scale tests can mimic results in larger scale tests upon proper consideration of shock, detonation, and material science.

Richard Granholm
NSWC IHDI

Date submitted: 30 Jan 2015

Electronic form version 1.4