

Abstract Submitted
for the SHOCK05 Meeting of
The American Physical Society

Additional Information Showing That a Cylinder's Material and Geometry Affect Measuring an Explosive's Gurney Velocity JOSEPH BACKOFEN, BRIGS Co. — In 2001, the thickness and properties of aluminum, steel, and copper cylinders were shown to affect the Gurney Velocity and Gurney Energy measured for Comp B explosive. This new work confirms the effects described in 2001 using experimental data for four additional explosives in cylinders of these and two more materials. The experimental data show a clear dependence between geometry, materials, and explosives. A new formula provides a relationship between an explosive's detonation rate and its Gurney Velocity as a function of cylinder and explosive geometry and densities.

Joseph Backofen
BRIGS Co.

Date submitted: 17 Jan 2005

Electronic form version 1.4