

Abstract Submitted  
for the MAR17 Meeting of  
The American Physical Society

**Explosives initiation by compression of gas inclusions.** ANDREI TIUTIAEV, Samara state technical university — This paper presents a study of explosives initiation by impact. The ignition of solid explosives with gas inclusion has been studied at the compression gas. Adiabatic compression sensitivity test machine is similar to the Bureau of Explosives compression apparatus. During the test, the gas in contact with the explosive is rapidly compressed using a known drop weight system. Small samples of the test explosive are placed in a piston-cylinder apparatus and a drop weight is used to initiate rapid compression gas. Drop heights are varied to change the ignition conditions. The instantaneous compression in the chamber is measured by a pressure transducer. Since the pressure rise in the test chamber is rapid, the compression will be nearly adiabatic and rapid temperature rise will result. A mathematical model of impact, the gas compression and ignition are also discussed in this paper.

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Date submitted: 11 Nov 2016

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