

Abstract Submitted
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Phenomenon of Energy Focusing in Explosive Systems which include High Modulus Elastic Elements¹ I. BALAGANSKY, K. HOKAMOTO, P. MANIKANDAN, A. MATROSOV, I. STADNICHENKO, H. MIYOSHI, IH SB RAS COLLABORATION, KUMAMOTO UNIV. COLLABORATION — The phenomenon was observed in a passive HE charge of cast Comp. B without cumulative shape under shock wave loading by explosion of an active HE charge through water after preliminary compression by a leading wave in silicon carbide insert. The phenomenon manifested itself as a hole in identification steel specimen with depth of about 10 mm and diameter of about 5 mm. Results of experiments on studying of conditions of implementation of this phenomenon for SEP and Comp. B are presented. For each HE a number of experiments has been executed at various length of silicon carbide insert. Presence or absence of a hole in the steel specimen was determined. Also a number of optical registrations of process in framing mode with record step of 1 μ s have been executed. Digital video camera SHIMADZU HPV-1 was used for optical registration. Results of experiments testify that the phenomenon is reproduced both for SEP, and for Comp. B. Focusing process is observed in conditions close to critical conditions of transfer of a detonation from active to a passive HE charge.

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