

Abstract Submitted
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Shock Initiation of Wedge-shaped Explosive Measured with Smear Camera and Photon Doppler Velocimetry YAN GU, Institute of Fluid Physics, China Academy of Engineering Physics — Triaminotrinitrobenzene (TATB) is an important insensitive high explosive in conventional weapons due to its safety and high energy. In order to have an insight into the shock initiation performance of a TATB-based insensitive high explosive (IHE), experimental measurements of the particle velocity histories of the TATB-based Explosive using Photon Doppler Velocimetry and shock wave profile of the TATB-based explosive using High Speed Rotating Mirror Smear Camera had been performed. In this paper, we would describe the shock initiation performance of the TATB-based explosive by run-to-detonation distance and the particle velocity history at an initialization shock of about 7.9 GPa. The parameters of hugoniot of unreacted the TATB-based explosive and Pop relationship could be derived with the particle velocity history obtained in this paper.

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