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Reactive Behavior of Explosive Billets in Deflagration Tube of Varied Confinements HAIBO HU, YINGWEN GUO, TAO LI, HUA FU, HAILIN SHANG, SHANGGANG WEN, TIAN QIU, China Academy of Engineering Physics, LABORATORY FOR SHOCK WAVE AND DETONATION PHYSICS RESEARCH TEAM — The deflagration process of small size cylinder billets of pressed HMX-based explosive JO-9159 and the deflagration tube wall deformation is recorded by combined pressure-velocity-meter-high-speed frame photographic and radiographic diagnostic system. The influence of confinement structure strength on deflagration evolution behavior is compared with analysis of convective flame propagation along the slot between explosive billet and confinement wall. The follow-up reaction inside the cracks on the initiation site end surface on the side surfaces and between the end surfaces of explosive billets is restored with the analysis results of post experimental explosive billet remains.

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