

# Development and propagation of detonation in HMX-based explosive under annular initiation

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Development and propagation of detonation under annular initiation of HMX-based (HMX—octogen) explosive were experimentally studied. The different-diameter annular layers of PETN-based (PETN—pentaerythritol tetranitrate) plastic explosive were used as initiator. The paper describes evolution of the shape of the detonation front and the pressure profiles when the HMX-based explosive thickness varies from 5 mm to 30 mm. The qualitative and quantitative comparison of the above parameters for annular initiator having different diameters is made. The effect of additional layer of PETN-based plastic explosive placed between the annular initiator and the test HMX-based explosive is demonstrated.