derness ratio, speed, kinetic energy and tails shape of the EFP. The appropriate initiation radius is primarily fixed on 20 mm to 30 mm according to the simulating results.

(3) The experimental results validate initial velocity of projectile which is formed by three-point initiation is higher. It can keep lower speed drop and a good aerodynamic stability in the great distances. Moreover its penetration ability is stronger.

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## 三点爆轰机理与 EFP 尾翼成型研究

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摘要:采用爆轰波理论分析了由爆炸成形弹丸装药而成的三点起爆爆轰波的相互作用。运用 LS-DYNA 软件数值模拟 了三点起爆方式下的爆轰波作用、超压形成、药型罩在非均衡爆轰作用下的变形过程,以及尾翼的形成机理等。研究结果 显示:药型罩表面受到非均衡爆轰载荷作用,发生翻转、变形,在有超压作用的药型罩区域的压合程度小,形成弹丸尾翼,其 中起爆半径对弹丸长径比、头尾速度、动能以及尾翼成形有重要影响。模拟中,起爆半径应选在 20~30 mm 之间。实验结 果对理论分析和数值模拟研究进行了验证。

**关键词**:爆炸力学;爆炸成形弹丸;三点起爆;数值模拟;起爆半径 中图分类号:TJ410.3<sup>+</sup>33;0389 **文献标** 

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