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基于PER理论的聚能装药射流理论计算方法(PDF)

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Title: Model of Theoretical Calculation of Shaped Charge with Modified P - E - R Theory

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关键词: [爆炸力学](#); [PER理论](#); [聚能装药](#); [射流](#)

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摘要: 以Behrmann和J.Carleone改进的PER理论为基础, 通过P.J.Chou方法建立综合考虑药型罩、炸药、壳体等因素的压垮速度计算方法, 对药型罩微元的压垮过程、射流头部参数(质量和速度)等进行修正, 在此基础上建立Lagrangian坐标系下的射流空间运动方程, 编制了相应的计算程序。与数值模拟结果的对比表明, 所建立的射流理论分析方法能有效计算射流参数, 可为聚能装药结构设计提供参考。

Abstract: Based on modified P - E - R theory founded by Behrmann and J .Carleone, collapse process of liner element and calculation of jet tip parameters including mass and velocity were illustrated. The modified P - E - R theory got collapse velocity of liner elements with simple model provided by P.J. Chou who takes influence of liner, charge, case into account when calculating liner - collapsed velocity.The equations of modified P - E - R theory of shaped charge can be solved with liner - collapsed velocity.Jet motion equations were founded with Lagrangian coordinate.

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