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炸药装药在机场跑道中爆破效应数值模拟(PDF)

Title:	Numerical Simulation of Damage Effect for Runway　Subjected to Explosive Loading

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关键词：　破坏效应; 机场跑道; 参数敏感性; 数值模拟

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摘要：　为研究动能型侵爆弹在机场跑道中静爆破坏效应，采用非线性动力分析程序AUTODYN，对由混凝土面层、卵石层和压实土层构成的机场跑道进行了爆破数值模拟，对比分析了三层跑道爆炸漏斗坑尺寸、靶体各层损伤区域分布、峰值压力等情况，在此基础上，结合已有的试验结果，获得了爆炸破坏效应与影响参数之间的初步规律。分析结果可为弹体设计和跑道毁伤效应评估提供参考。

Abstract:　In order to study the blast damage effect of kinetic energy warhead, the hydro code AUTODYN was used for simulation of explosive loading interactions to multilayer runway. A study including an investigation of the effect of blasting depth, layer of runway, boundary of target was presented. Comparisons and analysis were made with crater size, crunch area radius, damage area and the peak pressure. Based on the theoretical analysis and numerical simulation results, preliminary rule between explosive effect and influence parameter was obtained. The simulated results have reference value for the design of penetrator and damage evaluation.

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