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## 多种钢制破片侵彻性能的数值模拟研究(PDF)

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**Title:** Numerical Simulation Research of the Penetration Performance of Several Kinds of Steel Fragments

**作者:** [李 韬](#); [米双山](#); [金卫同](#)  
解放军军械工程学院, 石家庄 050003

**Author(s):** [LI Tao](#); [MI Shuangshan](#); [JIN Weitong](#)  
Ordnance Engineering College, Shijiazhuang 050003, China

**关键词:** [破片](#); [侵彻](#); [ANSYS/LS - DYNA](#); [数值模拟](#)

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**摘要:** 为了清楚了解不同形状的预制破片对铝合金靶板的侵彻规律,采用LS - DYNA动力有限元分析软件,对几种典型形状破片侵彻多层间隔靶板进行了数值模拟研究。旨在通过几种不同类型破片的侵彻规律研究,揭示不同破片形状以及入射角所造成的侵彻效果的差别,分析新型钢材料下不同形状预制破片的侵彻效能和多威胁下通用车辆及简易装甲目标的损伤模式。

**Abstract:** The aluminium alloy target was penetrated by fire formed fragments of different shapes, to understand it accurately, LS - DYNA dynamics finite element analysis software was used and the progress of some kinds of typical shape fragments penetrating the multilayer spaced target was simulated. The research of penetration of some kinds of steel fragments was done, and the different effect arising out by the different fragment shape as well as incidence angle are revealed. Based on these, the penetration effect of new material fragment of different shapes and the damage pattern of the ordinary vehicles and simply armored targets under multi - threat were analyzed.

### 参考文献/REFERENCES

- [1] Warren T L, Hanchak S J, Poormon K L. Penetration of limestone targets by ogive-nosed VAR4340 steel projectiles at oblique angles: Experiments and simulations [J]. International Journal of Impact Engineering, 2004, 30 (10) :1307-1331.
- [2] Forrestal MT, Okajima K, Luk V K. Penetration of 6061T6651 aluminium targets with rigid long rods [J]. Journal of Applied Mechanics, 1988, 55 (4) :755-760.
- [3] Anderson CE, Mullin SA, Piekutowski A, et al. Scale model experiments with ceramic laminate targets [J]. International Journal of Impact Engineering, 1996, 18 (1) :1-22.
- [4] 慈明森. 金属在大变形、高应变率和高温条件下的本构模型和数据 [J]. 弹箭技术, 1998 (3) :32-42.

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[5] 赵海鸥.LS-DYNA动力分析指南 [M] .北京:兵器工业出版社, 2003.

[6] Warren T L , Kevin L P.Penetration of 6061 T6511 aluminum targets by ogive-nosed VAR4340 steel projectiles at oblique angles:Experiments and simulations [J] .International Journal of Impact Engineering , 2001, 25 (10) :993 - 1022.

[7] 周翔, 龙源, 岳小兵.高速碰撞中攻角对动能弹侵彻多层间隔靶能力的影响 [J] .弹道学报. 2004, 12 (4) :7-11.

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备注/Memo: 收稿日期:2008-02-29作者简介:李韬 (1983-), 男, 湖北麻城人, 硕士研究生, 研究方向 :装备战斗损伤仿真。

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