

# 爆炸与冲击

BAOZHA YU CHONGJI

1981年7月创刊

2023年4月

第43卷 第4期

(总第234期)

## 目次

### · 爆炸物理 ·

- 间隙对爆轰加载下金属飞片运动特征影响的模拟分析 ..... 刘军, 孙致远, 张凤国, 殷建伟 042201
- 驱动气体的密度梯度对弹丸发射速度的影响 ..... 王马法, 李俊玲, 柳森 042202
- 基于光学诊断的某新型含铝推进剂燃烧特性分析 ..... 杨云杰, 邢时越, 张少华, 余西龙, 王泽众, 王海燕 042301

### · 冲击动力学 ·

- 考虑围压效应的冻结砂土动态本构模型研究 ..... 马冬冬, 汪鑫鹏, 马芹永, 周志伟, 杨毅, 袁璞 043101
- 循环冲击层理煤岩动力学行为及破坏规律研究 ..... 罗宁, 索云琛, 张浩浩, 柴亚博, 翟成, 屈喆, 白桂智 043102
- 试样形状对轴承钢绝热剪切带微观组织的影响 ..... 李志刚, 李淑欣, 余丰, 鲁思渊, 王永刚 043103
- 前抛体对弹体入水载荷影响数值模拟研究 ..... 肖睿, 魏继锋, 吉耿杰, 冯宇浪 043201

### · 实验技术与数值方法 ·

- 直撞式霍普金森压杆二次加载技术 ..... 钟东海, 郭鑫, 熊雪梅, 郑宇轩, 宋力 044101
- 船体水下近距非接触爆炸损伤计算之两步迭代法 ..... 任凯, 周洪景, 杨晨 044201
- 神经网络状态方程在强爆炸冲击波数值模拟中的应用 ..... 李秦超, 姚成宝, 程帅, 张德志, 刘文祥 044202

### · 应用爆炸力学 ·

- 抗战斗部侵彻爆炸作用的混凝土遮弹层设计 ..... 程月华, 周飞, 吴昊 045101
- 三元可燃混合气体爆炸极限实验及预测方法 ..... 宁也, 何萌, 祁畅, 陈昇, 闫兴清, 喻健良 045401
- 航空油料在舱室内燃爆危害的数值分析 ..... 杨满江, 董张强, 胡洋洋, 武红梅, 刘丽娟 045402
- 一种新型危险品仓库结构设计及其安全距离 ..... 刘明君, 李展, 谢伟, 尹青, 曾丹, 张亚栋, 周亭 045901

# EXPLOSION AND SHOCK WAVES

Vol. 43, No. 4, 2023 (Sum No. 234)

## CONTENTS

### • Explosion Physics •

- Simulation analysis of the effect of clearance on motion characteristic of metal flyer under detonation loading .....  
..... LIU Jun, SUN Zhiyuan, ZHANG Fengguo, YIN Jianwei 042201
- The influence of density gradient of driving gas on projectile launching velocity ..... WANG Mafa, LI Junling, LIU Sen 042202
- Investigation of combustion characteristics of a new aluminum-containing propellant based on optical diagnosis .....  
..... YANG Yunjie, XING Shiyue, ZHANG Shaohua, YU Xilong, WANG Zezhong, WANG Haiyan 042301

### • Impact Dynamics •

- A study of dynamic constitutive model of frozen sandy soil considering confining pressure effect .....  
..... MA Dongdong, WANG Xinpeng, MA Qinyong, ZHOU Zhiwei, YANG Yi, YUAN Pu 043101
- On dynamic behaviors and failure of bedding coal rock subjected to cyclic impact .....  
..... LUO Ning, SUO Yunchen, ZHANG Haohao, CHAI Yabo, ZHAI Cheng, QU Zhe, BAI Guizhi 043102
- Effect of the specimen shape on microstructure of the adiabatic shear band in bearing steel .....  
..... LI Zhigang, LI Shuxin, YU Feng, LU Siyuan, WANG Yonggang 043103
- Numerical research on the effect of front body on water-entry load of a projectile ... XIAO Rui, WEI Jifeng, JI Gengjie, FENG Yulang 043201

### • Experimental Techniques & Numerical Methods •

- Direct-impact double-loading Hopkinson bar technique ... ZHONG Donghai, GUO Xin, XIONG Xuemei, ZHENG Yuxuan, SONG Li 044101
- A two-step iterative method for damage calculation of a ship hull subjected to underwater close-up non-contact explosion .....  
..... REN Kai, ZHOU Hongjing, YANG Chen 044201
- Application of the neural network equation of state in numerical simulation of intense blast wave .....  
..... LI Qinshao, YAO Chengbao, CHENG Shuai, ZHANG Dezhi, LIU Wenxiang 044202

### • Applied Explosion Mechanics •

- Design of concrete shield against the combination of penetration and explosion of warheads ... CHENG Yuehua, ZHOU Fei, WU Hao 045101
- Experiment and prediction methods on the explosion limit of the ternary flammable gas mixture .....  
..... NING Ye, HE Meng, QI Chang, CHEN Sheng, YAN Xingqing, YU Jianliang 045401
- Simulation analysis of combustion and explosion hazards of aviation fuel in cabin .....  
..... YANG Manjiang, DONG Zhangqiang, HU Yangyang, WU Hongmei, LIU Lijuan 045402
- A novel hazard warehouse and its safety separation distance .....  
..... LIU Mingjun, LI Zhan, XIE Wei, YIN Qing, ZENG Dan, ZHANG Yadong, ZHOU Ting 045901