

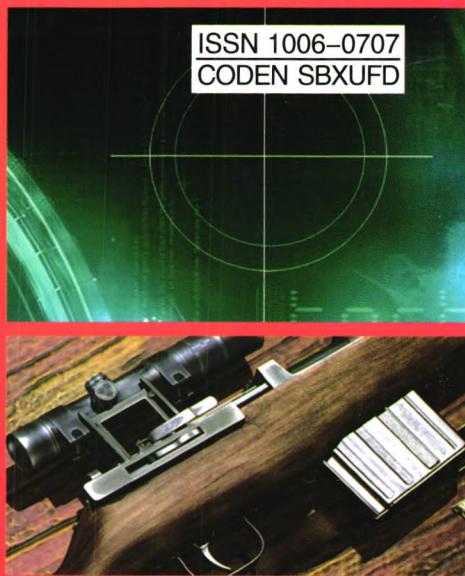
ISSN 1006-0707  
CODEN SBXUFD

# 四川兵工学报

JOURNAL OF SICHUAN ORDNANCE

2013年第5期  
第34卷  
总第178期

5



# SICHUAN BINGGONG XUEBAO

主办单位：重庆市（四川省）兵工学会 重庆理工大学

- ☆ 中国科技核心期刊
- ☆ 中国科技论文统计源期刊
- ☆ 美国化学文摘（CA）收录期刊
- ☆ 中国学术期刊评价数据库来源期刊
- ☆ CNKI中国期刊全文数据库收录期刊
- ☆ 中国科技论文在线数据库来源期刊



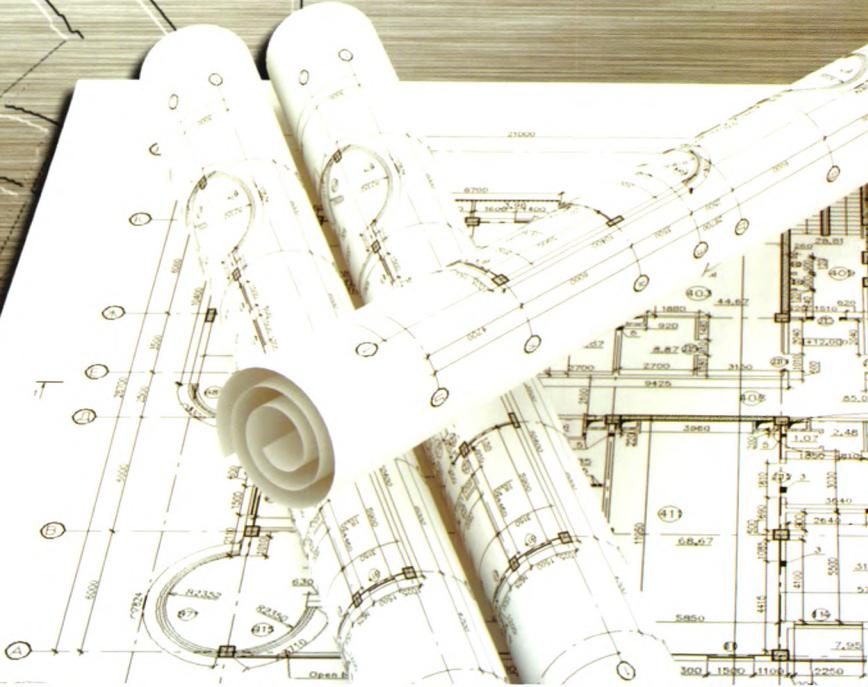
ISSN 1006-0707



05>

9 771006 070090

万方数据



## 目 录

### 武器装备理论与技术

- 装甲战车防护技术研究 ..... 李向荣,赵海龙(1)  
Three Important Protection Techniques of Armored Vehicles ..... *Li Xiang-rong, ZHAO Hai-long*(1)
- 高功率电磁脉冲弹反导策略组合最优化研究 ..... 张跟鹏(5)  
Research of the Combinatorial Optimization in the Anti-missile Strategy with EMP-Bomb ..... *ZHANG Gen-peng*(5)
- 常规导弹部队战术模拟训练评价方法 ..... 高桂清,史重建(9)  
Study on Evaluation Technology of Simulation-Based Tactical Training Performance for Missile Forces  
..... *GAO Gui-qin, SHI Chong-jian*(9)
- 枪弹底火击穿爆炸成因探析 ..... 张洪星,杜永博,曹志刚,齐杏林(12)  
The Analysis on the Reason of Explosion of the Bullet Perforated Primer  
..... *ZHANG Hong-xing, DU Yong-bo, CAO Zhi-gang, et al*(12)
- 基于案例推理的航天发射场故障诊断系统 ..... 周辉峰,王一雄,曾少龙,张庆胜(15)  
Cosmodrome Fault Diagnosis System Based on Case-Based Reasoning  
..... *ZHOU Hui-feng, WANG Yi-xiong, ZENG Shao-long, et al*(15)
- 钨合金弹侵彻运动圆柱壳靶板的数值模拟 ..... 吴世永,宿德志,王 坤(20)  
Numerical Simulation of Penetration of Tungsten-Alloy Projectile Penetrating Moving Cylindrical Shell Target  
..... *WU Shi-yong, SU De-zhi, WANG Kun*(20)
- 临近空间攻防对抗技术发展研究 ..... 李亚轲,梁晓庚,郭正玉(24)  
Research of Near Space Attack-Defense Confrontation Technology ..... *LI Ya-ke, LIANG Xiao-geng, GUO Zheng-yu*(24)
- 三回路驾驶仪控制下的导弹静不稳定性边界 ..... 郑鵠鹏,华建林,姜殿民(27)  
Static-Unstable Stability Limitation of Missile Under Control of Three Loop Autopilot  
..... *ZHENG Kun-peng, HUA Jian-lin, JIANG Dian-min*(27)
- 带末端角度约束的离散滑模制导律设计 ..... 颜 博,田宏亮,许国栋(31)  
Design of Discrete Sliding-Mode Guidance Law with Terminal Angle Constraint  
..... *YAN Bo, TIAN Hong-liang, XU Guo-dong*(31)
- 基于 Vega 的光电制导武器电子对抗视景仿真技术 ..... 白 彬,李文生,王国民(35)  
Research on Technology of Visual Simulation for Electronic Countermeasure of Photoelectric Guided Weapon Based on Vega  
..... *BAI Bin, LI Wen-sheng, WANG Guo-ming*(35)
- 中远距空空导弹弹道总体规划 ..... 斯 凌(38)  
Trajectory Planning of Middle-Long-Range Air-to-Air Missile ..... *JIN Ling*(38)
- 基于遗传算法的弹道优化算法 ..... 张乐蓉,宋 龙,章惠君(40)  
Trajectory Optimization Method Based on Genetic Algorithm for Air-to-Air Missiles  
..... *ZHANG Le-rong, SONG Long, ZHANG Hui-jun*(40)
- 基于灰色关联度分析法的飞行控制系统故障原因分析 ..... 崔亚君,祝华远,李艳丽(44)  
Flight Control System Faults Analysis Based on Grey Relation Method ..... *CUI Ya-jun, ZHU Hua-yuan, LI Yan-li*(44)

## 后勤保障与装备管理

- 航空装备保障特性综合评估指标体系 ..... 祝华远,赵功伟,崔亚君,王灵芝,刘俊瀛(46)  
Evaluation Index of Aviation Equipment Support Characteristics ..... ZHU Hua-yuan, ZHAO Gong-wei, CUI Ya-jun, et al(46)
- 武器装备体系保障军事需求问题框架研究 ..... 王一波,石全,张成(50)  
Research of Military Requirement Problem Frame for Weapon System of Systems Support  
..... WANG Yi-bo, SHI Quan, ZHANG Cheng(50)
- JBPM 工作流技术在工程装备维修业务中的应用 ..... 武鹏,凌海风,肖毅鸿,杨炜辰(53)  
Application and Research of JBPM Workflow Technology in the Engineering Equipment Repair Business  
..... WU Peng, LING Hai-feng, XIAO Yi-hong, et al(53)
- 基于 DEA 的装备保障方案评估 ..... 代海飞,刘小方,张永天,赵鹏昭(58)  
Research on Evaluating the Equipment Support Program Based on DEA  
..... DAI Hai-fei, LIU Xiao-fang, ZHANG Yong-tian, et al(58)
- 机载设备技术保障能力评估指标体系 ..... 贾梦杰,孙荣平,董华,柏长帅(62)  
Evaluation Index System for Technical Support Ability of Airborne Equipment  
..... JIA Meng-jie, SUN Rong-ping, DONG Hua, et al(62)
- 弹药修理安全风险内涵分析 ..... 姜欣明,连晋峰,郭旭光(65)  
Analysis of the Connotation of Ammunition Maintenance Safety Risk ..... JIANG Xin-ming, LIAN Jin-feng, GUO Xu-guang(65)
- 一种基于 PSO 的装备战场抢修力量调度多目标决策模型 ..... 张军,江勋林,武鹏,秦一凡(69)  
Multi-objective Decision-Making Model of BDAR Unit Scheduling Based on PSO  
..... ZHANG Jun, JIANG Xun-lin, WU Peng, et al(69)
- 电路国产化可靠性管理 ..... 胡剑书,刘锐,唐万军(73)  
Management of the Reliability for Circuits Localization ..... HU Jian-shu, LIU Rui, TANG Wan-jun(73)
- 高频超视距雷达系统发展现状及趋势 ..... 费川,曹松棣,杨强,周传晟(76)  
Current States and Trends of HF over the Horizon Radar System ..... FEI Chuan, CAO Song-di, YANG Qiang, et al(76)

## 机械制造与检测技术

- 复合压电振子非轴对称优化 ..... 曾一致,陶红艳,刘天宝,余成波,王晨(79)  
A Research on Non-axisymmetrical Optimization of Composite Piezoelectric Oscillator  
..... ZENG Yi-zhi, TAO Hong-yan, LIU Tian-bao, et al(79)
- 高强度铝蜂窝组装设备 ..... 刘天宝,陶红艳,于文泽,王书付,王晨(83)  
Research on Assembly Equipment of High Strength Aluminium Honeycomb  
..... LIU Tian-bao, TAO Hong-yan, YU Wen-ze, et al(83)

## 信息科学与控制工程

- 电子凸轮控制器设计 ..... 刘学鹏,郝晓红,张东升,黄晓东(87)  
The Design of Electronic Cam Controller ..... LIU Xue-peng, HAO Xiao-hong, ZHANG Dong-sheng, et al(87)
- 高瞬态响应指标的伺服系统设计方法 ..... 周文,李长红,韩耀鹏,杨执中,蔺韬,张江博(91)  
Design Method of Servo System Possess of Fast Transient Response  
..... ZHOU Wen, LI Chang-hong, HAN Yao-peng, et al(91)

- 双通道单脉冲跟踪快速校相改进算法 ..... 仇三山(96)  
An Improved Fast Phase Adjusting Algorithm for Dual-Channel Monoplus IF Tracking Receivers ..... QIU San-shan(96)  
雷达目标跟踪模拟技术 ..... 许文忠, 张阳阳, 王梓斌, 王 勇, 赵乐至(99)  
Research of Tracking and Simulating Techniques for Radar Targets  
..... XU Wen-zhong, ZHANG Yang-yang, WANG Zi-bin, et al(99)  
嵌入式软件实时动态仿真系统设计 ..... 张 萍(102)  
Design of Real-Time Dynamic Simulation System of Embedded Software ..... ZHANG Ping(102)  
频谱细化算法分析 ..... 赵宏强(105)  
Analysis of Spectrum Zoom Algorithms ..... ZHAO Hong-qiang(105)  
卫星测量数据电离层延迟误差多频修正方法 ..... 吴胤霖, 战 杰(110)  
Multi-Frequency Correction Method for Ionosphere Error in Satellite Measurements ..... WU Yin-lin, ZHAN Jie(110)  
基于S3C2410的嵌入式Linux开发环境的搭建 ..... 朱 黎(113)  
The Building of Embedded Linux Development Environment Based on the S3C2410 ..... ZHU Li(113)

## 化学工程与材料科学

- 陶瓷/金属复合装甲抗侵彻研究进展 ..... 尹志新, 李言语, 梁兴华, 陆 辉(116)  
Research Progress of Ceramic/Metal Composite Armor Against Ballistic Penetration  
..... YIN Zhi-xin, LI Yan-yu, LIANG Xiong-hua, et al(116)  
1-甲基-4,5-二硝基咪唑包覆钝感CL-20研究  
..... 王小军, 尚凤琴, 王 霞, 鲁志艳, 秦 亮, 杨学斌, 苏 强, 杨彩云, 曹端林(120)  
Study on Insensitivity CL-20 Coated with 4,5-MDNI ..... WANG Xiao-jun, SHANG Feng-qin, WANG Xia, et al(120)  
高速鱼雷水冲压发动机用金属/水反应燃料研究进展 ..... 张亚俊, 王 柔, 李吉祯, 刘芳莉, 齐晓飞(123)  
Review on the Hydroreactive Metal Fuel Used in Water Ramjet Engine of High Speed Torpedo  
..... ZHANG Ya-jun, WANG Yi, LI Ji-zhen, et al(123)

## 基础理论与应用研究

- 机电产品材料成本的控制方法 ..... 周康渠, 郭东东, 李 晓(127)  
Mechatronics Material Cost Control Method ..... ZHOU Kang-qu, GUO Dong-dong, LI Xiao(127)  
基于时空LBP特征的自适应运动目标提取算法 ..... 黄存东, 杨思春, 刘仁金(130)  
Temporal-Spatial LBP Based on Adaptive Moving Object Extracing ..... HUANG Cun-dong, YANG Si-chun, LIU Ren-jin(130)  
线性跟踪系统Lyapunov函数性质及其应用 ..... 凡国龙, 梁晓庚(134)  
The Nature of the Lyapunov Function and Its Application in the Linear Tracking System ..... FAN Guo-long, LIANG Xiao-geng(134)  
数字化侦察营指挥控制系统作战效能评估 ..... 张继春, 吴伟泽(137)  
Usefulness Assessment of Digitalization Reconnaissance Command and Control System Battle ..... ZHANG Ji-chun, WU Wei-ze(137)  
空间信息支援导弹防御系统作战需求论证的反向分析方法 ..... 杨 娟, 刘 欣(141)  
Inverse Analysis Method of Operational Requirements Demonstration of Missile Defense System Supported  
by Space Information ..... YANG Juan, LIU Xin(141)  
正交试验法在制导算法优化中的应用 ..... 王纪兵, 花文华, 张金鹏, 兰 勇(145)  
Application of Orthogonal Design in Guidance Algorithm Optimization  
..... WANG Ji-bing, HUA Wen-hua, ZHANG Jin-peng, et al(145)