

机械工程学报

JIXIE GONGCHENG XUEBAO

2010 年第 46 卷第 14 期 7 月 20 日出版

目次

仪器科学与技术

机械制造领域测量技术的发展研究	裘祖荣 石照耀 李 岩 (1)
车辆雨刷自动控制系统中相邻电容传感器设计	李 楠 郭宝龙 王 湃 (12)
一种基于磁真空泄漏原理的漏磁无损检测新方法	孙燕华 康宜华 (18)
多频涡流的谱分析和缺陷分类技术研究	高军哲 潘孟春 罗飞路等 (24)

材料科学与工程

激光熔覆成形技术的研究进展	宋建丽 李永堂 邓琦林等 (29)
基于模糊粗糙集的改模知识分层归纳方法	陈 晨 毛 宁 陈庆新 (40)
微尺度聚合物熔体粘性耗散效应对流变行为的影响	徐 斌 于同敏 王敏杰等 (47)
690 合金晶界碳化物和贫铬区演化动力学模拟及工艺优化	焦少阳 郑 磊 董建新等 (53)
基于 Sola 算法强迫层流纯物质枝晶生长相场法模拟	王智平 王军伟 朱昌盛等 (60)
高强度硼钢热成形技术研究及其应用	马 宁 胡 平 闫康康等 (68)
冷热循环对铝合金锥形件淬火残余应力和加工变形的影响	黄树海 赵祖德 肖远伦等 (73)
MIG 焊电弧声信号与熔透状态相关性	刘立君 兰 虎 郑红艳等 (79)
基于遗传算法的锻模阻力墙结构多目标优化设计	周 杰 张 渝 安治国等 (85)
形状记忆合金旋转驱动器结构设计方法	于 东 张博明 金龙学等 (91)
纵向磁场对 MAG 焊电弧及熔滴过渡的控制作用	华爱兵 殷树言 陈树君等 (95)

运载工程

电动轮驱动汽车驱动助力转向技术	靳立强 王军年 宋传学等 (101)
采用超弹性—粘弹性—弹塑性本构模型的橡胶隔振器动态特性计算方法	吴 杰 上官文斌 潘孝勇 (109)
橡胶衬套力学特性半经验参数化模型	于增亮 张立军 余卓平 (115)

可再生能源与工程热物理

基于 CFD 技术的离心压缩机径向进气室结构形状优化设计	陈宗华 谷传纲 舒信伟 (124)
基于 CFD 数值模拟的板式换热器分配器性能研究	仇 嘉 魏文建 张绍志等 (130)
汽轮发电机转子径向通风冷却系统流量分配研究	胡晓红 袁益超 刘聿拯等 (138)

交叉与前沿

流体传动与控制

微纳米尺度上含 DNA 分子流体传输规律的多尺度算法研究进展	罗筱薇 石 泳 朱恂等 (143)
高大空间火灾模拟及探测平台电液同步驱动控制	侯继伟 李世伦 陈 鹰等 (154)
液力变矩器三维瞬态流场计算	刘春宝 马文星 朱喜林 (161)

可靠性工程

机械可靠性设计的内涵与递进	张义民 (167)
具有随机退化特性的柱塞泵性能可靠性分析	马纪明 詹晓燕 (189)
飞机翼梁结构强度可靠性灵敏度分析	高宗战 刘志群 姜志峰等 (194)
《机械工程学报》被 EI 收录论文目次	(137)
其他	(39)

JOURNAL OF MECHANICAL ENGINEERING

Vol.46 No.14 July 2010

CONTENTS

Research on the Development of Measurement Technology Mechanical Manufacture	
.....	QIU Zurong SHI Zhaoyao LI Yan (1)
Proximity Capacitive Sensor Design in an Automatic Car Wiper Control System	
.....	LI Nan GUO Baolong WANG Pai (12)
New MFL Nondestructive Testing Method Based on Magnetic Vacuum Leakage	
.....	SUN Yanhua KANG Yihua (18)
Research on Spectrogram Method and Flaw Classification of Multi-frequency Eddy Current	
.....	GAO Junzhe PAN Mengchun LUO Feilu et al (24)
Research Progress of Laser Cladding Forming Technology	
.....	SONG Jianli LI Yongtang DENG Qilin et al (29)
Knowledge Hierarchical Induction for Injection Mould Repairs Based on Fuzzy Rough Set	
.....	CHEN Chen MAO Ning CHEN Qingxin (40)
Impact of Viscous Dissipation Effects on Micro-scale Polymer Melts Rheological Behavior	
.....	XU Bin YU Tongmin WANG Minjie et al (47)
Kinetic Simulation of Grain Boundary Carbide and Cr-depletion Region Evolution in Alloy	
690 and Thermal Treatment Optimization.....	JIAO Shaoyang ZHENG Lei DONG Jianxin et al (53)
Phase-field Simulation of Pure Material Dendritic Growth Based on Sola	
Algorithm in Force Laminar Flow.....	WANG Zhiping WANG Junwei ZHU Changsheng et al (60)
Research on Boron Steel for Hot Forming and Its Application	
.....	MA Ning HU Ping YAN Kangkang et al (68)
Influence of Thermal-cooling Cycle on Both Quenching-induced Residual Stress and	
Machining-induced Distortion of Aluminum Cone-shaped Part	
.....	HUANG Shuhai ZHAO Zude XIAO Yuanlun et al (73)
Relationship between Arc Sound Signal and Penetration Status in MIG Welding	
.....	LIU Lijun LAN Hu ZHENG Hongyan et al (79)
Multi-objective Optimization Design of Forging-Die Resistance Wall Structure Based	
on Genetic Algorithm	ZHOU Jie ZHANG Yu AN Zhiguo et al (85)
Structural Design Method of Rotation Gear Actuated by Shape Memory Alloys	
.....	YU Dong ZHANG Boming JIN Longxue et al (91)
Behavior of Arc and Drop Transfer of MAG Welding Controlled by Longitudinal Magnetic Field	
.....	HUA Aibing YIN Shuyan CHEN Shujun et al (95)
Power Steering by Driving Force for Vehicle with Motorized Wheels	
.....	JIN Liqiang WANG Junnian SONG Chuanxue et al (101)
	(下转封三)

(上接第Ⅱ页)

Computational Method for Dynamic Properties of Rubber Isolators Using
Hyperelastic-viscoelastic-plastoelastic Constitutive Model
.....WU Jie SHANGGUAN Wenbin PAN Xiaoyong (109)

Semi-Empirical Parameterized Dynamic Model of Rubber Bushing Mechanical Properties
.....YU Zengliang ZHANG Lijun YU Zhuoping (115)

Shape Optimum Design for Centrifugal Compressor Radial Inlet Based on CFD Technique
.....CHEN Zonghua GU Chuangang SHU Xinwei (124)

Research on Performance of Distributors Used in Plate Heat Exchangers Based
on CFD Numerical Simulation QIU Jia WEI Wenjian ZHANG Shaozhi et al (130)

Study on the Flow Characteristics of Radial Ventilation in Turbo-generator Rotor
.....HU Xiaohong YUAN Yichao LIU Yuzheng et al (138)

Advances in the Study on the Micro/Nanoscale Transport of DNA Molecule
Fluids by Using Multi-scale Algorithm..... LUO Xiaowei SHI Yong ZHU Xun et al (143)

Electro-hydraulic Synchronization Driving Control for the Platform of Large
Space Fire Simulation and Detection.....HOU Jiwei LI Shilun CHEN Ying et al (154)

3D Transient Calculation of Internal Flow Field for Hydrodynamic Torque Converter
.....LIU Chunbao MA Wenxing ZHU Xilin (161)

Connotation and Development of Mechanical Reliability-based Design..... ZHANG Yimin (167)

Performance Reliability Analysis of a Piston Pump Affected by Random Degradation
..... MA Jiming ZHAN Xiaoyan (189)

Strength Reliability and Parameter Sensitivity Analysis for Airfoil Spar Structure
.....GAO Zongzhan LIU Zhiquan JIANG Zhifeng et al (194)