



ISSN 1000-9345 CODEN CJMEER

中国机械工程学报

CHINESE JOURNAL OF MECHANICAL ENGINEERING®

http://www.cjmenet.com; www.cjmenet.com.cn; www.springer.com/10033

Vol. 26, No. 1, January 2013

ISSN 1000-9345







万方数据

CHINESE JOURNAL OF MECHANICAL ENGINEERING

Vol. 26, No. 1, 2013

Contents

1	Driving and Braking Control of PM Synchronous Motor Based on Low-resolution Hall Sensor for Battery Electric Vehicle
	GU Jing, OUYANG Minggao, LI Jianqiu, LU Dongbin, FANG Chuan, and MA Yan
11	Adaptive PI Control Strategy for Flat Permanent Magnet Linear Synchronous Motor Vibration Suppression MENG Fanwei, LIU Chengying, LI Zhijun, and WANG Liping
21	Vision-based Stabilization of Nonholonomic Mobile Robots by Integrating Sliding-mode Control and Adaptive Approach CAO Zhengcai, YIN Longjie, and FU Yili
29	Accuracy Analysis of Stewart Platform Based on Interval Analysis Method YAO Rui, ZHU Wenbai, and HUANG Peng
35	Design and Analysis of a New AUV's Sliding Control System Based on Dynamic Boundary Layer GAO Fudong, PAN Cunyun, and HAN Yanyan
46	Numerical Prediction and Performance Experiment in a Deep-well Centrifugal Pump with Different Impeller Outlet Width SHI Weidong, ZHOU Ling, LU Weigang, PEI Bing, and LANG Tao
53	Numerical Simulation and Analysis of Solid-liquid Two-phase Flow in Centrifugal Pump ZHANG Yuliang, LI Yi, CUI Baoling, ZHU Zuchao, and DOU Huashu
61	Real Gas Effects on Charging and Discharging Processes of High Pressure Pneumatics LUO Yuxi, WANG Xuanyin, and GE Yaozheng
69	Effect of Honeycomb Seals on Loss Characteristics in Shroud Cavities of an Axial Turbine GAO Jie, ZHENG Qun, and WANG Zheng
78	Flow Dynamics of a Spiral-groove Dry-gas Seal WANG Bing, ZHANG Huiqiang, and CAO Hongjun
85	Fluid-solid Interaction Model for Hydraulic Reciprocating O-ring Seals LIAO Chuanjun, HUANG Weifeng, WANG Yuming, SUO Shuangfu, and LIU Ying
95	Unbalance Vibratory Displacement Compensation for Active Magnetic Bearings GAO Hui, XU Longxiang, and ZHU Yili
104	Dynamic Responses of Rotor Drops onto Double-decker Catcher Bearing ZHU Yili, JIN Chaowu, and XU Longxiang
114	Synergistic Effect between Nano-ceramic Lubricating Additives and Electroless Deposited Ni-W-P Coating CHEN Min, CHENG Wushan, ZHAO Zuxin, and HUANG Xiaobo

121	Numerical Analysis of Nd:YAG Pulsed Laser Polishing CVD Self-standing Diamond Film XU Feng, HU Haifeng, ZUO Dunwen, XU Chun, QING Zhenghua, and WANG Min
128	Fractal Prediction Model of Thermal Contact Conductance of Rough Surfaces JI Cuicui, ZHU Hua, and JIANG Wei
137	Fractal Characteristics and Microstructure Evolution of Magnetron Sputtering Cu Thin Films DU Shiwen and LI Yongtang
144	Coupled Dynamic Modeling of Rolls Model and Metal Model for Four High Mill Based on Strip Crown Control SUN Jianliang, PENG Yan, and LIU Hongmin
151	Precision Design for Machine Tool Based on Error Prediction, HUANG Qiang and ZHANG Genbao
158	Temperature Variable Optimization for Precision Machine Tool Thermal Error Compensation on Optimal Threshold ZHANG Ting, YE Wenhua, LIANG Ruijun, LOU Peihuang, and YANG Xiaolan
166	Algorithm for Detecting Volumetric Geometric Accuracy of NC Machine Tool by Laser Tracker WANG Jindong and GUO Junjie
176	Multi-segment and Multi-ply Overlapping Process of Multi Coupled Activities Based on Valid Information Evolution WANG Zhiliang, WANG Yunxia, and QIU Shenghai
189	Reconfigurable Modeling Technology of Similar-structure Products Configuration Design QIU Lemiao, REN Bin, ZHANG Shuyou, and XU Jian
197	Topology Recovery Technique for Complex Freeform Surface Model after Local Geometry Repair BIAN Keke and KE Yinglin
207	Analysis of Oil Consumption in Cylinder of Diesel Engine for Optimization of Piston Rings ZHANG Junhong, ZHANG Guichang, HE Zhenpeng, LIN Jiewei, and LIU Hai
A1	Contents of Journal of Mechanical Engineering, Vol. 48, Nos. 20-24, 2012