

CHINESE JOURNAL OF MECHANICAL ENGINEERING

Vol. 24, No. 4, 2011

Contents

- 515 **Dynamic Modeling and Analysis of 9-DOF Omnidirectional Legged Vehicle**
GAO Feng, WANG Guofu, CUI Ying, and YANG Xinhong
- 522 **Structural Synthesis of Compliant Metamorphic Mechanisms
Based on Adjacency Matrix Operations**
LI Duanling, ZHANG Zhonghai, and CHEN Guimin
- 529 **Fluid-based Slotting Optimization for Automated Order Picking System
with Multiple Dispenser Types**
LIU Peng, WU Yaohua, ZHOU Chen, and XU Na
- 539 **Numerical Investigation on Fluid Structure Interaction Considering Rotor
Deformation for a Centrifugal Pump**
YUAN Shouqi, PEI Ji, and YUAN Jianping
- 546 **Adaptive Trajectory Tracking Control for a Nonholonomic Mobile Robot**
CAO Zhengcai, ZHAO Yingtao, and WU Qidi
- 553 **New Method to Measure the Fill Level of the Ball Mill II—
Analysis of the Vibration Signals**
HUANG Peng, JIA Minping, and ZHONG Binglin
- 561 **Effect of Thermal Cycling on Properties and Microstructure
of SnAgCuCe Soldered Joints in QFP Devices**
ZHANG Liang, XUE Songbai, GAO Lili, ZENG Guang, YU Shenglin, and SHENG Zhong
- 567 **CAD Model-Based Intelligent Inspection Planning
for Coordinate Measuring Machines**
DONG Yude, LIU Daxin, ZHAO Han, WANG Wanlong, and WU Juan
- 584 **Tracking Performance of Electric Power Steering System Based
on the Mixed H_2/H_∞ Strategy**
ZHAO Wanzhong, SHI Guobiao, LIN Yi, and NIE Hong
- 591 **Ultrasonic Nondestructive Signals Processing Based on Matching Pursuit
with Gabor Dictionary**
GUO Jinku, WU Jinying, YANG Xiaojun, and LIU Guangbin
- 596 **Mechanical Properties of QFP Joints Soldered with SnAgCu and SnPb Solders**
XUE Peng, XUE Songbai, ZENG Guang, ZHANG Liang, and DAI Wei
- 601 **Structural Surface Crack Monitoring Method Based on Electrical Potential
Technique and Modern Surface Technology**
CUI Ronghong, HE Yuting, YU Zhiming, LI Hongpeng, SHU Wenjun, and DU Jinqiang

- 607 **Experimental Analysis on the Variable Polarity Plasma Arc Pressure**
JIANG Yi, XU Binshi, LÜ Yaohui, LIU Cunlong, and LIU Ming
- 612 **Dynamic Walking of AIBO with Hopf Oscillators**
ZHANG Jiaqi, TOMIZUKA Masayoshi, CHEN Qijun, and LIU Chengju
- 618 **Numerical Analysis of Nozzle Clearance's Effect on Turbine Performance**
HU Liangjun, YANG Ce, SUN Harold, ZHANG Jizhong, and LAI Mingchia
- 626 **Design and Modeling on Stranded Wires Helical Springs**
ZHOU Jie, WANG Shilong, KANG Ling, and CHEN Tianyi
- 638 **Mobility Analysis of Altmann Overconstrained Linkages by Modified Grübler-Kutzbach Criterion**
LIU Jingfang, LI Yanwen, and HUANG Zhen
- 647 **Designing and Optimization of an Off-line Programming System
for Robotic Belt Grinding Process**
WANG Wei, YUN Chao, ZHANG Ling, and GAO Zhihui
- 656 **Microstructure and Mechanical Behavior of in Situ Primary Si/Mg₂Si Locally Reinforced
Aluminum Matrix Composites Piston by Centrifugal Casting**
HAO Xuhong, LIU Changming, and PAN Dengliang
- 661 **Feature Extraction Method Based on Pseudo-Wigner-Ville Distribution for Rotational
Machinery in Variable Operating Conditions**
WANG Huaqing, LI Ke, SUN Hao, and CHEN Peng
- 669 **Iterative Learning Control Algorithm with a Fixed Step**
WANG Yan and NIU Jianjun
- 676 **Dynamic Feedforward Control of a Novel 3-PSP 3-DOF Parallel Manipulator**
HAO Qi, GUAN Liwen, WANG Jinsong, and WANG Liping
- 685 **Performance Investigation of Cone Dielectric Elastomer Actuator Using Taguchi Method**
WANG Huaming, ZHU Yinglong, ZHAO Dongbiao, and LUAN Yunguang
- 693 **Robust Iterated Sigma Point FastSLAM Algorithm for Mobile Robot
Simultaneous Localization and Mapping**
SONG Yu, SONG Yongduan, and LI Qingling
- 701 **FEM Analysis on Acoustic Performance of Wall Flow Diesel Particulate Filters**
GAO Wenzhi and FENG Liming
- 707 **Information Coding for Cockpit Human-machine Interface**
ZHANG Lei, ZHUANG Damin, and WANYAN Xiaoru
- A1 Contents and Abstracts of Journal of Mechanical Engineering, Vol. 47, No. 11-14, 2011