



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](http://www.cjmenet.com.cn); [www.springer.com/10033](http://www.springer.com/10033)

# CJME

Vol. 25, No. 6, November 2011

ISSN 1000-9345



万方数据



# CHINESE JOURNAL OF MECHANICAL ENGINEERING

Vol. 25, No. 6, 2012

## Contents

- 1 075    **Modeling of Cross-Spring Pivots Subjected to Generalized Planar Loads**  
BI Shusheng, YAO Yanbin, ZHAO Shanshan, and YU Jingjun
- 1 086    **Conditions for Parallel Realizable Configurations in Synthesis  
of Constraint-based Flexure Mechanisms**  
LI Shouzhong, YU Jingjun, and ZONG Guanghua
- 1 096    **Orientation-Singularity Representation and Orientation-Capability Computation of a Special  
Class of the Gough-Stewart Parallel Mechanisms Using Unit Quaternion**  
LI Baokun, CAO Yi, ZHANG Qiuju, and HUANG Zhen
- 1 105    **Universal Mechanism Modeling Method in Virtual Assembly Environment**  
LIU Jianhua, ZHANG Zhixian, and LIU Yang
- 1 115    **Flow Electrification of Insulated Liquid in Metal Pipes**  
ZHU Shouxin, LIU Lin, and TAKAHASHI Satoshi
- 1 121    **Hydraulic Accumulator-Motor-Generator Energy Regeneration System  
for a Hybrid Hydraulic Excavator**  
LIN Tianliang and WANG Qingfeng
- 1 130    **Algorithm for Calculating Torque Base in Vehicle Traction Control System**  
LI Hongzhi, LI Liang, SONG Jian, WU Kaihui, QIAO Yanjuan, LIU Xingchun, and XIA Yongguang
- 1 138    **Rotational Swashplate Pulse Continuously Variable Transmission  
Based on Helical Gear Axial Meshing Transmission**  
SUN Jiandong, FU Wenyu, LEI Hong, TIAN E, and LIU Ziping
- 1 144    **Large-eddy Simulation of Fluid Flow and Heat Transfer in a Mixing Tee Junction**  
LU Tao, WANG Yongwei, and WANG Kuisheng
- 1 151    **Valve Dynamic and Thermal Cycle Model in Stepless Capacity Regulation  
for Reciprocating Compressor**  
JIN Jiangming and HONG Weirong
- 1 161    **Power-balancing Instantaneous Optimization Energy Management  
for a Novel Series-parallel Hybrid Electric Bus**  
SUN Dongye, LIN Xinyou, QIN Datong, and DENG Tao
- 1 171    **Influence of PTFE on Electrode Structure for Performance of PEMFC and 10-Cells Stack**  
LIN Rui, ZHAO Tiantian, ZHANG Haiyan, CAO Chunhui, LI Bing, and MA Jianxin
- 1 176    **Numerical Calculation of Thermal Effect on Cavitation in Cryogenic Fluids**  
SHI Suguo and WANG Guoyu

- 1 184     **Numerical Simulation and Experimental Research on the Influence of Solid-phase Characteristics on Centrifugal Pump Performance**  
LI Yi, ZHU Zuchao, HE Weiqiang, and HE Zhaohui
- 1 190     **Simulations of the Transient Flow Generated from a Started Flat Plate**  
WANG Leqin, MA Xudan, LI Zhifeng, WU Peng, and WU Dazhuan
- 1 198     **Numerical Simulation of Pressure Fluctuations in a Large Francis Turbine Runner**  
WANG Fujun, LIAO Cuilin, and TANG Xuelin
- 1 205     **Experimental Study of the Pressure Fluctuations in a Pump Turbine at Large Partial Flow Conditions**  
RAN Hongjuan, LUO Xianwu, ZHU Lei, ZHANG Yao, WANG Xin, and XU Hongyuan
- 1 210     **Analysis of Collapse in Flattening a Micro-grooved Heat Pipe by Lateral Compression**  
LI Yong, HE Ting, and ZENG Zhixin
- 1 218     **Friction and Wear Behaviors of MoS<sub>2</sub>/Zr Coated HSS in Sliding Wear and in Drilling Processes**  
DENG Jianxin, YAN Pei, and WU Ze
- 1 224     **Tool Wear and Its Effect on Surface Roughness in Diamond Cutting of Glass Soda-lime**  
JIA Peng and ZHOU Ming
- 1 231     **Optimal Design of Multiple Stress Constant Accelerated Life Test Plan on Non-rectangle Test Region**  
CHEN Wenhua, GAO Liang, LIU Juan, QIAN Ping, and PAN Jun
- 1 238     **Current-Bounded Commutation of a Long-Stroke Magnetically Levitated Stage with Moving Coils**  
ZHU Yu, ZHANG Shengguo, YANG Kaiming, MU Haihua, and YIN Wensheng
- 1 245     **Concept Design, Modeling and Station-keeping Attitude Control of an Earth Observation Platform**  
YANG Yueneng, WU Jie, and ZHENG Wei
- 1 255     **New Algorithm for CBR-RBR Fusion with Robust Thresholds**  
XU Man, YU Haiyan, and SHEN Jiang
- 1 264     **Quality Control on Crimping of Large Diameter Welding Pipe**  
FAN Lifeng, GAO Ying, LI Qiang, and XU Hongshen
- 1 274     **System Identification of Controlled Pulse Keyhole Plasma Arc Welding Process**  
JIA Chuanbao, DU Yongpeng, GUO Ning, WANG Fang, and HAN Yanfei
- 1 281     **Evaluating Local Elasticity of the Metal Nano-films Quantitatively Based on Referencing Approach of Atomic Force Acoustic Microscopy**  
ZHANG Gaimei, HE Cunfu, WU Bin, and CHEN Qiang
- 1 287     **Enhanced Detection of Rolling Element Bearing Fault Based on Stochastic Resonance**  
ZHANG Xiaofei, HU Niaoqing, CHENG Zhe, and HU Lei
- A1       **Contents of Journal of Mechanical Engineering, Vol. 48, Nos. 14–19, 2012**