



ISSN 1000-4750 CN11-2595/O3
CODEN GOLIEB Ei 收录期刊

工程力学

第 32 卷 第 7 期

ENGINEERING MECHANICS

Vol. 32 No. 7



7

2015

《工程力学》杂志社
Engineering Mechanics Press

目 次

综述

超长复杂隔震结构施工力学及全过程监测研究.....杜永峰, 赵丽洁, 张 韬, 郑文智, 李万润 (001)

基本方法

一维变分不等式问题的自适应有限元分析新探.....袁 驹, 刘泽洲, 邢沁妍 (011)

锚杆支护圆形隧洞弹塑性解.....孟 强, 赵洪波, 茹忠亮, 李东利 (017)

基于仿生观念的多层薄壁结构承载热防护一体化分析设计.....曹小建, 王跃方, 王 琦 (026)

基于载荷损伤分散的严重谱选取方法初探.....贺小帆, 刘家曦, 王 强, 刘文斑 (032)

土木工程学科

近断层地震动作用下多塔悬索桥的地震反应分析.....

.....丁幼亮, 谢 辉, 耿方方, 宋建永, 李万恒, 王玉倩 (038)

耗能梁段与带楼板 RC 框架梁连接节点的滞回性能研究.....

.....孙国华, 邵 寅, 于安林, 赵宝成, 盛邵山 (047)

再生混凝土三轴受压力学性能试验研究.....陈宗平, 李 玲, 陈宇良, 应武挡 (056)

钢管混凝土单圆管拱结构罕遇地震作用下振动台阵试验研究.....

.....黄福云, 陈宝春, 李建中, 程浩德 (064)

扩底楔形桩抗压承载力理论计算分析.....孔纲强, 周 航, 丁选明, 杨 庆 (074)

单层网壳结构冲击响应模式及临界冲击动能研究.....王秀丽, 王 昊, 施 刚, 赵丽洁 (081)

底部加强型工字形截面钢管混凝土柱抗震性能数值分析.....惠 存, 曹万林, 王元清, 王 斌 (088)

预应力混凝土箱梁开裂后的刚度损伤评估.....徐向锋, 张 峰, 韦成龙 (095)

单层网壳结构稳定性分析方法研究.....蔡 健, 贺 盛, 姜正荣, 刘齐齐, 张郁林 (103)

温度与荷载耦合下农村公路混凝土路面结构尺寸优化.....魏 亚, 梁思明, 和 昆, 封基良 (111)

钢板剪力墙结构基于性能的塑性设计方法研究.....郝际平, 袁昌鲁, 樊春雷, 田黎敏 (118)

考虑粘结-滑移与剪切作用的钢筋混凝土柱侧向变形分析.....朱绩超, 王 响, 张 勤 (128)

目 次

风机塔筒流固耦合分析与受力监测研究.....	彭文春, 邓宗伟, 高乾丰, 董 辉 (136)
圆管刚性法兰加劲肋角焊缝受力特性及强度计算理论.....	王宇强, 张大长, 李步辉, 孙铭泽 (143)
基于节点冲切破坏的板柱结构连续倒塌可靠性分析.....	易伟建, 水 淼 (149)
基于静动力凝聚及扩展卡尔曼滤波的连续梁桥损伤识别.....	何浩祥, 吕永伟, 韩恩圳 (156)
抗剪加固 FRP 与混凝土界面粘结性能的试验研究	

..... 陈光明, 刘 迪, 李云雷, 李世伟, 陈建飞, 许浩彬 (164)

一种考虑尺寸效应的颗粒材料流变模型及其验证..... 夏明钺, 徐远杰, 楚锡华 (176)

机械工程学科

基于齿根动应力的船用人字齿轮疲劳分析与优化.....	王 峰, 方宗德, 李声晋, 蒋进科 (184)
管-杆伸出式弹芯垂直侵彻半无限靶机理研究	董玉财, 杜忠华, 刘 杰 (190)
薄壁管材连续矫直压扁力学模型研究.....	张子骞, 颜云辉, 杨会林 (197)
聚碳酸酯的单轴棘轮行为研究.....	黄婧依, 谷军杰, 张建伟, 蒋 晗, 康国政 (204)
含机构位移起重机主副臂组合臂架结构几何非线性分析.....	王 刚, 齐朝晖, 孔宪超 (210)

其他工程学科

大尺度刚柔组合飞艇结构的静动态力学性能分析.....	李高胜, 柳占立, 林三春, 庄 茁 (219)
高强轨道钢双轴压-扭棘轮行为的实验和模拟	邱 博, 阚前华, 刘宇杰, 张 旭, 谢瑞丽 (229)
水工闸门垂直水动力计算方法.....	高仕赵, 徐国宾 (236)
复合材料蜂窝夹层结构 T 型接头拉伸性能研究.....	徐云研, 程小全, 张纪奎, 邝正能 (243)
非均匀载荷作用下偏心磨损套管稳定性准则	屈 展, 王小增, 窦益华, 马文海 (249)

CONTENTS

OVERVIEWS

- Study on construction mechanics of long complicated isolated structures and life-cycle monitoring.....
.....DU Yong-feng, ZHAO Li-jie, ZHANG Tao, ZHENG Wen-zhi, LI Wan-run (001)

METHODOLOGIES

- A new approach to self-adaptive FEM for one-dimensional variational inequality problems.....
.....YUAN Si, LIU Ze-zhou, XING Qin-yan (011)
- Analytical solution for circular tunnels with rock bolts.....
.....MENG Qiang, ZHAO Hong-bo, RU Zhong-liang, LI Dong-li (017)
- Integrated analysis and design of loading capacity and thermal protections of multilayer thin-walled structures based on bionics.....
.....CAO Xiao-jian, WANG Yue-fang, WANG Qi (026)
- Primary analysis on the selection method of severe load spectrum based on the fleet load damage variation.....
.....HE Xiao-fan, LIU Jia-xi, WANG Qiang, LIU Wen-ting (032)

CIVIL ENGINEERING

- Seismic response analysis of a multi-tower suspension bridge subjected to near-fault ground motions.....
.....DING You-liang, XIE Hui, GENG Fang-fang, SONG Jian-yong, LI Wan-heng, WANG Yu-qian (038)
- Hysteretic behavior of the connection between RC frame beam with floor and energy dissipation link.....
.....SUN Guo-hua, SHAO Yin, YU An-lin, ZHAO Bao-cheng, SHENG Shao-shan (047)
- Experimental study on mechanical properties of recycled concrete in tri-axial compression.....
.....CHEN Zong-ping, LI Ling, CHEN Yu-liang, YING Wu-dang (056)
- Shaking tables testing of concrete filled steel tubular single arch rib model under the excitation of rare earth-
quakes.....
.....HUANG Fu-yun, CHEN Bao-chun, LI Jian-zhong, CHENG Hao-de (064)
- Theoretical analysis on the compression bearing capacity of belled wedge piles.....
.....KONG Gang-qiang, ZHOU Hang, DING Xuan-ming, YANG Qing (074)
- Study on impact response modes and critical impact kinetic energy of single-layer reticulated shell.....
.....WANG Xiu-li, WANG Hao, SHI Gang, ZHAO Li-jie (081)
- Numerical analysis for aseismic behavior of bottom strengthened I-sectional concrete filled steel tube columns
.....
.....HUI Cun, CAO Wan-lin, WANG Yuan-qing, WANG Bin (088)
- Stiffness damage assessment of prestressed concrete box-girder after cracking.....
.....XU Xiang-feng, ZHANG Feng, WEI Cheng-long (095)
- Investigation on stability analysis method of single layer latticed shells.....
.....CAI Jian, HE Sheng, JIANG Zheng-rong, LIU Qi-qi, ZHANG Yu-lin (103)
- Slab-size optimization of rural road concrete pavement considering the combined effect of temperature gradient
and traffic load.....
.....WEI Ya, LIANG Si-ming, HE Kun, FENG Ji-liang (111)
- Performance-based plastic design method for the slender unstiffened steel plate shear walls.....
.....HAO Ji-ping, YUAN Chang-lu, FAN Chun-lei, TIAN Li-min (118)
- Lateral deformations analysis of reinforced concrete columns incorporating bond-slip and shear effects.....
.....ZHU Ji-chao, WANG Xiang, ZHANG Qin (128)

CONTENTS

Fluid-solid interaction analysis and stress monitoring research of wind turbine tower	
..... PENG Wen-chun , DENG Zong-wei , GAO Qian-feng , DONG Hui (136)	
Mechanical behavior and strength calculation theory of stiffener fillet weld in circle rigid flange.....	
..... WANG Yu-qiang , ZHANG Da-chang , LI Bu-hui , SUN Ming-ze (143)	
Reliability analysis for progressive collapse of slab-column structure based on the punching failure of the connection	
..... YI Wei-jian , SHUI Miao (149)	
Damage detection for continuous girder bridge based on static-dynamic condensation and EKF	
..... HE Hao-xiang , LÜ Yong-wei , HAN En-zhen (156)	
Bond behavior between shear strengthening FRP and concrete: an experimental study.....	
..... CHEN Guang-ming , LIU Di , LI Yun-lei , LI Shi-wei , CHEN Jian-fei , XU Hao-bin (164)	
A rheology model incorporating scale effect for granular materials and its validations	
..... XIA Ming-tan , XU Yuan-jie , CHU Xi-hua (176)	

MECHANICAL ENGINEERING

Fatigue analysis and optimization of marine herringbone gear based on tooth root dynamic stress.....	
..... WANG Feng , FANG Zong-de , LI Sheng-jin , JIANG Jin-ke (184)	
Study on extended-penetrator mechanism of tube-rod normal penetration into semi-infinite target.....	
..... DONG Yu-cai , DU Zhong-hua , LIU Jie (190)	
Research on a mechanical model of the flattening intermesh for continuous straightening of thin-walled tubes	
..... ZHANG Zi-qian , YAN Yun-hui , YANG Hui-lin (197)	
Study on uniaxial ratcheting of polycarbonate.....	
..... HUANG Jing-yi , GU Jun-jie , ZHANG Jian-wei , JIANG Han , KANG Guo-zheng (204)	
Geometric nonlinear analysis for crane main and sub-boom structures with mechanism displacements	
..... WANG Gang , QI Zhao-hui , KONG Xian-chao (210)	

OTHER ENGINEERING DISCIPLINES

Static and dynamic mechanics analysis for a large-scale rigidity-flexibility airship structure	
..... LI Gao-sheng , LIU Zhan-li , LIN San-chun , ZHUANG Zhuo (219)	
Experiment and simulation on the biaxial compression-torsion ratcheting behavior of high strength rail steel.....	
..... QIU Bo , KAN Qian-hua , LIU Yu-jie , ZHANG Xu , XIE Rui-li (229)	
Calculation method for vertical hydrodynamic force of hydraulic gate.....	
..... GAO Shi-zhao , XU Guo-bin (236)	
Study on composite honeycomb sandwich structure formed T-joints under tensile load	
..... XU Yun-yan , CHENG Xiao-quan , ZHANG Ji-kui , LI Zheng-neng (243)	
Stability criterion of eccentric worm casing under nonuniform external loadings	
..... QU Zhan , WANG Xiao-zeng , DOU Yi-hua , MA Wen-hai (249)	

本刊责任编辑: 黄丽艳
本刊责任编辑: 崔京浩

工程力学

Gongcheng Lixue

(月刊)

2015 年 第 32 卷 第 7 期

ENGINEERING MECHANICS

(Monthly)

Vol.32 No.7 2015

主管单位	中国科学技术协会	Supervisor	China Association for Science and Technology
主办单位	中国力学学会	Sponsor	The Chinese Society of Theoretical and Applied Mechanics
出版单位	《工程力学》杂志社	Publication	Engineering Mechanics Press
杂志社地址	北京清华大学新水利馆 114 室 《工程力学》杂志社 邮政编码 100084 电 话 (010)62788648 传 真 (010)62788648 电子信箱: gclxbjb@tsinghua.edu.cn 网 址: http://gclx.tsinghua.edu.cn	Editorial Office	Engineering Mechanics Press Room 114, New Hydraulic Building Tsinghua University, 100084, Beijing, China Tel. : +86-10-62788648 Fax : +86-10-62788648 E-mail: gclxbjb@tsinghua.edu.cn Website: http:// gclx.tsinghua.edu.cn
印刷单位	北京科信印刷有限公司	Printing	Beijing Kexin Printing Co., Ltd
发 行	国外: 中国国际图书贸易集团有限公司 国内: 北京报刊发行局 全国各地邮局均可订购 邮发代号 82-862	Distributors	Abroad: China International Book Trading Corporation Domestic: Beijing Newspapers & Periodicals Distribution Bureau (Code: 82-862)
杂志社法人、社长	袁 驷	Head and Representative of artificial person	Yuan Si
编委会主编	袁 驷	Editor-in-Chief	Yuan Si
名 誉 主 编	崔京浩	Honorary Editor-in-Chief	Cui Jinghao
编辑部主任	黄丽艳	Director of Editorial Office	Huang Liyan

国际标准刊号 ISSN1000-4750 国内统一刊号 CN11-2595/O3
美国国际刊名代码中心授予的国际刊名代码 (CODEN) GOLIEB
百种中国杰出学术期刊, 工业技术类核心期刊, O3 力学类核心期刊
RCCSE 中国权威学术期刊(A⁺)
工程索引(Ei)收录期刊

定价: 55.00
每月下旬出版

ISSN 1000-4750

