

## 目次

### 专家视点

液化天然气船液舱的晃荡 ..... 王德禹(1)

### 专稿

基于边界面法的完整实体应力分析理论与应用 ..... 张见明(5)

### CAD/CAE/CAM 自主创新论坛

大力发展自主大规模工程力学应用软件 ..... 吴瑞安,何颖波,郝志明,范宣华(11)

### 工程数值仿真与 CAE 算法

裙板安装对高速列车气动性能影响的数值分析 ..... 杨志刚,高喆,陈羽,王毅刚(16)

新型复合 FRP 锚杆延展性及协调性数值分析 ..... 张晓,郑百林,贺鹏飞(22)

钢筋混凝土拱桥构件重要性评价及超载导致倒塌破坏模拟 ..... 卢啸,陆新征,叶列平,何水涛(26)

钢轨火焰热处理温度场数值模拟 ..... 屈岳波,和平安,蔡志鹏,赵海燕,潘际奎(31)

下反前掠地效翼三维数值模拟 ..... 应成炯,杨韡,杨志刚(35)

星载大型可展桁架天线热变形分析 ..... 李琴,朱敏波(40)

发电机挡块组件有限元分析 ..... 张维,郑百林,贺鹏飞(44)

基于高次多项式动力凸轮型线的配气机构性能分析 ..... 杜爱民,梁伟(48)

高速齿轮转子系统质量不平衡响应分析 ..... 张坤,郑百林,李应生(53)

大型全回转浮式起重机平衡系统优化数学模型 ..... 杨勇生,孙乐乐,沈海荣(57)

基于 ANSYS 的速度时程求解方法 ..... 林超伟(61)

橡胶材料疲劳断裂特性研究进展 ..... 李晓芳,张春亮(64)

### CAD 与计算机图像图形学

动态调节圆半径曲面重建算法的改进 ..... 王崑凌,李莉(70)

基于 ALAP 元模型的产品功能模型 ..... 郝泳涛,唐涛,马冲(73)

### 计算机仿真

模型的快速降阶技术 ..... 王小娟,吴旭光,姚伟刚(79)

基于 PSO 和 SVM 的牵引变压器绝缘故障诊断 ..... 方科,苏雁军,黄友文(83)

非正弦供电感应电动机传动系统稳态仿真方法 ..... 谢卫,魏永国,张琼(87)

电力数字化综合管理系统的设计与实现 ..... 吴建国,李光耀(91)

### 应用技术与技巧

地铁车辆橡胶轴箱定位器结构分析与优化 ..... 王明星,黄友剑,程海涛(97)

考虑可靠性和鲁棒性的机械接头有限元设计优化 ..... 毛力奋(101)

CAE 软件操作小百科 ..... 顾铨璋,武秀根(106)

STAR-CCM + 使用技巧(续1) ..... (108)

Abaqus/CAE 高级实用技巧 ..... (110)

### 信息交流

计算机辅助工程及其理论研讨会 2011(CAETS 2011) 征文通知 ..... (112)

International Conference on Computational Methods(ICCM)2010 ..... (114)

有限元高性能计算暨纪念卞学镛先生学术会议召开 ..... (115)

第6届中国 CAE 工程分析技术年会召开 ..... (116)

补白 ..... (4,47,52,105,107,109)

[期刊基本参数] CN 31-1679/TP \* 1992 \* q \* A4 \* 118 \* zh \* P \* ¥18.00 \* 3000 \* 22 \* 2010-09

## Contents

### Expert View

Sloshing on liquid tank of liquefied natural gas ship ..... WANG Deyu(1)

### Special Contribution

Theory and application of stress analysis on complete solids based on boundary face method ..... ZHANG Jianming(5)

### Independent CAD/CAE/CAM Innovation Forum

Promoting development of independent large scale engineering mechanics application software  
..... WU Ruian, HE Yingbo, HAO Zhiming, FAN Xuanhua(11)

### Numerical Simulation of Engineering and CAE Algorithm

Numerical analysis on influence on aerodynamic performance of high-speed train caused by installation of skirt plates  
..... YANG Zhigang, GAO Zhe, CHEN Yu, WANG Yigang(16)

Numerical analysis on ductility and harmony for new composite FRP anchor ..... ZHANG Xiao, ZHENG Bailin, HE Pengfei(22)

Component importance evaluation and overload-induced collapse simulation for reinforced concrete arch bridge  
..... LU Xiao, LU Xinzheng, YE Lieping, HE Shutao(26)

Numerical simulation on temperature field of rail with flame heat treatment  
..... QU Yuebo, HE Ping'an, CAI Zhipeng, ZHAO Haiyan, PAN Jiluan(31)

3D numerical simulation on reverse forward swept wing-in-ground effect ..... YING Chengjiog, YANG Wei, YANG Zhigang(35)

Thermal deformation analysis of large deployable truss antenna on satellite ..... LI Qin, ZHU Minbo(40)

Finite element analysis on generator stopper component ..... ZHANG Wei, ZHENG Bailin, HE Pengfei(44)

Valve train performance analysis based on high-order polynomial dynamic cam profile ..... DU Aimin, LIANG Wei(48)

Mass unbalance response analysis of high-speed gear rotor system ..... ZHANG Kun, ZHENG Bailin, LI Yingsheng(53)

Mathematical model for design optimization on balance system of large floating crane with full rotation  
..... YANG Yongsheng, SUN Lele, SHEN Hairong(57)

Method of solving velocity history based on ANSYS ..... LIN Chaowei(61)

Research advance on rubber material fatigue and fracture characteristics ..... LI Xiaofang, ZHANG Chunliang(64)

### CAD and Computer Image and Graphics

Improved surface reconstruction algorithm using dynamic regulation of circle radius ..... WANG Kunling, LI Li(70)

Product function model based on ALAP meta-model ..... HAO Yongtao, TANG Tao, MA Chong(73)

### Computer Simulation

Technology on fast order reduction of model ..... WANG Xiaojuan, WU Xuguang, YAO Weigang(79)

Insulation fault diagnosis for traction transformer based on PSO and SVM ..... FANG Ke, SU Yanjun, HUANG Youwen(83)

Steady-state simulation method for induction motor drive system supplied with non-sinusoidal power  
..... XIE Wei, WEI Yongguo, ZHANG Qiong(87)

Design and implementation on integrated power digitalization management system ..... WU Jianguo, LI Guangyao(91)

### Application Technology and Skills

Structure analysis and optimization on rubber axle box positioner of metro vehicle  
..... WANG Mingxing, HUANG Youjian, CHENG Haitao(97)

Finite element design optimization on mechanical joint considering reliability and robustness ..... MAO Lifan(101)

CAE software operation tips ..... GU Chengzhang, WU Xiugen(106)

Application skills of STAR-CCM + (Serials 2) ..... (108)

Advanced practical skills of Abaqus/CAE (Serials 1) ..... (110)