

## 目 录

### 结构与力学

- 反应堆压力容器外水冷条件下贯穿件完整性分析.....曹克美 许以全 史国宝 等 (001)  
稳压器波动管热分层应力及疲劳分析.....余晓菲 张毅雄 (005)  
基于虚拟激励的滞变支撑耦合结构的随机地震响应分析  
.....黄茜 臧峰刚 张毅雄 (010)

### 设备的设计与制造

- 压水堆核电厂堆内构件制造的质量监督.....吴小康 (016)  
外来物对蒸汽发生器传热管微动磨损的分析研究  
.....陈银强 桂春 王先元 等 (021)  
CPR1000 核电厂应急柴油发电机组试验方法研究.....陆秀生 钟质飞 杨勇 (025)  
蒸汽发生器最优化设计.....王盟 王建军 孙中宁 等 (029)  
安全与控制  
岭澳核电站二期 LOFW+ATWS 事故的氢气风险研究.....黄兴冠 杨燕华 傅孝良 (034)  
LOCA 下喷放水对周围仪表仪器的影响分析.....顾培文 陶俊 曹学武 等 (039)  
反应堆高阶冗余系统的相关-动态可靠性分析.....郭强 赵新文 蔡琦 等 (043)  
核电厂数字化人-机界面特征对人因失误的影响研究  
.....李鹏程 张力 戴立操 等 (048)

### 热工与水力

- 喷射泵内部流动模拟与其扩散角优化.....龙新平 王丰景 俞志君 (053)  
自然循环蒸汽发生器倒 U 型管内单相流体倒流特性研究  
.....王川 于雷 (058)  
强浮升力作用下超临界流体对流换热的湍流模型研究  
.....张昊 谢正瑞 杨燕华 (063)  
垂直并联管低质量流速自补偿特性的研究.....朱晓静 毕勤成 杨冬 等 (070)  
垂直上升光管内超临界水的传热特性试验研究.....潘杰 杨冬 董自春 等 (075)  
基于当量环方法的自定距棒束换热及水力学模型研究.....张丹 刘昌文 鲁剑超 (081)  
窄间隙矩形通道单相水纵向涡可视化实验研究.....马建 黄彦平 黄军 (085)  
窄间隙矩形通道单相水纵向涡强化传热实验.....马建 黄彦平 黄军 (089)  
矩形窄缝通道内湍流充分发展区流动边界层探析.....徐建军 陈炳德 王小军 (095)  
微肋管单相对流换热实验研究.....范广铭 孙中宁 朱升 (099)  
倾斜限制空间内池式沸腾流型特性研究.....文青龙 陈军 赵华 (104)  
摇摆条件下矩形管内湍流流动特性的 LES 研究.....鄢炳火 顾汉洋 杨燕华 等 (108)  
摇摆条件下矩形通道内单相水强制循环流动特性研究  
.....幸莫川 阎吕琪 刘洋 等 (112)

### 其他

- “启明星 1<sup>号</sup>” 单向耦合快区外中子源放大系数研究.....谢金森 于涛 钱金栋 (117)  
秦山第二核电厂堆芯燃料管理方案的选择与优化.....潘泽飞 叶国栋 项骏军 等 (122)

编委会主任：周永茂  
编委会副主任：赵仁恺 彭士禄 黄国俊 谷云龙 李玉嵩  
王大中 王乃彦 潘自强 赵华 杨岐  
主 编：罗琦  
副 主 编：孙玉发 黄士鉴 卜永照 崔广余 汪胜国

编辑部主任：左成元  
编辑部副主任：尚作燕  
编 辑：金刚菊 张明军 马蓉 刘君  
孙凯 刘胜吾 黄可东 杨清蕾  
英文审校：张琼

Analysis of Penetration Integrity under External Reactor Vessel Cooling .....	CAO Ke-mei, XU Yi-quan, SHI Guo-bao, et al (001)
Thermal Stratification and Fatigue Stress Analysis for Pressurizer Surge Line .....	YU Xiao-fei, ZHANG Yi-xiong (006)
Pseudo Excitation Random Seismic Response Analysis for Structures Equipped with Hysteretic Dampers .....	HUANG Qian, ZANG Feng-gang, ZHANG Yi-xiong (010)
Quality Surveillance for PWR Power Plant Reactor Internals Manufacturing .....	WU Xiao-kang (016)
Analytical Investigation on Steam Generator Tube Fretting Due to Foreign Object .....	CHEN Yin-qiang, GUI Chun, WANG Xian-yuan, et al (021)
Study on Issues of CPR1000 NPP Emergency Diesel Generator Test .....	LU Xiu-sheng, ZHONG Zhi-fei, YANG Yong (025)
Optimum Design of Steam Generator .....	WANG Meng, WANG Jian-jun, SUN Zhong-ning, et al (029)
Hydrogen Safety Analysis of Ling'ao II NPP under LOFW+ATWS Accident .....	HUANG Xing-guan, YANG Yan-hua, FU Xiao-liang (034)
Analysis of Effect of Flashing Liquid Jet on Surrounding Instruments during LOCA .....	GU Pei-wen, TAO Jun, CAO Xue-wu, et al (039)
Dependent-Dynamic Reliability Analysis of High-Order Redundancy System in Nuclear Reactors .....	GUO Qiang, ZHAO Xin-wen, CAI Qi, et al (043)
Effects of Digital Human-Machine Interface Characteristics on Human Error in Nuclear Power Plants .....	LI Peng-cheng, ZHANG Li, DAI Li-cao, et al (048)
Optimization of Divergence Angle of Jet Pump Based on Numerical Simulation of Interior Flow Field .....	LONG Xin-ping, WANG Feng-jing, YU Zhi-jun (053)
Investigation on Single Phase Water Reverse Flow in Inverted U-Tubes of Steam Generator under Condition of Natural Circulation .....	WANG Chuan, YU Lei (058)
Study on Turbulence Model of Supercritical Fluids Flow and Heat Transfer under Strong Buoyancy .....	ZHANG Hao, XIE Zheng-Rui, YANG Yan-Hua (063)
Investigation on Self-Compensating Characteristics of Vertical Parallel Tubes with Low Mass Velocity .....	ZHU Xiao-jing, BI Qing-cheng, YANG Dong, et al (070)
Experimental Investigation on Heat Transfer Characteristics of Water in Vertical Upward Tube under Supercritical Pressure .....	PAN Jie, YANG Dong, DONG Zi-chun, et al (075)
Study on Heat Transfer and Hydraulic Model of Spiral-Fin Fuel Rods Based on Equivalent Annulus Method .....	ZHANG Dan, LIU Chang-wen, LU Jian-chao (081)
Visual Experimental Investigations on Single-Phase Flow in Narrow Rectangular Channel with Longitudinal Vortex .....	MA Jian, HUANG Yan-ping, Huang Jun (085)
Experimental Investigations on Single-Phase Heat Transfer Enhancement in a Narrow Rectangular Channel with Longitudinal Vortex .....	MA Jian, HUANG Yan-ping, HUANG Jun (089)
Experimental Investigations on Single-Phase Heat Transfer Enhancement in a Narrow Rectangular Channel with Longitudinal Vortex .....	MA Jian, HUANG Yan-ping, HUANG Jun (095)
Analysis and Discussion of Flow Boundary Layer in Fully Turbulent of Narrow Rectangular Channel .....	XU Jian-jun, CHEN Bing-de, WANG Xiao-jun (095)
Experimental Research on Single Phase Convection Heat Transfer in Micro-Fin Tube .....	FAN Guang-ming, SUN Zhong-ning, ZHU Sheng (099)
Flow Pattern Characteristics of Pool Boiling in Inclined Confined Spaces .....	WEN Qing-long, CHEN Jun, ZHAO Hua (104)
LES Research on Flowing Characteristics of Turbulent Flow in Rectangular Tubes in Rolling Motion .....	YAN Bing-huo, GU Han-yang, YANG Yan-hua, et al (108)
Research on Single-Phase Forced Circulation in Rectangular Channel Flow Characteristics under Rolling Conditions .....	XING Dian-chuan, YAN Chang-qi, LIU Yang, et al (112)
Study on Neutron Amplification Factor of Fast-Zone in VENUS 1 <sup>#</sup> on Unidirectional Coupling Mode .....	XIE Jin-sen, YU Tao, QIAN Jin-dong (117)
Optimization and Selection of Long Fuel Cycle Reloading Pattern for Qinshan Project II .....	PAN Ze-fei, YE Guo-dong, XIANG Jun-jun, et al (122)